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UNITED STATES COURT OF APPEALS
FOR THE SIXTH CIRCUIT

CAUDILL SEED & WAREHOUSE CO., INC.,

Plaintiff-Appellee,

v.

JARROW FORMULAS, INC.,

Defendant-Appellant.

No. 21-5345

Appeal from the United States District Court for the Western District of Kentucky at Louisville.
No. 3:13-cv-00082—Charles R. Simpson, III, District Judge.

Argued: April 28, 2022

Decided and Filed: November 10, 2022

Before: SUHRHEINRICH, MOORE, and CLAY, Circuit Judges.

COUNSEL

ARGUED: David R. Carpenter, SIDLEY AUSTIN LLP, Los Angeles, California, for Appellant. Benjamin J. Lewis, DENTONS BINGHAM GREENEBAUM LLP, Louisville, Kentucky, for Appellee. **ON BRIEF:** David R. Carpenter, SIDLEY AUSTIN LLP, Los Angeles, California, Christopher A. Eiswerth, Daniel J. Hay, SIDLEY AUSTIN LLP, Washington, D.C., for Appellant. Benjamin J. Lewis, J. Mark Grundy, Jared A. Cox, Amanda D. Reed, Kyle W. Miller, DENTONS BINGHAM GREENEBAUM LLP, Louisville, Kentucky, for Appellee.

The court delivered a PER CURIAM opinion. MOORE, J. (pp. 32–34), delivered a separate opinion concurring in part and dissenting in part.

OPINION

PER CURIAM. Caudill Seed & Warehouse Co. manufactures an important ingredient in certain nutritional supplements. Jarrow Formulas, Inc., a customer of Caudill's, wanted to get into this manufacturing business. To do this, Jarrow decided to lure away Caudill's Director of Research, Kean Ashurst, and learn Caudill's manufacturing process from him. Caudill, understandably displeased, proceeded to federal court. Eight years later, a jury awarded Caudill approximately \$7,000,000 in damages under the Kentucky Uniform Trade Secrets Act ("KUTSA"). Jarrow appeals the district court's denial of its motions for judgment notwithstanding the verdict and for a new trial. We **AFFIRM**.

I. BACKGROUND

A. Facts

Caudill is a Kentucky business that manufactures and sells a wide range of agricultural products including seeds, fertilizers, and sprouts. One Caudill subsidiary, C.S. Health, develops nutritional supplements. And one such supplement, made using broccoli-seed extract, attempts to harness a substance called glucoraphanin, which some believe to have positive health effects when consumed. Specifically, the glucoraphanin found in broccoli seeds reacts with myrosinase, an enzyme also found in broccoli seeds, to create in the digestive tract a supposedly beneficial compound called sulforaphane.

Caudill has developed a nutritional supplement ingredient containing high concentrations of glucoraphanin, which it sells to producers under the trade name BroccoRaphanin. Caudill also manufactures and distributes glucoraphanin capsules for individual use called Vitalica and Vitalica Plus. Vitalica and Vitalica Plus are "activated" products: they add myrosinase into the production formula to increase the amount of sulforaphane produced in the small intestine.

Jarrow Formulas is a dietary-supplement company that sells a broccoli-seed extract called BroccoMax. To manufacture BroccoMax, Jarrow purchased glucoraphanin-containing powder

in bulk from Caudill, eventually becoming Caudill's largest customer for the powder. Before the events that precipitated this dispute, Jarrow did not produce its own glucoraphanin, myrosinase, or sulforaphane. That would change.

Jarrow eventually decided to design and sell its own activated glucoraphanin product "to increase the margins for Jarrow Formulas for the BroccoMax product and develop a higher level of pull-through at the retail level." Instead of investing in its own research and development, Jarrow took a shortcut when it solicited Kean Ashurst, Caudill's Director of Research.

Jarrow approached Ashurst for a reason. He had worked at Caudill for nine years, during which he played a major role in the firm's research and development efforts. This included extensively researching the development of the broccoli-seed derivatives at issue in this case. As part of Ashurst's research, he assembled a collection of over 2000 articles concerning broccoli, the effects of sulforaphane on the body, and the myrosinase glucosinolate system. In the course of his employment with Caudill, Ashurst signed Non-Disclosure, Non-Competition, and Secrecy Agreements, and annually reviewed and signed Caudill's employee handbook, which barred him from disclosing Caudill's trade secrets or other confidential information.

Ashurst and Jarrow's relationship evolved rapidly. On April 10, 2011, Ashurst—who was still a Caudill employee, although Jarrow had approached him by this point—emailed Jarrow's CEO several confidential Caudill documents. Ten days later, Jarrow requested a "zip of the pertinent data"—presumably a large volume of data compressed into a .zip file—and Ashurst apparently¹ obliged by sending a physical disc the next week. On May 1, Ashurst began to work for Jarrow as a consultant. The next day, Ashurst submitted his resignation letter to Caudill, resigning from the firm. The "Scope of Services" listed in Ashurst's Consulting Agreement with Jarrow made clear that Jarrow hired him to mimic the work he had done for Caudill, tasking him with assisting in sourcing broccoli seeds; using the seeds to procure sulforaphane, glucoraphanin, and glucosinolate products; and performing "Other projects related to seeds."

Ashurst's expertise proved very useful for Jarrow. Jarrow never conducted its own research on broccoli extract products. Instead, Ashurst provided Jarrow with what the research it

¹According to Caudill, Jarrow never produced the disc in this litigation.

was “looking for” by delivering a curated collection of broccoli product research compiled over his nine years with Caudill. A Jarrow scientist acknowledged that only someone who “spen[t] all their time” researching broccoli products could have produced such a useful research collection. Jarrow sent Ashurst an outline of tasks that it wanted Ashurst to complete, including providing information on ordering research steps, performing every step, solving “R&D issues,” and blending the final product. Ashurst complied, adding that he was proposing that Jarrow adopt “the same process that the current BroccoMax Material [uses]”—that is, the process that Caudill used to manufacture the raw materials that Jarrow purchased from Caudill to make BroccoMax. Over the coming months, Ashurst provided to Jarrow additional valuable information from Caudill. Ashurst at one point bragged to Jarrow employees that they would be using a formula that had been tested for over six months. At the time, Ashurst had been at Jarrow for just over one month, meaning that he must have performed substantial amounts of this research while at Caudill.

Jarrow profited handsomely from this research. Jarrow brought an activated broccoli product into commercial production just four months after hiring Ashurst. From 2012 to 2019, Jarrow earned \$7.5 million in sales of their activated-myrosinase BroccoMax product.

B. Procedural History

Perturbed by these developments, Caudill initiated this lawsuit. In August 2014, Caudill amended its complaint to add a claim under the KUTSA, which is the only claim relevant to this appeal. Caudill identified six trade secrets that Jarrow allegedly misappropriated, three of which are relevant here: “(1) research and development on supplements, broccoli, and chemical compounds; (2) the general manufacturing process detailed in Caudill Seed’s provisional patent application; . . . and (6) the hard drive and research notebook as described herein.” Jarrow argued at the summary-judgment phase that Caudill insufficiently defined its trade secrets. The district court rejected this contention, concluding that “genuine issues of material fact exist with respect to whether the information so identified constitutes trade secrets.”

The case proceeded to trial. After hearing weeks of testimony, the jury made the following findings:

- Caudill had a protectable trade secret regarding Trade Secrets 1, 3, 4, 5, and 6;
- Jarrow misappropriated Trade Secrets 1, 3, 4, and 5;
- Caudill was entitled to \$2,023,000 in actual losses and \$404,605 in unjust enrichment as to Trade Secret 1, but was not entitled to damages on the other trade secrets; and
- Jarrow willfully and maliciously misappropriated Trade Secrets 1, 3, 4, and 5.

Jarrow moved for judgment as a matter of law and for a new trial as to liability, compensatory damages, and the jury's willfulness and malice finding. Regarding the finding of misappropriation of Trade Secret 1, Jarrow argued that Caudill had improperly asserted a "kitchen-sink theory of trade secrets" by broadly defining all its research activities as components of Trade Secret 1. With respect to the compensatory damages award, Jarrow argued that the jury's award of all of Caudill's research-and-development costs for the period that Ashurst worked for Caudill was improper because Caudill did not demonstrate that the trade secret was destroyed or made public. Jarrow argued that the unjust-enrichment damages could not stand because it was "plagued by speculation and guesswork." Finally, concerning willful and malicious misappropriation, Jarrow argued that the record showed no evidence of Jarrow's malice towards Caudill, just motivation to compete and an awareness of wrongdoing.

The district court denied Jarrow's motion. The district court entered a judgment of \$2,427,605 in damages awarded by the jury, \$1,000,000 in exemplary damages, \$3,254,303.50 in attorney fees, and \$69,871.82 in costs against Jarrow. Jarrow timely appealed.

II. DISCUSSION

On appeal, Jarrow raises a litany of issues. Jarrow asserts that (1) Caudill failed to define Trade Secret 1 adequately; (2) Caudill failed to show that Jarrow acquired Trade Secret 1; (3) Caudill did not introduce sufficient evidence attributing its damages to the misappropriation of Trade Secret 1; (4) the award of \$2,023,000 in compensatory damages lacked a legal and factual basis; (5) the award of \$404,605 in unjust-enrichment damages lacked a legal and factual basis; and (6) the district court improperly assessed exemplary damages and attorney fees. Jarrow also argues that, should we vacate the award of compensatory damages, we should similarly vacate

the awards of exemplary damages and attorney fees for recalculation. We take each issue in turn.

A. Caudill Adequately Defined Trade Secret 1

Jarrow argues that Caudill insufficiently defined Trade Secret 1 at trial. We first must weave through a procedural thicket to see whether Jarrow’s contention is even properly before this court on appeal and, if so, what standard of review applies to Jarrow’s claim. After settling these matters, we discuss trade secrets broadly and Caudill’s combination trade secret specifically. At the end of this road, we conclude that Caudill suitably defined Trade Secret 1.

Turning to the issue of presentation, Caudill argues that Jarrow, by failing to object to the jury instructions, forfeited its challenge to Caudill’s failure to define Trade Secret 1 properly, which Jarrow sometimes casts as the district court’s failure to force Caudill to so define the secret. The rule, however, is not so simple. The failure to object to jury instructions “does not prevent normal appellate review” so long as a party “[ma]kes all necessary arguments to preserve the issues raised in its appeal in its Rule 56 motion for summary judgment and in its Rule 50(b) motion for judgment as a matter of law or alternatively for a new trial.” *K&T Enters., Inc. v. Zurich Ins. Co.*, 97 F.3d 171, 174–75 (6th Cir. 1996); *see also City of St. Louis v. Praprotnik*, 485 U.S. 112, 119–20 (1988) (plurality op.).

Jarrow made the necessary arguments. Jarrow challenged Trade Secret 1’s definition in its motion for judgment as a matter of law at trial, and in its renewed motion for judgment as a matter of law after trial. It is true that Jarrow’s summary-judgment briefing challenged the definition of only the trade secrets allegedly contained in the notebook and on the hard drive, not Trade Secret 1. But once Caudill put Trade Secret 1 at issue in its response, Jarrow challenged Trade Secret 1’s definition in its reply brief. Taking these references together, we conclude that Jarrow sufficiently preserved its objection to the jury instructions.

We now must determine our standard of review. After trial, Jarrow moved for both judgment as a matter of law and a new trial. We review de novo the district court’s denial of Jarrow’s Rule 50 motion. *Nolfi v. Ohio Ky. Oil Corp.*, 675 F.3d 538, 545 (6th Cir. 2012). The

standard we apply in reviewing Jarrow's motion for judgment as a matter of law, on the other hand, depends on whether Jarrow challenges the sufficiency of the evidence. In federal court:

If a party has been fully heard on an issue during a jury trial and the court finds that a reasonable jury would not have a legally sufficient evidentiary basis to find for the party on that issue, the court may:

(A) resolve the issue against the party; and

(B) grant a motion for judgment as a matter of law against the party on a claim or defense that, under the controlling law, can be maintained or defeated only with a favorable finding on that issue.

Fed. R. Civ. P. 50(a)(1). "In diversity cases, when a Rule 50 motion for judgment as a matter of law is based on a challenge to the sufficiency of the evidence, [however,] this Court applies the standard of review used by the courts of the state whose substantive law governs the action." *Kusens v. Pascal Co.*, 448 F.3d 349, 360 (6th Cir. 2006). Under Kentucky law, a directed verdict after trial "is only appropriate when 'there is a complete absence of proof on a material issue or if no disputed issues of fact exist upon which reasonable minds could differ.'" *Alph C. Kaufman, Inc. v. Cornerstone Indus. Corp.*, 540 S.W.3d 803, 817–18 (Ky. Ct. App. 2017) (quoting *Toler v. Süd-Chemie, Inc.*, 458 S.W.3d 276, 285 (Ky. 2014)).

Jarrow also appeals the district court's denial of its motion for a new trial. A court may grant a new trial "for any reason for which a new trial has heretofore been granted in an action at law in federal court." Fed. R. Civ. P. 59(a)(1)(A).

We have interpreted Rule 59 to mean that "a new trial is warranted when a jury has reached a 'seriously erroneous result' as evidenced by: (1) the verdict being against the weight of the evidence; (2) the damages being excessive; or (3) the trial being unfair to the moving party in some fashion, *i.e.*, the proceedings being influenced by prejudice or bias."

Mosby-Mechem v. Memphis Light, Gas, & Water Div., 883 F.3d 595, 606 (6th Cir. 2018) (quoting *Holmes v. City of Massillon*, 78 F.3d 1041, 1045–46 (6th Cir. 1996)). We apply abuse-of-discretion review to the district court's denial of a motion for a new trial. *Broad St. Energy Co. v. Endeavor Ohio, LLC*, 806 F.3d 402, 405–06 (6th Cir. 2015). "A district court abuses its discretion when it relies on clearly erroneous findings of fact, applies the law improperly, or uses an erroneous legal standard." *United States v. Pembrook*, 609 F.3d 381, 383 (6th Cir. 2010).

With those issues resolved, we turn to the main event: whether Caudill defined Trade Secret 1 with “sufficient definiteness” at trial. Restatement (Third) of Unfair Competition § 39 cmt. d (Am. L. Inst. 1995).

1. Caudill Sufficiently Explained Trade Secret 1’s Contents

The KUTSA defines a trade secret as

information, including a formula, pattern, compilation, program, data, device, method, technique, or process, that: (a) Derives independent economic value, actual or potential, from not being generally known to, and not being readily ascertainable by proper means by, other persons who can obtain economic value from its disclosure or use, and (b) Is the subject of efforts that are reasonable under the circumstances to maintain its secrecy.

Ky. Rev. Stat. § 365.880(4). In interpreting this language, we can look beyond Kentucky court decisions: the KUTSA is a version of a uniform statute adopted in many jurisdictions and states that it “shall be applied and construed to effectuate its general purpose to make uniform the law . . . among states enacting it.” *Id.* at § 365.894; *see Allied Erecting & Dismantling Co. v. Genesis Equip. & Mfg., Inc.*, 805 F.3d 701, 703 (6th Cir. 2015); *Auto Channel, Inc. v. Speedvision Network, LLC*, 144 F. Supp. 2d 784, 788 (W.D. Ky. 2001). Although few Kentucky cases apply the KUTSA, the Kentucky Supreme Court has relied on the Restatement (Third) of Unfair Competition in the past. *See, e.g., Montgomery v. Montgomery*, 60 S.W.3d 524, 528 nn.3, 11, 13 (Ky. 2001). Consequently, we will return to this Restatement repeatedly throughout the opinion.

“A trade secret is any information that can be used in the operation of a business or other enterprise and that is sufficiently valuable and secret to afford an actual or potential economic advantage over others.” Restatement (Third) of Unlawful Competition § 39 (Am. L. Inst. 1995). Trade Secret 1 is what is known as a “combination” trade secret. “[A] new combination of known steps or processes can be entitled to trade-secret protection.” *Mike’s Train House, Inc. v. Lionel, L.L.C.*, 472 F.3d 398, 411 (6th Cir. 2006), *abrogated on other grounds as recognized by A.K. ex rel. Kocher v. Durham Sch. Servs., L.P.*, 969 F.3d 625, 629–30 (6th Cir. 2020). Caudill claims—and the jury found—protection not for one specific piece of information, but rather for its entire process of research and development. In assessing Caudill’s case, we take heed of the

maxim that “[i]t is not possible to state precise criteria for determining the existence of a trade secret.” Restatement (Third) of Unlawful Competition § 39 cmt. d (Am. L. Inst. 1995). Still, caselaw provides some general guiding principles. “The fact that some or all of the components of [a combination] trade secret are well-known does not preclude protection for a secret combination, compilation, or integration of the individual elements.” *Id.* cmt. f. Indeed, “a plaintiff may prevail in a trade-secrets case without identifying a specific item of information that is not publicly known or readily accessible.” *Mike’s Train House*, 472 F.3d at 410 (citing *3M v. Pribyl*, 259 F.3d 587, 595–96 (7th Cir. 2001)); *see also* Melvin F. Jager, 1 Trade Secrets Law § 5:28 (Oct. 2021) (“Even if each and every element in a process is known to the industry, the combination of known elements will have sufficient novelty to be a trade secret if the combination produces a superior product.”).

Although a combination-trade-secret plaintiff need not show that any individual item in a combination trade secret is unique, the plaintiff must establish that “the combination of known elements or components is unique.” Melvin F. Jager, 1 Trade Secrets Law § 5:28 (Oct. 2021); *see also* *Sit-Up Ltd. v. IAC/InterActiveCorp.*, No. 05 Civ. 9292, 2008 WL 463884, at *9 (S.D.N.Y. Feb. 20, 2008). A plaintiff must “offer[] . . . concrete evidence that its business method uniquely strung together certain elements in a particular way[,]” and cannot “have the Court [or jury] infer that, because it ran a successful . . . business, its combination of various, possibly secret, data and business protocols must have been unique.” *Sit-Up*, 2008 WL 463884, at *10. Because all of a combination trade secret’s elements may individually be publicly known, the uniqueness of the combination is critical to establishing trade-secret protection.

In addition to showing novelty, a trade-secrets plaintiff must “defin[e] the information for which protection is sought with sufficient definiteness to permit a court to apply the criteria for protection described in this Section and to determine the fact of an appropriation.” Restatement (Third) of Unfair Competition § 39 cmt. d (Am. L. Inst. 1995). The trade secret must be defined with “reasonable particularity.” *Phoenix Process Equip. Co. v. Cap. Equip. & Trading Corp.*, No. 3:16-cv-00024, 2021 WL 1062553, at *16 (W.D. Ky. Mar. 19, 2021). Reasonable particularity “must be ‘particular enough as to separate the trade secret from matters of general knowledge in the trade or special knowledge of persons skilled in the trade.’” *Id.* (quoting

Babcock Power, Inc. v. Kapsalis, No. 3:13-cv-717, 2015 WL 9257759, at *3 (W.D. Ky. Dec. 17, 2015)). If a plaintiff “effectively assert[s] that all information in or about its [product] is a trade secret,” then it brings a case “both too vague and too inclusive,” and does not allow a jury to “separate the trade secrets from the other information that goes into any” product in the field. *IDX Sys. Corp. v. Epic Sys. Corp.*, 285 F.3d 581, 583–84 (7th Cir. 2002) (applying the Wisconsin Uniform Trade Secrets Act).

In cases involving a combination trade secret based on technical information, like the current appeal, the reasonable-particularity requirement takes on special importance. A combination-trade-secret plaintiff must “describe the secret with sufficient specificity that its protectability can be assessed and to show that its compilation is unique.” *Sit-Up Ltd.*, 2008 WL 463884, at *10. And a plaintiff asserting a combination trade secret over highly complex technical information cannot merely offer “lists of broad technical concepts . . . ‘identif[ying] categories of information’” without showing which information contained within those categories constituted a trade secret. *Calendar Rsch. LLC v. StubHub, Inc.*, No. 2:17-cv-04062, 2020 WL 4390391, at *7 (C.D. Cal. May 13, 2020) (quoting *Loop AI Labs Inc. v. Gatti*, 195 F. Supp. 3d 1107, 1116 (N.D. Cal. 2016)).²

“Whether a particular type of information constitutes a trade secret is a question of fact.” *Alph C. Kaufman*, 540 S.W.3d at 818 (quoting *Fastenal Co. v. Crawford*, 609 F. Supp. 2d 650, 672 (E.D. Ky. 2009)). Substantial evidence presented at trial showed that Caudill’s research-and-development efforts constituted a protectable combination trade secret: Caudill repeatedly demonstrated that it had assembled a unique combination of processes and information that aided its research and development processes at a level of depth beyond merely listing technical concepts. To give some examples:

- One witness who had worked with Ashurst at Caudill testified that Ashurst “seemed, in my experience, to understand the whole process. It was a compilation of discoveries they had made before, and he was working with previous discoveries by Caudill to work on new projects.”

²*Calendar Research* arises under the federal Defend Trade Secrets Act, but “Kentucky’s trade secret protection statute is nearly identical to the DTSA.” *C-Ville Fabricating, Inc. v. Tarter*, No. 5:18-cv-379, 2019 WL 1368621, at *14 (E.D. Ky. Mar. 26, 2019).

- Ashurst “assembled that very large collection of information in the course of [his] work for Caudill Seed Company,” “probably” “curated that compilation of information,” and “read those articles in the course of [his] work for Caudill Seed Company.”
- Caudill extensively tested the microbial contents of both its products and its competitors’, which a witness agreed gave Caudill a competitive advantage and provided Caudill with important information related to product quality.
- Caudill had a collection of documents that showed “the process from the seed all the way to the making of BroccoRaphanin,” and this data would have saved industry employers “time and money had [they] had that document in [their] possession after May 2, 2011.”

We therefore agree with the district court that Caudill sufficiently defined Trade Secret 1 at trial, as the work that Caudill had performed before Ashurst arrived, the specific work that Ashurst performed while at Caudill, and the “body of knowledge” that Ashurst subsequently took to Jarrow. “The jury agreed,” and “[e]vidence presented at trial supports the jury’s finding.” *Alph C. Kaufman*, 540 S.W.3d at 818.

Jarrow then tries another angle, arguing that Caudill repeatedly shifted its level of generality at trial, defining different aspects of the secret as public or confidential based on the argument that Caudill sought to present. For example, Jarrow contends that a Caudill witness vacillated on whether Trade Secret 1 contained confidential material or was composed entirely of public information. We disagree. For instance, one Caudill executive constantly reiterated over almost 100 pages of testimony that Caudill’s trade secret is in the entire research-and-development process, even though many of the individual steps may be in the public domain. The jury could credit this and similar testimony to understand Trade Secret 1 as containing all of Caudill’s process, regardless of Jarrow’s contentions that Caudill concealed Trade Secret 1’s true definition. Jarrow’s argument, therefore, does not convince us that Caudill failed to define its trade secret properly.

Failing to provide a convincing legal argument, Jarrow turns to policy. Policy concerns about employee mobility loom in the background when assessing trade-secret claims based on information derived from departing employees. There is a “long-standing tension between employment law and the trade secrets doctrine[,]” and to avoid an anticompetitive effect, “a party seeking to protect trade secrets [must] describe the subject matter of the trade secret with

sufficient particularity to separate it from matters of general knowledge in the trade or of special knowledge of those persons who are skilled in the trade.” *Calendar Rsch. LLC*, 2020 WL 4390391, at *5 (quoting *Mattel, Inc. v. MGA Entm’t, Inc.*, 782 F. Supp. 2d 911, 967 (C.D. Cal. 2011)). And when trade secrets consist of incremental advances in a highly specialized technical field, “a more exacting level of particularity may be required to distinguish the alleged trade secrets from matters already known to persons skilled in that field.” *Id.* (quoting *Loop AI Labs*, 195 F. Supp. 3d at 1115); Restatement (Third) of Unfair Competition § 39 Reporter’s note to cmt. d (Am. L. Inst. 1995) (“For example, to protect the ability of former employees to utilize their general knowledge and skill, a court may impose a rigorous burden on the former employer to define the precise contours of the claimed trade secret.” (citation omitted)). According to Jarrow, Caudill’s suit undermines this policy.

As a general matter, Kentucky law supports Jarrow. Kentucky law has long recognized an employee’s “right to take with him all the skill he has acquired” when moving between employers. *Birn v. Runion*, 222 S.W.2d 657, 659 (Ky. 1949) (quoting *Garst v. Scott*, 220 P. 277, 278 (Kan. 1923)). Kentucky’s highest court has held that “[a]ll [of an employee’s] knowledge, skill and information, except trade secrets, become a part of his equipment for the transaction of any business in which he may engage, just the same as any part of the skill, knowledge, information or education that was received by him before entering upon the employment.” *Progress Laundry Co. v. Hamilton*, 270 S.W. 834, 836 (Ky. 1925) (quoting *Garst*, 220 P. at 278). If Caudill’s case rested on the fact that Ashurst joined Jarrow, then this argument might be convincing.

Ashurst, however, did more than simply move companies. Ashurst sent Caudill documents to Jarrow, produced an outline for Jarrow recreating Caudill’s research strategy, and prompted Jarrow to “lay on some BS” to ensure that Caudill did not catch wise to Jarrow’s machinations. In other words, he provided Jarrow with the results of years of research, testing, and analysis that informed Caudill’s production process. Similar behavior has supported courts imposing trade-secret liability in the past. *Fastenal*, 609 F. Supp. 2d at 672. We reject Jarrow’s employee-mobility argument.

Jarrow argued that Caudill improperly defined its trade secret in three ways: by showing insufficient particularity, by presenting a constantly shifting trade secret, and by defining the trade secret in such a way as to impose on free labor movement. Because “the jury’s verdict is [not] so flagrantly against the weight of the evidence as to indicate passion or prejudice,” *Alph C. Kaufman*, 540 S.W.3d at 819 (quoting *Consol. Infrastructure Mgmt. Auth., Inc. v. Allen*, 269 S.W.3d 852, 856 (Ky. 2008)), and because the district court did not rely on clearly erroneous facts in reaching this conclusion, we reject all three of Jarrow’s arguments and uphold the jury’s conclusion that Caudill properly defined Trade Secret 1.

2. Trade Secret 1 Is Not Improperly Composed of Public Information

In addition to arguing that Caudill did not sufficiently define Trade Secret 1, Jarrow advances the separate but related argument that much of Trade Secret 1 comes from the public domain. This is another important feature in trade-secret law: as discussed above, trade secrets must not be “readily ascertainable by proper means.” Ky. Rev. Stat. § 365.880(4)(a). Under Kentucky law, “[i]nformation cannot constitute a trade secret and, thus, is not confidential if the subject matter is ‘of public knowledge or general knowledge in the industry’ or if the matter consists of ‘ideas which are well known or easily ascertainable.’” *Insight Ky. Partners II, L.P. v. Preferred Auto. Servs., Inc.*, 514 S.W.3d 537, 555 (Ky. Ct. App. 2016) (quoting *Heyer-Jordan & Assocs., Inc. v. Jordan*, 901 S.W.2d 814, 821 (Tenn. Ct. App. 1990)).

Unfortunately, Kentucky law provides no further guidance on this point. For example, *Insight* did not concern a combination trade secret, and we have located no cases evaluating combination trade secrets under the KUTSA.³ Courts evaluating UTSA claims have split on the question of whether combination trade secrets may consist entirely of public-domain materials.

³We have found only two cases that even come close. Before the KUTSA’s adoption, Kentucky’s highest court suggested that elements known to an industry could not combine to produce a trade secret. *Mid-States Enters., Inc. v. House*, 403 S.W.2d 48, 50 (Ky. 1966) (“[T]here could be no novelty or uniqueness about the components of a device if they are known to others.”). But the court made that observation to dispatch the plaintiff’s argument that application of a well-known design to a new industry was a protectable trade secret. Additionally, in an unpublished post-KUTSA case concerning disclosure of trade secrets during discovery, the Kentucky Supreme Court dismissed the plaintiff’s argument that “a compilation of information that would allow an unfair economic advantage to others if disclosed” could receive trade-secret protection if it “would provide meaningful confidential information to the detriment of” the plaintiff. *Ky. Farm Bureau Mut. Ins. Co. v. Hopper*, No. 2002-SC-0774, 2003 WL 22415748, at *5 (Ky. Oct. 23, 2003). This case gives us little guidance because the putative trade secret there was really an internal corporate self-assessment.

Compare Mike's Train House, 472 F.3d at 411, *and 3M*, 259 F.3d at 595–96 (stating that they may), *with Olaplex, Inc. v. L'Oréal USA, Inc.*, 855 F. App'x 701, 710–11 (Fed. Cir. 2021) (faulting the plaintiff for (a) not proving use and (b) failing to define the “testing and know how and “dead ends and trials and errors” trade secrets with specificity).

We need not choose a side in this split because Jarrow does not assert that Trade Secret 1 consists entirely of public-domain materials. Jarrow instead argues that “so much of Caudill’s purported ‘seed to shelf’ process was generally known in the industry and readily ascertained by persons (like Ashurst) who are skilled in the trade.” But the fact that “much of” the Caudill process was known to the industry, even if true, does not matter, because it means that some of the process that Ashurst brought to Jarrow was *not* known to the industry. *See Chemetall GmbH v. ZR Energy, Inc.*, No. 99 C 4334, 2001 WL 1104604, at *6 (N.D. Ill. Sept. 18, 2001) (mem.) (“Thus, the defendants’ argument that ‘much’ of plaintiff’s ZMP process is in the public domain is a non-starter, because ‘much’ is not all.” (citation omitted)). As a result, Jarrow cannot establish that Caudill impermissibly relied on solely public-domain materials to establish Trade Secret 1.

B. Caudill Proved that Jarrow Acquired and Used All of Trade Secret 1

Jarrow separately argues that even if Caudill permissibly defined Trade Secret 1, Caudill never satisfied the legal requirement of showing that Jarrow acquired and used the entire combination trade secret. Jarrow explains that if this requirement is not enforced, a defendant could be liable for acquiring or using only a component of a combination trade secret that is readily discernible from general industry knowledge. Caudill disputes that trade-secret law imposes such a requirement. We agree with Caudill.

The parties dispute a legal issue: whether trade-secret law requires a plaintiff to show acquisition and use of the entirety of a combination trade secret. We therefore undertake de novo review of this legal claim. *Hanover Am. Ins. Co. v. Tattooed Millionaire Ent., Inc.*, 974 F.3d 767, 779 (6th Cir. 2020).

Authorities disagree as to whether a combination-trade-secret plaintiff must show acquisition and use of the entire combination. One line of thinking, expressed in the Restatement

of Unfair Competition, explains that a trade secret's "unauthorized use need not extend to every aspect or feature of the trade secret; use of any substantial portion of the secret is sufficient to subject the actor to liability." Restatement (Third) of Unfair Competition § 40 cmt. c (Am. L. Inst. 1995). "[T]raditional trade secret law" recognizes that "the user of another's trade secret is liable even if he uses it with modifications or improvements upon it effected by his own efforts, so long as the substance of the process used by the actor is derived from the other's secret." *Mangren Rsch. & Dev. Corp. v. Nat'l Chem. Co.*, 87 F.3d 937, 944 (7th Cir. 1996) (quoting *In re Innovative Constr. Sys., Inc.*, 793 F.2d 875, 887 (7th Cir. 1986)).⁴ This tradition has a solid foundation: if a trade secret misappropriator could avoid liability by changing a few details in their final product, "the protections that law provides would be hollow indeed." *Id.*

But that does not tell the whole story. Several courts have concluded that a trade-secrets plaintiff cannot prove the use of a combination trade secret unless that plaintiff "prove[s] use of each and every element in combination." *Vital State Can., Ltd. v. DreamPak, LLC*, 303 F. Supp. 2d 516, 529 (D.N.J. 2003). For instance, in *GSI Technology, Inc. v. United Memories, Inc.*, California's Northern District concluded that it would be "overbroad and incorrect" to impose liability based on partial use of a combination trade secret, because doing so could create liability for a firm that "misappropriate[ed]" a portion of a combination trade secret containing either its own intellectual property or publicly available information. No. 5:13-cv-01081, 2016 WL 3035699, at *6 (N.D. Cal. May 26, 2016). And in *American Airlines, Inc. v. KLM Royal Dutch Airlines, Inc.*, the Eighth Circuit spoke to the requirement of showing acquisition of an entire combination, holding that a plaintiff's combination-trade-secret case could not survive summary judgment because "American's expert testified that the specific combination of all five elements constituted a trade secret," but "[i]t is undisputed that KLM never received all five elements." 114 F.3d 108, 111–12 (8th Cir. 1997).

Jarrow highlights this latter line of authorities to argue that Caudill never showed that Jarrow acquired every piece of information that could constitute a part of Caudill's research-and-development process. Jarrow also presents several differences between the firms' manufacturing processes, implying that it did not use the entirety of Trade Secret 1. Unfortunately for interested

⁴*Mangren* did not concern a combination trade secret.

readers and industry spies, we will decline to summarize those differences so as to protect the parties' secrets. Caudill disputes the differences between the firms' products, but more importantly explains that the evidence at trial demonstrated that Jarrow acquired and used Caudill's entire process, regardless of what portion of the process made it into Jarrow's final product.

We begin by considering—and rejecting—Jarrow's argument that trade-secrets law requires showing acquisition of each atom of a combination trade secret. First, we disagree that such a requirement necessarily exists: Jarrow presents no in-circuit case, and no principle of Kentucky law, that would support such a requirement for combination-trade-secrets plaintiffs. Second, as the district court recognized, even if such a requirement existed, it would make a good deal of sense to relax it in combination-trade-secrets case like this one, in which the acquired trade secret comprised a party's entire research process. That is because when a trade secret consists of a mass of public information that has been collected and sorted, it will always be possible to identify increasingly minute details of the combination that a plaintiff would need to show were specifically misappropriated. *See GlobeRanger Corp. v. Software AG USA, Inc.*, No. 3:11-cv-0403, 2015 WL 3648577, at *12–13 (N.D. Tex. June 11, 2015). Jarrow cannot avoid liability in this fashion. The evidence at trial showed that Jarrow, through Ashurst, received vast quantities of information concerning Caudill's research-and-development process. We affirm the district court's denial of Jarrow's post-trial motions on this ground.

Jarrow fares no better as to the purported requirement that a combination-trade-secrets plaintiff show use of the entire combination. Trade-secrets law does not demand a mirror-image between the misappropriated secrets and the eventual product derived from them. Restatement (Third) of Unfair Competition § 40 cmt. c (Am. L. Inst. 1995); *GlobeRanger Corp.*, 2015 WL 3648577, at *13; cf. *Avery Dennison Corp. v. Four Pillars Enter. Co.*, 45 F. App'x 479, 487 (6th Cir. 2002) (per curiam). We see no reason not to apply this general principle to combination trade secrets: when the law grants protection over many interconnected pieces of information, an even-higher threat exists of a misappropriating party changing one element of the combination to evade liability. Holding otherwise would produce bizarre outcomes: a trade-secret thief could misappropriate a research process, design a competing product in far less time than it would have

otherwise taken, and avoid liability because it did not debut the same product as its victim-competitor. *See 3M*, 259 F.3d at 596. We similarly affirm the dismissal of Jarrow’s post-trial motions on this ground.

C. The District Court Properly Calculated Damages

Jarrow next faults the district court for improperly awarding damages. We disagree.

Caudill claimed entitlement to just under \$10 million in damages. This included a request for \$4,535,793 in research-and-development costs, about \$2,000,000 of which was incurred in the 2002–2011 period that Ashurst worked for Caudill. Caudill’s expert testified that Caudill was entitled to unjust enrichment damages, estimating Jarrow’s profits from 2011-2019 on various Jarrow products. Caudill’s expert based his damage predictions on the jury finding Jarrow liable on all six trade secrets.

The jury awarded Caudill \$2,023,000 in actual losses and \$404,605 in unjust enrichment. The jury did not calculate these numbers randomly. Instead, for actual losses, the jury calculated Caudill’s research-and-development costs spanning the approximately eight years and four months for which Ashurst worked for Caudill. The unjust-enrichment amount represents Jarrow’s profits relating to the four relevant products “from May 2011 through the end of 2017.”

The district court upheld this award against Jarrow’s motion for judgment as a matter of law or motion for a new trial. The district court stressed that Caudill received only a portion of the damages that it sought, even considering the jury’s verdict that Jarrow misappropriated four Caudill trade secrets.

Jarrow makes three arguments on appeal. Jarrow claims that the damages award was calculated improperly based on the damages expert’s consideration of all six asserted trade secrets, even though Caudill recovered damages on only Trade Secret 1; Jarrow argues that the \$2,023,000 compensatory-damages award cannot stand because the trade secret was not published or destroyed, and puts forward a blunderbuss of other reasons why compensatory damages were improperly calculated; and Jarrow asserts that the unjust-enrichment award is

insufficiently tied to the damages that Caudill proved at trial. But first, we again must determine whether Jarrow forfeited this argument, and what the applicable standard of review is.

Caudill asserts that Jarrow forfeited its damages arguments by failing to object to the damages award at the close of trial. This is incorrect. A party can preserve a challenge to a damages award by presenting the issue to the district court in a post-trial motion. *Roush v. KFC Nat'l Mgmt. Co.*, 10 F.3d 392, 397 (6th Cir. 1993). Because Jarrow's motion for judgment as a matter of law devoted nearly half of its pages to damages issues, it did not forfeit this argument.

Regarding the standard of review, the parties agree that Jarrow appeals the denial of its Rule 50 motion. Because this is a diversity case in which Jarrow challenges the sufficiency of the evidence, we therefore apply Kentucky's standard for Rule 50 motions, which holds that judgment as a matter of law "is only appropriate when 'there is a complete absence of proof on a material issue or if no disputed issues of fact exist upon which reasonable minds could differ.'" *Alph C. Kaufman*, 540 S.W.3d at 817–18 (quoting *Toler*, 458 S.W.3d at 285); *see also Bierman v. Klapheke*, 967 S.W.2d 16, 18–19 (Ky. 1998).

1. The Evidence Supports the Jury's Compensatory-Damages Verdict

Jarrow first argues that Caudill did not introduce sufficient evidence attributing its compensatory damages to Trade Secret 1. Jarrow makes this argument in two separate ways: by arguing that the compensatory damages award was against the sufficiency of the evidence, and by explaining that the compensatory damages cannot be tied specifically to Trade Secret 1.

Each trade secrets "case requires a flexible and imaginative approach to the problem of damages." Melvin F. Jager, 1 *Trade Secrets Law* § 7:20 (Oct. 2021) (quoting *Univ. Computing Co. v. Lykes-Youngstown Corp.*, 504 F.2d 518, 538 (5th Cir. 1974)). This flexibility means that "the plaintiff is required to prove the amount of such loss with only as much certainty as is reasonable under the circumstances." Restatement (Third) of Unfair Competition § 45 cmt. b (Am. L. Inst. 1995). "Damages in trade secrets cases are difficult to calculate . . . When the misappropriated trade secret is used to field competing products, the best measure of damages is the plaintiff's lost profits or the defendant's illicit gains." *Acuity Brands Lighting, Inc. v.*

Bickley, No. 5:13-cv-366, 2015 WL 12976104, at *2 n.2 (E.D. Ky. June 8, 2015) (quoting *Avery Dennison Corp.*, 45 F. App’x at 485).

Jarrow tosses out many objections to the jury’s award of compensatory damages. It asserts that Chief Operating Officer Dan Caudill’s testimony concerned some research and development for products unrelated to glucoraphanin. This, Jarrow reasons, implies that Ashurst worked on some research and development that did not concern glucoraphanin, meaning that the jury should not have awarded Caudill all of its research-and-development costs over Ashurst’s nine-year tenure. Jarrow also faults Caudill’s expert for pulling research-and-development figures from Caudill’s consolidated tax returns without recognizing that Caudill has numerous subsidiaries. Jarrow additionally complains that Trade Secret 1 did not embody the full \$2,023,000 of research-and-development costs awarded. Finally, Jarrow notes that because Caudill disclosed some of its research-and-development information through publicly filed patent applications in 2008 and 2009, Jarrow would not have needed to recreate *all* of Caudill’s work, making the full research-and-development award improper.

The Rule 50 standard dooms these arguments. The record provides evidence that would permit a jury to infer that the 2002–11 research-and-development costs reflected the damages that Trade Secret 1’s misappropriation inflicted on Caudill. For example, Dan Caudill testified that Ashurst’s research-and-development efforts concerned glucoraphanin, and that the goal of this research was to develop a commercially successful glucoraphanin powder. Dan Caudill performed this research “primarily with Ashurst,” and the duo’s work “took off on a path that no one else was working on.” Caudill’s damages expert, on cross-examination, specifically confirmed that the company’s research-and-development expenses related to broccoli seeds.

As to the reliance on consolidated tax returns, courts have concluded that tax returns are valid evidence in calculating trade-secrets damages. See *Hirtle Callaghan Holdings v. Thompson*, No. 2:18-cv-2322, 2021 WL 1163739, at *5 (E.D. Pa. Mar. 26, 2021). Jarrow was certainly welcome to argue to the jury that consolidated tax returns could not provide a basis on which to award damages, but Caudill presented more than a “complete absence of proof” by providing them.

Jarrow's argument about Caudill's purported failure to link research-and-development costs to Trade Secret 1 fares no better. Jarrow claims that because the jury found no misappropriation of the tangible Trade Secrets 2 or 6, the jury could not have awarded the full amount of research-and-development costs based on the intangible Trade Secret 1. Jarrow cites no precedent for this proposition and cannot satisfy Kentucky's stringent standard for sufficiency challenges.

Finally, Jarrow's argument about Caudill's research and development existing in the public domain also fails. First, as catalogued above, combination trade secrets can consist of public information. Second, and more importantly, Jarrow fails to persuade us that this argument satisfies (or even approaches) Kentucky's sufficiency-of-the-evidence standard.

In sum, Jarrow's sufficiency-of-the-evidence arguments on damages lose less on their content and more on their procedural posture. As Caudill's expert explained, Caudill provided evidence that its research-and-development expenses related to broccoli seeds, “[a]nd if there's evidence that sways the jury the other way, then” the jury would be free to decide differently. Jarrow indeed tried to “sway[] the jury the other way”: the damages issue was the first issue that Jarrow pressed in closing, with Jarrow's attorney highlighting the importance of the damages argument by noting that he had not in thirty-one years of practice begun a closing argument by discussing damages. One element of damages that Jarrow stressed was the “illogical claim” that Caudill's research-and-development costs all went towards the alleged trade secrets. The jury rejected Jarrow's argument and embraced Caudill's, and we will not disturb its decision.

2. Jarrow's Challenge to Caudill's Expert's Testimony in Light of the Jury Verdict Also Fails

Jarrow separately argues that Caudill's damages award fails as a matter of law because it relies on expert testimony undermined by the jury's verdict. At trial, Caudill's expert assumed as part of his analysis that Caudill would recover on all six alleged trade secrets, conceding that there would be an “impact [on] the analysis” if the jury found no liability on Trade Secret 2. The jury then found no misappropriation of Trade Secrets 2 or 6. Jarrow thus argues that the jury could not have given Caudill the full recovery that it sought for Trade Secret 1. The parties again provide no standard of review, but it appears that this is a legal issue that we review de

novo as to Jarrow’s Rule 50 motion. *Hanover Am. Ins. Co.*, 974 F.3d at 779. To the extent that Jarrow intends to challenge the district court’s denial of its Rule 59 motion, we apply abuse-of-discretion review. *Broad St. Energy Co.*, 806 F.3d at 405–06.

Jarrow supports its argument with two out-of-circuit cases in which courts found that an expert’s reliance on trade secrets that were not misappropriated doomed a damages award: *Texas Advanced Optoelectronic Solutions, Inc. v. Renesas Electronics America, Inc.*, and *O2 Micro International Ltd. v. Monolithic Power Systems, Inc.* Neither of these cases dictates Jarrow’s conclusion.

In *Texas Advanced Optoelectronic Solutions*, a jury found the defendant liable on multiple grounds, but an appellate panel vacated some grounds for liability, leaving only one remaining. 895 F.3d 1304, 1311–15 (Fed. Cir. 2018). Turning to the damages award, the court concluded that because the plaintiff’s expert “did not distinguish among” the multiple grounds, and because two of the three grounds had been vacated, the damages award needed to be vacated as well. *Id.* at 1317. This was because the expert “did not explain which of the trade secrets contributed to what amount of profit to be disgorged; he assigned all profits to the misappropriation of all trade secrets.” *Id.*

Texas Advanced Optoelectronic’s reasoning does not call for reversal here. There, the jury awarded the full amount of requested trade-secrets damages. *Id.* at 1328. First, in *Texas Advanced Optoelectronic*, the appellate court reversed the district court in part, concluding that two of the three secrets did not qualify for protection. *Id.* at 1317. We, by contrast, affirm the district court’s decision as to Trade Secret 1’s protectability, and thus have no reason to go down *Texas Advanced Optoelectronic’s* path. More importantly, the jury here awarded far less than the total amount requested. *Texas Advanced Optoelectronic’s* fears of a court having “no basis to conclude” that the relevant ground for liability “supports the entire award” thus are unavailing, because the jury did not award the “entirety” of Caudill’s damages. 895 F.3d at 1317. Indeed, the jury appeared to heed Caudill’s expert’s claim that a finding of no misappropriation of Caudill’s other trade secrets would affect the damages calculation by awarding reduced damages.

In *O2*, the plaintiff's damages expert testified that the theft of eleven trade secrets unjustly enriched the defendant by \$16 million. *O2 Micro Int'l Ltd. v. Monolithic Power Sys., Inc.*, 399 F. Supp. 2d 1064, 1076 (N.D. Cal. 2005). The jury found that the misappropriation of only one trade secret resulted in the defendant being unjustly enriched and awarded \$12 million in damages. *Id.* The district court recognized that damages must be calculated flexibly but struck the expert's testimony because it no longer provided a "reasonable basis" to support a jury award. *Id.* Because the jury had been "left without sufficient evidence, or a reasonable basis, to determine the unjust enrichment damages . . . the jury's award of unjust enrichment damages was based on speculation and guesswork, not on evidence." *Id.* at 1077. The court granted the defendant's motion for judgment as a matter of law. *Id.*

O2 is not as persuasive as Jarrow thinks. The plaintiff's damages expert there took an all-or-nothing approach: his model turned on misappropriation of all the trade secrets without offering the jury a way to attribute value to each individual trade secret. *Id.* at 1076. But Caudill's expert gave the jury options. As explained above, although Caudill's expert's damages model assumed misappropriation of all six trade secrets, he testified that all of Caudill's research and development expenses went to broccoli seed research. That allowed the jury to calculate the value of Trade Secret 1 even while finding no misappropriation of Trade Secrets 2 and 6. Jarrow has presented no evidence convincing us that Kentucky's Supreme Court would take a more narrow view of the evidence that can support a trade-secrets damages award, and so we will adhere to the broader view that a court may flexibly award trade-secrets damages. See Melvin F. Jager, 1 *Trade Secrets Law* § 7:20 (Oct. 2021); *Acuity Brands Lighting, Inc.*, 2015 WL 12976104, at *2 n.2.

Jarrow also finds no refuge in Kentucky law. In *Insight Kentucky Partners*, a trade-secret case that also included a tortious-interference claim, plaintiff's damages expert included money spent at different vendors than the one involved in the litigation. 514 S.W.3d at 553. The Kentucky Court of Appeals ruled that, because the testimony provided no "causal link" between those expenses and the damages relevant to this case, the damages award had to be vacated. *Id.* Otherwise, the plaintiff could have collected "damages that had no relationship to the claims asserted by" the plaintiff. *Id.* But the portion of *Insight* concerning damages calculations does

not refer to the trade-secrets claim, because the court ruled that the underlying information was not a trade secret. *Id.* at 554–55. As a result, we cannot conclude that Kentucky’s courts would import *Insight*’s rigid reasoning into the malleable context of trade secrets. The district court properly rejected Jarrow’s argument on this point.

3. The Award of Research-and-Development Costs Was Not Legally Defective

Jarrow next argues that Caudill cannot collect research-and-developments costs from the time that Ashurst worked at Caudill because those costs may be awarded only when the underlying secret is destroyed (which didn’t happen here). This is also a legal issue that we review de novo as to Jarrow’s Rule 50 challenge and for abuse of discretion as to its Rule 59 motion. *See Hanover Am. Ins. Co.*, 974 F.3d at 779 (Rule 50); *Broad St. Energy Co.*, 806 F.3d at 405–06 (Rule 59).

Jarrow is right that actual loss to the plaintiff is one way to measure damages. “[T]his is an appropriate measure of damages only when the defendant has in some way destroyed the value of the secret.” *Univ. Computing*, 504 F.2d at 535. “Where the plaintiff retains the use of the secret, as here, and where there has been no effective disclosure of the secret through publication, the *total* value of the secret to the plaintiff is an inappropriate measure.” *Id.* (emphasis added).

But actual loss to the plaintiff is not the only method of calculating damages in trade secret theft cases. Courts, including our own, utilize several other measures of monetary relief. *See Mid-Michigan Computer Sys., Inc. v. Marc Glassman, Inc.*, 416 F.3d 505, 510 (6th Cir. 2013); *Avery Dennison*, 45 F. App’x at 485; *Welogix v. Accenture, L.L.P.*, 716 F.3d 867, 879 (5th Cir. 2013); *Univ. Computing*, 504 F.2d at 535–38; *see also* Restatement (Third) of Unfair Competition § 45 cmt. d (listing “four methods of measuring monetary relief in trade secret cases”).

One of those options is the “measure of the value of the secret to the defendant.” *Univ. Computing*, 504 F.2d at 536.⁵ “This is usually the accepted approach where the secret has not been destroyed and where the plaintiff is unable to provide specific injury.” *Id.* Thus, the appropriate measure of damages “is not what the plaintiff lost, but rather the benefits, profits, or advantages gained by the defendant in the use of the trade secret.” *Id.* (cleaned up). We adopted this measure of damages in *Avery Dennison*, adding that “[i]f the benefit to the defendant in terms of direct profits is not ascertainable, damages may be awarded based on the value to the defendant of the secret at the time of misappropriation, the value derived from savings because of increased productivity, *or the value derived from savings in research costs.*” *Avery Dennison*, 45 F. App’x at 486 (emphasis added).⁶

Courts, including this one, have emphasized that “every case requires a flexible and imaginative approach to the problem of damages,” and is ‘controlled by its own peculiar facts and circumstances.’” *Univ. Computing*, 504 F.2d at 538 (quoting *Enter. Mfg. Co. v. Shakespeare Co.*, 141 F.2d 916, 920 (6th Cir. 1944)). With this caveat: “Pecuniary loss in any event can be determined only by reasonable approximation. The actual value of what has been appropriated is always the ultimate in appraisement.” *Enter. Mfg.*, 141 F.2d at 920.

Take *University Computing*, which mirrors this case in some ways. There the defendants misappropriated a retail inventory control system owned by the plaintiff and marketed it to competitors. The Fifth Circuit explained:

In the type of case which we now consider, when the parties were potentially in direct competition and the course of conduct of the defendant extended over a period of time and included a number of different uses of the plaintiff’s trade secret, and where the process of developing a computer system was very difficult

⁵*University Computing* noted that this second approach to measuring the value of the trade secret to the defendant has “many variations,” including a “reasonable royalty” standard and its subsidiary “standard of comparison method.” 504 F.2d at 538.

⁶The defendant-misappropriator in *Avery Dennison* “did not use the stolen trade secrets to bring directly competing products to market. Rather it used the [plaintiff-manufacturer of pressure-sensitive adhesive labels’] secrets to create a panoply of new products, save significantly on time and resources devoted to research, and streamline their manufacturing processes.” 45 F. Appx at 486; *see also id.* at 482. The plaintiff’s damages expert presented three theories of damages, all aimed at the ill-gotten benefits to the defendant: reasonable royalty, the defendant’s profits, and avoided costs. *Id.* at 486. We held the district court’s decision to allow the expert’s testimony was within its discretion because the “theories were sufficiently factually supported.” *Id.* at 487.

and required substantial technical and theoretical advances, we believe a broader measure of damages is needed.

Univ. Computing, 504 F.2d at 538. That “broader measure” included factors in addition to development costs. *Id.* Based on this flexible and comprehensive approach, the Fifth Circuit affirmed the district court’s instructions to the jury that it could consider the plaintiff’s development costs and the defendant’s sales, among other factors. *Id.* at 539–40.

Here the jury was instructed that if it found that Jarrow misappropriated Trade Secret 1, damages could “include both the actual loss caused by the misappropriation and unjust enrichment caused by misappropriation that is not taken into account in computing actual loss.” The monetary value for unjust enrichment included “the profits that Jarrow Formulas derived from the sales of products utilizing such Caudill trade secret or secrets and the value gained or money saved by Jarrow Formulas by not having to expend resources on research and development.” The jury was admonished not to double count any damages, and to limit the recovery period to “the time it would have taken Jarrow Formulas to obtain the information by proper means.”

The jury instructions in this case were not only in-sync with the “benefit-to-defendant” method of damage calculation laid out in *Mid-Michigan Computer* and *Avery Dennison* but were also fine-tuned to the unique facts of this case, per *University Computing* and *Enterprise Manufacturing*’s instruction. And the jury obviously got the message: it did not award Caudill all of its requested research-and-development costs. As the district court held in its ruling on Jarrow’s motion for judgment as a matter of law, “[t]he jury’s verdicts . . . indicate[d] that it found Caudill Seed’s evidence established that Jarrow Formulas’ misappropriation of Caudill Seed’s research and development ‘seed to shelf’ only had compensable value insofar as it enabled Jarrow Formulas to become a broccoli seed extract manufacturer and developer of a successful activated formula broccoli seed product in four months.” This meant that Caudill “was thus entitled to a portion of the damages claimed which the jury determined from the evidence represented the value gained or money saved by Jarrow Formulas by not having to expend resources on research and development and the profits Jarrow Formulas derived from sales of products achieved through that jump start afforded to Jarrow Formulas.”

In sum: the jury was properly instructed on the appropriate legal theory of compensatory damages.

4. The Unjust-Enrichment Award Has a Proper Basis

Jarrow next argues that the award of unjust-enrichment damages rested upon an improper basis. We disagree.

In trade-secrets cases, “[d]amages may include both the actual loss caused by misappropriation and the unjust enrichment caused by misappropriation that is not taken into account in computing actual loss.” Ky. Rev. Stat. § 365.884(1). Some courts in trade-secrets cases permit plaintiffs to pursue both compensatory and restitutionary damages, “provided that there is no double recovery.” Restatement (Third) of Unfair Competition § 45 cmt. c (Am. L. Inst. 1995). The jury awarded Caudill \$404,605 in unjust-enrichment damages.⁷ This amount apparently came from Caudill’s damages expert’s calculation of the net profits on four Jarrow products that contained either glucoraphanin or activated glucoraphanin. The district court concluded that a jury faced with Caudill’s evidence could conclude that Jarrow gained a substantial competitive advantage from its misappropriation and could award damages accordingly.

On appeal, Jarrow raises a series of arguments challenging the sufficiency of the evidence supporting the unjust-enrichment award, all stemming from the proposition that a jury must allocate recovery for unjust-enrichment damages “based on the role plaintiff’s trade secret played in the commercial success of defendant[’s] product.” *Softel, Inc. v. Dragon Med. & Sci. Commc’s, Ltd.*, 891 F. Supp. 935, 943 (S.D.N.Y. 1995). Because we once again evaluate a sufficiency-of-the-evidence claim in a diversity case, we apply Kentucky’s standard, which asks us to determine whether a “complete absence of proof” exists as to the damages issue. Here, Caudill presented sufficient proof.

First, Jarrow argues that Caudill presented “no evidence sufficiently tying all of the products at issue to Trade Secret 1.” Three of the four products used only glucoraphanin, a

⁷The verdict form awards \$404,605 in unjust-enrichment damages. The district court’s opinion denying Jarrow’s post-trial motions incorrectly stated that the jury awarded \$404,603 in unjust-enrichment damages.

commercially available product that Jarrow could have procured from other suppliers (the fourth product used myrosinase-activated broccoli material). In response, Caudill explains, and we agree, that although Jarrow could have purchased glucoraphanin elsewhere, Caudill alleged that Jarrow used Caudill's proprietary process to produce glucoraphanin in-house. *See Imperial Chem. Indus. Ltd. v. Nat'l Distillers & Chem. Corp.*, 342 F.2d 737, 743 (2d Cir. 1965). Jarrow tries to make hay of the expert's reliance on products containing glucoraphanin, but the jury was instructed that Trade Secret 1 includes research and development related to glucoraphanin.

Second, Jarrow again asserts that Caudill's damages expert assumed Caudill would successfully prove misappropriation of all six trade secrets, which it failed to do. As discussed *supra*, we see no mismatch between the expert's testimony and the ultimate damages award, and so we decline to adopt Jarrow's argument.

Third, Jarrow claims that even if the unjust-enrichment award can partially stand, Caudill did not present evidence showing that Jarrow should have to disgorge "all profits over a six-year period." This is because Jarrow already manufactured broccoli-based products before Ashurst joined the company. But Caudill demonstrates that the jury instructions allowed the jury to award damages for an additional period if the jury believed that Jarrow "retained an advantage over good faith competitors because of the misappropriation."

Because Jarrow cannot show a "complete absence of material proof" on these issues, we reject Jarrow's argument. The trial featured much discussion of glucoraphanin's value. *See, e.g.*, R. 438 (Trial Tr. 2 at 11:9–21) (Page ID #19906); R. 452 (Trial Tr. 3-B at 10:4–17) (Page ID #20671); R. 458 (Trial Tr. 13 at 40:25–42:6) (Page ID #21296–98); R. 470 (Trial Tr. 15-B at 8:2–9) (Page ID #21718). Caudill explained to the jury that Jarrow had profited for several years because of its misappropriation of Caudill's trade secrets, and that the jury could award unjust-enrichment damages on that basis. *Id.* at 58:22–60:8. We affirm the district court's denial of Jarrow's post-trial motion as to the unjust-enrichment damages.

5. The Award of Exemplary Damages Need Not Be Reconsidered

At trial, the jury found that Jarrow willfully and maliciously misappropriated Trade Secret 1. This finding was proper. And based on that finding, the court awarded \$1,000,000 in exemplary damages and \$3,254,303.50 in attorney fees. Those awards were also proper.

a. Sufficient Evidence Supports the Jury's Finding of Willful and Malicious Misappropriation

The KUTSA authorizes exemplary damages and reasonable attorney fees in a trade-secrets case “[i]f willful and malicious misappropriation exists.” Ky. Rev. Stat. §§ 365.884(2), 365.886. The parties agreed to jury instructions explaining that willful and malicious misappropriation is “behavior motivated by spite or ill will and a disregard for the rights of another with knowledge of probable injury.” The instructions explained that the relevant motivation must come from employees and agents of Jarrow Formulas “other than Kean Ashurst.” After Caudill received \$1,000,000 in exemplary damages and \$3,254,303.50 in attorney fees, Jarrow moved for judgment as a matter of law, contending that Caudill should have presented proof of actual malice, The district court denied the motion, applying what Jarrow calls on appeal a “significantly lower standard” than that provided in the jury instructions. Jarrow takes issue with the district court’s reference to a case in which “a breach of basic commercial ethics and fraud” supported an award of exemplary damages. Jarrow thus appears to argue that sufficient evidence does not support the correct, higher standard for exemplary damages presented in the jury instructions.

Before proceeding to our analysis, we must for the final time determine the proper standard of review. Because Jarrow argues that the evidence is insufficient to support the verdict, and because we are reviewing a Rule 50 motion in a diversity case, we again apply Kentucky’s standard, granting a directed verdict only if “there is a complete absence of proof on a material issue or if no disputed issues of fact exist upon which reasonable minds could differ.” *Alph C. Kaufman*, 540 S.W.3d at 817–18 (quoting *Toler*, 458 S.W.3d at 285).

To determine whether sufficient evidence supports the jury’s finding of “willful and malicious” misappropriation, we must define the phrase “willful and malicious.” Unfortunately,

no Kentucky case defines willful and malicious conduct in the context of trade-secret misappropriation. As a result, we must try to predict how Kentucky's highest court would distinguish ordinary trade-secrets cases from those in which a plaintiff can receive exemplary damages. *Brown Jug, Inc. v. Cincinnati Ins. Co.*, 27 F.4th 398, 402 (6th Cir. 2022).

Kentucky's courts have looked to Black's Law Dictionary when defining "willful and malicious injury." *Huddleston ex rel. Lynch v. Hughes*, 843 S.W.2d 901, 906 (Ky. Ct. App. 1992). That definition provides:

For such to exist there must be an intent to commit a wrong either through actual malice or from which malice will be implied. Such an injury does not necessarily involve hatred or ill will, as a state of mind, but arises from intentional wrong committed without just cause or excuse. . . . It may involve merely a willful disregard of what one knows to be his duty, an act which is against good morals and wrongful in and of itself, and which necessarily causes injury and is done intentionally.

Id. (quoting *Willful and Malicious Injury*, Black's Law Dictionary (6th ed. 1990)) (emphasis removed). And in *Collins v. Rocky Knob Associates, Inc.*, the Kentucky Court of Appeals added another layer, quoting the Supreme Court of Kentucky as defining "willful" to mean "conduct which is still, at essence, negligent, rather than actually intended to do harm, but which is so far from a proper state of mind that it is treated in many respects as if it were so intended." 911 S.W.2d 608, 611 (Ky. Ct. App. 1995) (quoting *Kirschner v. Louisville Gas & Elec. Co.*, 743 S.W.2d 840, 842–43 (Ky. 1988)).

These definitions are an awkward fit for trade-secret law. Intentional misconduct satisfies Kentucky's general definition of "willful and malicious injury." But to find liability in a KUTSA case, a plaintiff must already establish intentional misappropriation. Ky. Rev. Stat. § 365.880(2). A plaintiff could thus argue that the court may award exemplary damages in every KUTSA case: every businessperson presumably "knows [it] to be his duty" that he should not steal a competitor's trade secrets. *Huddleston*, 843 S.W.2d at 906 (quoting *Willful and Malicious Injury*, Black's Law Dictionary (6th ed. 1990)). That cannot be the case, however, because the statute distinguishes between damages for "misappropriation" and damages for "willful and malicious misappropriation." Ky. Rev. Stat. § 365.884. And applying Kentucky law, "[o]ur goal in construing each statute is to give effect to its plain meaning and unambiguous intent

without rendering any part meaningless.” *A.H. v. Louisville Metro Gov’t*, 612 S.W.3d 902, 908 (Ky. 2020).

We are caught somewhat between two principles: Kentucky’s definition of malice, which would include all trade-secret cases, and Kentucky’s general rule that each provision of a statute should be read to have independent effect. The parties’ agreed-upon jury instructions, requiring, “behavior motivated by spite or ill will and a disregard for the rights of another with knowledge of probable injury,” appears to us to navigate that divide. It distinguishes itself from the language of Black’s Law Dictionary, under which an injury “does not necessarily involve hatred or ill will, as a state of mind,” allowing for clearer application to trade-secrets cases. *Willful and Malicious Injury*, Black’s Law Dictionary (6th ed. 1990). But it remains within the spirit of Kentucky’s requirements for finding willful and malicious injury.

Measured against this standard, Caudill presented sufficient evidence at trial to allow a jury to find willful and malicious misappropriation. A few notable anecdotes stand out:

- While Ashurst was working for Caudill, Jarrow requested a contact email for Ashurst outside of his employee account, and immediately wrote to it asking for his collection of broccoli-related research;
- Jarrow, after learning that Ashurst had a non-disclosure agreement with Caudill, “offered to pay [Kean Ashurst] to deliver on [Caudill’s] new formula for Jarrow Formulas” (quoting trial testimony) (alterations in original);
- Jarrow accepted Ashurst’s advice to “lay on some BS” when discussing broccoli products with Caudill;
- Jarrow never informed Ashurst that he should stop working on broccoli-seed-extract products.

Taken together, these pieces of evidence show ill will towards Caudill, and a disregard of Caudill’s rights. They therefore give sufficient evidence to support the jury’s finding of willful and malicious misappropriation.

b. The Exemplary Damages and Attorney Fees Were Appropriate

Finally, in a footnote, Jarrow asserts that if the court orders a new trial on compensatory damages but affirms the finding of willful and malicious conduct, we should still vacate the exemplary damages, because they are tied to the compensatory damages, *see Tex. Advanced*

Optoelectronic, 895 F.3d at 1318, as well as the attorneys' fees award, which are based on degree of success. Because we do not disturb the compensatory damages award, the exemplary damages and attorneys' fees award do not need to be reassessed, and Jarrow does not assert any other error in those awards.

III. CONCLUSION

The judgment of the district court is **AFFIRMED** in full.

CONCURRING IN PART AND DISSENTING IN PART

KAREN NELSON MOORE, Circuit Judge, concurring in part and dissenting in part.

I join in the bulk of the per curiam opinion. I write separately because I would hold that the jury improperly awarded Caudill for its research-and-development costs because the relevant trade secret was not destroyed. As a result, I would reverse the district court's award of compensatory damages and remand for recalculation.

The majority correctly states that courts flexibly consider damages in trade-secrets disputes. But that flexibility has one relevant limit: a plaintiff may only recover "the value of the trade secret if it has been destroyed through a public disclosure by the defendant." Restatement (Third) of Unfair Competition § 45, cmt. d (Am. L. Inst. 1995).

In the often-cited case of *University Computing Co. v. Lykes-Youngstown Corp.*, the Fifth Circuit justified this rule by noting that "in most cases the defendant has utilized the secret to his advantage with no obvious effect on the plaintiff save for the relative differences in their subsequent competitive positions." 504 F.2d 518, 535 (5th Cir. 1974). If the secret is not destroyed, "the plaintiff retains the use of the secret" and therefore "the total value of the secret to the plaintiff is an inappropriate measure." *Id.*; see *Softel, Inc. v. Dragon Med. & Sci. Commc'ns, Inc.*, 118 F.3d 955, 969 (2d Cir. 1997). Thus, if a trade secret is not destroyed or revealed, the trade secret's total value is not an appropriate basis for calculating damages. If the plaintiff keeps the goose, the defendant is on the hook for only the value of the stolen golden eggs.

The Restatement presents an illustrative example:

A and B are competing manufacturers of poultry vaccines. A spends \$400,000 to develop a secret process for the production of a new vaccine. B appropriates the trade secret and begins to produce the vaccine in competition with A. B earns \$50,000 in net profits on sales of the vaccine. In the absence of evidence indicating loss to A in excess of \$50,000, A may recover B's \$50,000 profit in addition to the award of an injunction prohibiting further use of the process by B.

Restatement (Third) of Unfair Competition § 45, illustration 2 (Am. L. Inst. 1995). That illustration strongly resembles this case: A (Caudill) spends a large amount of money developing a production process, B (Jarrow) misappropriates it and earns profits from using the same process, and A can recover the profits B made, but not the money that A spent on research and development. Adhering to this rule makes sense because, as *University Computing* explained, A (Caudill) retains the ability to profit from its trade secret.

The district court dismissed this argument, concluding that the jury did not award Caudill all its requested research-and-development damages. R. 530 (Mem. Op. re: Mot. for J. as a Matter of Law at 48–49) (Page ID #25945–46). But the parties agree (and I do, too,) that the jury did award Caudill all the research-and-development costs that it incurred while it employed Ashurst.¹ This calls the Restatement’s hypothetical to mind. We should therefore apply the prohibition on the recovery of research-and-development damages to this award.

Against this conclusion, Caudill argues that Jarrow *did* destroy or diminish Caudill’s trade secret by misappropriating and using it, or at least that the jury may have so found. Appellee’s Br. at 36. But this cannot be correct. If a trade secret is “destroyed” whenever a company misappropriates and uses it without revealing its contents or destroying the physical embodiment of the secret, then the secret would be destroyed in every trade-secret case. It would be pointless to have a rule limiting research-and-development recovery to cases involving a trade secret’s destruction. Caudill cannot square the jury’s award here with foundational trade-secrets law.

Further, the majority implies that the \$2,023,000 award of compensatory damages represents the money Jarrow saved by not expending its own resources on research and development. If this were indeed how the jury had conceived of these damages, they should properly have been included in its “unjust enrichment” award, rather than its award for Caudill’s

¹The amount of actual losses awarded almost exactly matches Caudill’s research-and-development expenses over that time. R. 492-1 (Mem. in Supp. of Renewed Mot. for J. as a Matter of Law at 25 & n.11) (Page ID #21929). The parties agree that the award reflects Caudill’s research-and-development costs over that roughly eight-year period. *Id.*; Appellee Br. at 41. As a result, although we may not know with literal certainty that the jury based its damages award on those research-and-development costs, I believe that it is sufficiently obvious that we may address the legal error in the jury’s award. See *Voeltz v. Arctic Cat, Inc.*, 406 F.3d 1047, 1051 (8th Cir. 2005).

“actual losses.” R. 435 (Verdict at 3) (Page ID #19783). That the jury awarded the exact amount of Caudill’s research-and-development expenses while Ashurst worked there as Caudill’s “actual losses” is an indication that the jury improperly awarded Caudill the value of its trade secret as compensation, even though the trade secret was not destroyed. Moreover, the award here transgresses Kentucky’s law of damages. In Kentucky, as in many other states, “actual or compensatory damages seek to make the plaintiff whole by awarding an amount of money designed to equal the wrong done.” Ronald W. Eades, Kentucky Law of Damages § 2:1 (2022) (quoting *Mo-Jack Distrib., LLC v. Tamarak Snacks, LLC*, 476 S.W.3d 900, 910 (Ky. Ct. App. 2015)). “The object is not to place the plaintiff in a better position than he would have been had the wrong not been done.” *Ky. Cent. Ins. Co. v. Schneider*, 15 S.W.3d 373, 374–75 (Ky. 2000) (citing Robert E. Anderson et al., 22 Am. Jur. 2d Damages § 27 (2022)); *see also Reed v. Mercer Cnty. Fiscal Ct.*, 295 S.W. 995, 996 (Ky. 1927) (“Of course the injured party may not make a profit out of the injury”). A court may not issue an award that “result[s] in a windfall” for one party “and put[s] it in a position better than before” the harm occurred. *Level 3 Commc’ns, LLC v. TNT Constr., Inc.*, 220 F. Supp. 3d 812, 823 (W.D. Ky. 2016).

In sum, the compensatory-damages award permits Caudill to collect millions of dollars spent developing its trade secret while retaining the ability to profit indefinitely off that same trade secret. Because the jury’s award runs afoul of applicable legal principles, I would vacate the compensatory-damages award and respectfully dissent from part II.C.3 of the per curiam opinion.² I concur in the per curiam except as noted.

²I additionally dissent from Part II.C.5.b. The Kentucky Uniform Trade Secrets Act caps exemplary damages at twice the compensatory award. Ky. Rev. Stat. § 365.884(2). Because I would send the compensatory award back to the district court for recalculation, the exemplary award could require adjustment as well.