United States Court of Appeals for the Federal Circuit

TEVA PHARMACEUTICALS USA, INC., TEVA PHARMACEUTICAL INDUSTRIES, LTD., TEVA NEUROSCIENCE, INC., AND YEDA RESEARCH AND DEVELOPMENT CO., LTD.,
Plaintiffs-Appellants,

v.

SANDOZ, INC., AND MOMENTA PHARMACEUTICALS INC.,
Defendants-Appellants,

AND

MYLAN PHARMACEUTICALS INC., MYLAN INC., AND NATCO PHARMA LTD.,
Defendants-Appellants,

AND

SANDOZ INTERNATIONAL GMBH, AND NOVARTIS AG,
Defendants.

2012-1567, -1568, -1569, -1570

Appeals from the United States District Court for the Southern District of New York in consolidated Nos. 08-CV-7611 and 09-CV-8824, Judge Barbara S. Jones.

Decided: July 26, 2013

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Before RADER, *Chief Judge*, MOORE, *Circuit Judge*, and BENSON, *District Judge*.*

MOORE, *Circuit Judge*.

The defendants in these consolidated patent infringement actions (collectively, Appellants) appeal from the district court's judgment that various claims of the nine patents-in-suit asserted by the plaintiffs (collectively, Teva) are infringed, and from the court's holdings regarding indefiniteness, nonenablement, and obviousness.[1] We hold that Group I claims are invalid for indefiniteness, but that Group II claims have not been proven indefinite.[2] We also hold that the district court did not err in its conclusions that the claims are infringed, and that the Appellants failed to prove that the claims would have been obvious and are not enabled. Accordingly, we *affirm* the district court's judgments of infringement and no invalidity with respect to Group II claims, *reverse* its judgment of no invalidity with respect to Group I claims, and *remand*.

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* Honorable Dee V. Benson, District Judge, United States District Court for the District of Utah, sitting by designation.

[1] The asserted patents are: U.S. Patent Nos. 5,800,808 ('808 patent), 5,981,589 ('589 patent), 6,048,898 ('898 patent), 6,054,430 ('430 patent), 6,342,476 ('476 patent), 6,362,161 ('161 patent), 6,620,847 ('847 patent), 6,939,539 ('539 patent), and 7,199,098 ('098 patent).

[2] The six Group II claims are: claims 1 and 2 of the '430 patent, claim 1 of the '476 patent, claim 1 of the '161 patent, and claims 1 and 8 of the '098 patent. The remaining claims are collectively referred to as Group I claims.

BACKGROUND

Appellants submitted Abbreviated New Drug Applications (ANDAs) to the Food and Drug Administration (FDA) seeking approval to market generic versions of Copaxone®, a drug used in treating multiple sclerosis. Two proposed generic products, the Mylan accused product and the Sandoz accused product, are at issue in this appeal. Teva, which markets Copaxone®, sued Appellants for patent infringement under 35 U.S.C. § 271(e)(2)(A). The patents-in-suit, which share a common specification, are listed in the Approved Drug Products with Therapeutic Equivalence Evaluations (Orange Book) entry for Copaxone®. The patents-in-suit include claims reciting a product called copolymer-1 and claims reciting methods of making copolymer-1.

Copolymer-1 consists of four different amino acids (alanine, glutamic acid, lysine, and tyrosine) combined in a certain ratio to make a polypeptide product. A sample of polymeric material like copolymer-1 typically consists of a mixture of individual polymer molecules that have varying molecular weights. There are different ways to describe the resulting distribution of molecular weight values. One approach uses statistical measures, including the peak average molecular weight (M_p), number average molecular weight (M_n), and weight average molecular weight (M_w). M_p is the molecular weight of the most abundant molecule in the sample. M_n is the arithmetic mean, or the total mass of all the molecules in the sample divided by the total number of molecules. M_w is still another average molecular weight measure that is calculated differently from M_p and M_n. In a typical polymer sample, M_p, M_n, and M_w have different values.

A second approach describes how many molecules in a polymer sample have molecular weights that fall within an arbitrarily set range. For example, if 99% of the constituent molecules in a sample have molecular weights

between 1 kilodalton (kDa) and 100 kDa, the sample may be described as having 99% of its mole fraction within the molecular weight range of 1 kDa to 100 kDa.

The claims of the patents-in-suit use both approaches. Claim 1 of the '589 patent is representative of Group I claims, which use the first approach:

> Copolymer-1 having *a molecular weight of about 5 to 9 kilodaltons*, made by a process comprising the steps of:
>
> reacting protected copolymer-1 . . . ; and
>
> purifying said copolymer-1, to result in copolymer-1 *having a molecular weight of about 5 to 9 kilodaltons*.

'589 patent claim 1 (emphases added). Claim 1 of the '430 patent is representative of Group II claims, which use the second approach: "Copolymer-1 having over *75% of its mole fraction within the molecular weight range from about 2 kDa to about 20 kDa . . . .*" '430 patent claim 1 (emphasis added).

In its claim construction order, the district court did not distinguish in detail between the different contexts in which the term "molecular weight" is used in Group I and Group II claims. The court rejected the Appellants' argument that the term "molecular weight" was insolubly ambiguous because it could refer to M_p, M_n, M_w, or yet another average molecular weight measure. *Teva Pharms. USA, Inc. v. Sandoz, Inc.*, 810 F. Supp. 2d 578, 586–93, 596 (S.D.N.Y. 2011) (*Markman Order*). It construed "molecular weight" as M_p and held that the claims are not indefinite. *Id.* After a bench trial, the court held that the asserted claims are not invalid for obviousness or lack of enablement, and that the Mylan and Sandoz accused products infringe all of the asserted claims. *Teva Pharms. USA, Inc. v. Sandoz, Inc.*, 876 F. Supp. 2d 295 (S.D.N.Y. 2012) (*Opinion*).

This appeal followed. We have jurisdiction under 28 U.S.C. § 1295(a)(1).

DISCUSSION

I. Definiteness

A patent's specification "must conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the inventor . . . regards as the invention." 35 U.S.C. § 112(b) (2012). "A claim is indefinite only when it is not amenable to construction or insolubly ambiguous." *Biosig Instruments, Inc. v. Nautilus, Inc.*, 715 F.3d 891, 898 (Fed. Cir. 2013). To prove indefiniteness, "an accused infringer must demonstrate by clear and convincing evidence that one skilled in the relevant art could not discern the boundaries of the claim based on the claim language, the specification, the prosecution history, and the knowledge in the relevant art." *Wellman, Inc. v. Eastman Chem. Co.*, 642 F.3d 1355, 1366 (Fed. Cir. 2011). Indefiniteness is a question of law that we review *de novo*. *Id.* at 1365–66.

Appellants argue that the term "molecular weight" renders all of the asserted claims indefinite because it can refer to different measures, including M_p, M_w, and M_n. They contend that the scope of the claims varies significantly depending on the measure and that a skilled artisan cannot ascertain the boundaries of the claims. Appellants argue that Teva inconsistently defined "molecular weight" as M_w and M_p during prosecution of two of the familial patents, reinforcing the ambiguity. Further, Appellants contend that the specification does not resolve which molecular weight measure is intended.

Appellants also contend that their indefiniteness arguments apply equally to Group I and Group II claims. They argue that even Group II claims, which refer to a molecular weight range, "necessarily refer to a copolymer-1 percentage above or below a certain average molecular

weight." Sandoz Reply Br. 17. Appellants contend that, because all of the claims recite "molecular weight," they must be indefinite.

Teva counters that the prosecution history clarifies that "molecular weight" should be construed as M_p. It contends that its response to an indefiniteness rejection of the '539 patent claims unequivocally stated that a person of skill in the art reading the specification would understand that the term "molecular weight" refers to M_p. Teva argues that the district court correctly determined that its response during prosecution of the '847 patent, where it stated that "[o]ne of ordinary skill in the art could understand that kilodalton units implies [sic] a weight average molecular weight," was not contradictory. J.A. 3229. It contends that a skilled artisan would discount this statement because it does not explicitly define "molecular weight" as M_w and because it contains an evident scientific error—any molecular weight measurement, not just M_w, may be expressed in kilodalton units.

Teva also contends that the specification resolves any ambiguity in the meaning of "molecular weight." Teva contends that the specification's reference to the Size Exclusion Chromatography (SEC) method indicates that "molecular weight" means M_p because determining M_n and M_w requires further calculations from SEC data that the specification does not describe. It further argues that Figure 1 confirms this conclusion because only M_p can be obtained directly from the molecular weight plot in that figure.

Finally, Teva contends that Group II claims refer to exact molecular weight values and are therefore not ambiguous. It argues that Group II claims recite percentages of molecules in a copolymer-1 sample that fall within a specified molecular weight range, not average values.

We agree with Appellants that Group I claims are indefinite and agree with Teva that Group II claims are not.

It is undisputed that Group I claims contain an ambiguity because their plain language does not indicate which average molecular weight measure is intended. Teva's attempt to resolve this ambiguity hinges in part on the prosecution history. But two of its prosecution statements directly contradict each other and render the ambiguity insoluble.

During prosecution of the '539 patent, the Examiner rejected pending claims as indefinite, stating that "the term 'average molecular weight' . . . is indefinite since its method of measurement is not specified, i.e. [M_n], [M_w] . . . etc." J.A. 3245. Teva stated in its response that "[o]ne of ordinary skill in the art, upon reviewing the specification, would understand that 'average molecular weight' refers to the molecular weight at the peak of the molecular weight distribution curve shown in Figure 1," *i.e.*, M_p. J.A. 3258. The claims were allowed. During prosecution of the '847 patent, the Examiner made an analogous rejection over the same claim term, stating that "the term 'average' molecular weight . . . is meaningless as a limitation without specifying its basis, *e.g.*, [M_w], [M_n], etc." J.A. 3220. Teva overcame the rejection by responding that "[o]ne of ordinary skill in the art could understand that kilodalton units implies [sic] a weight average molecular weight," *i.e.*, M_w. J.A. 3229. The only basis upon which the Examiner could have agreed that the '539 patent claims were not indefinite was that "molecular weight" means M_p. In contrast, the only basis for the Examiner's withdrawal of the indefiniteness rejection of the '847 patent claims was that the same term means M_w. Teva's two definitions cannot be reconciled.

The specification does not resolve the ambiguity. Teva's expert, Dr. Gregory Grant, testified that after examining the curve depicted in Figure 1 and the accompanying legend, a skilled artisan would know that the claim terms "molecular weight" and "average molecular weight" denote M_p. Dr. Grant also testified that Example

1's discussion of gel filtration, which refers to the SEC method for measuring molecular weight, tells a skilled artisan that "molecular weight" refers to M_p. *See* '808 patent, col. 3 ll. 6–8. He explained that only M_p, which is simply the highest point of a molecular weight curve, can be read directly from a plot of SEC data.

On *de novo* review of the district court's indefiniteness holding, we conclude that Dr. Grant's testimony does not save Group I claims from indefiniteness. As Dr. Grant himself opined, SEC does not exclusively provide M_p—both M_n and M_w can also be obtained from the data generated by the SEC method after some calculations. J.A. 1005. His testimony is consistent with that of one of Appellants' experts, who opined that SEC "can give at least peak average, number average, and weight average 'molecular weights.'" J.A. 1229. Furthermore, as illustrated in the figure below, the peaks of the curves in Figure 1 do not correspond to the values denoted as "average molecular weight" in the figure's legend (Appellants' additions in color). In fact, the 7.7 kDa value is closer to the M_w than to the M_p of the corresponding batch, which makes it difficult to conclude that M_p is the intended measure. J.A. 5285. Thus, we hold that Group I claims are indefinite.

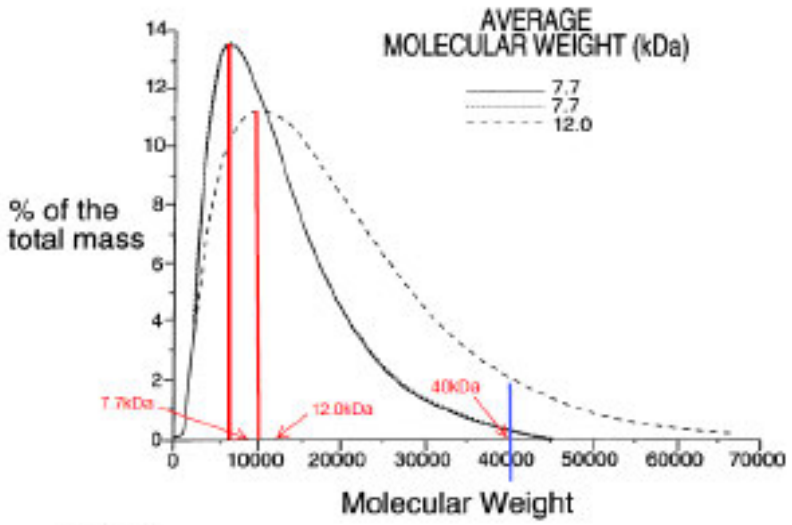

FIG. 1

Group II claims, by contrast, do not recite average molecular weight values. Instead of describing copolymer-1 in terms of a statistical measure, such as M_w, Group II claims recite the percentage of copolymer-1 molecules in a sample falling within an arbitrarily set molecular weight range. The numbers that set the boundaries of that range, such as "2 kDa" and "20 kDa" in the '430 patent claim 1, refer to precise points on the "Molecular Weight" axis, rather than to statistical properties of the polymer molecular weight curves. Like the numbers 10,000 (*i.e.*, 10 kDa) and 20,000 (*i.e.*, 20 kDa) in the figure above, "2 kDa" and "20 kDa" refer to exact values rather than statistical measures. The scope of Group II claims is thus readily ascertainable. We hold that Group II claims are not invalid for indefiniteness.

II. Enablement

A patent's specification must describe the invention and "the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains . . . to make and use the same." 35 U.S.C. § 112(a). "To be enabling, the specification of a patent must teach those skilled in the art how to make and use the full scope of the claimed invention without undue experimentation." *MagSil Corp. v. Hitachi Global Storage Techs., Inc.*, 687 F.3d 1377, 1380 (Fed. Cir. 2012) (internal quotation marks omitted). Enablement is a question of law that we review without deference, based on underlying factual inquiries that we review for clear error after a bench trial. *Cephalon, Inc. v. Watson Pharm., Inc.*, 707 F.3d 1330, 1336 (Fed. Cir. 2013).

The district court held that Appellants failed to prove that the asserted claims are not enabled for making copolymer-1 at the claimed molecular weight because a person of skill in the art would be able to measure it using either of two known calibration methods, "self-standards"

or "universal calibration." *See Opinion*, 876 F. Supp. 2d at 382–99. The court determined that polymer literature at the time of filing described both methods in detail, and that those methods could be adapted to copolymer-1. The court also found that Teva's own extensive post-filing experimentation with measurement methods did not conclusively establish lack of enablement. The court thus rejected Appellants' experts' testimony that undue experimentation would be required, holding instead that the specification and background knowledge in the art provided sufficient guidance on measuring the molecular weight.

Appellants argue that the district court erred in its enablement analysis. They contend that the specification states only that the SEC column should be "calibrated" and does not disclose which calibration standards should be used to measure the molecular weight. '808 patent, col. 3 ll. 6–8. Appellants argue that general SEC calibration methods do not readily apply because copolymer-1 is complex and exhibits unpredictable behavior. They further point to expert testimony that the commercially available standards that a skilled artisan would have been most likely to pick are in fact unreliable for measuring the molecular weight of copolymer-1.

Appellants also argue that the evidence of Teva's own difficulties with identifying appropriate calibration methods, which they contend the district court disregarded, confirms that the claims are not enabled. Appellants contend that Teva's various internal documents show the allegedly challenging development of calibration standards for measuring the molecular weight of copolymer-1, and point out that Teva deleted references to the standards from the patent application before filing. They argue that Teva's problems with molecular weight measurements continued after filing, noting that Teva switched calibration standards during the FDA approval process. Appellants thus contend that the asserted claims are not

enabled because the specification does not teach which standards a skilled artisan must use to calibrate copolymer-1 molecular weight measurements.

We perceive no clear error in the fact findings on which the district court based its enablement conclusion. Dr. Grant testified at length that it would have been routine for a skilled artisan to measure the molecular weight of copolymer-1. *See, e.g.*, J.A. 19671, 20474, 20752–54. He explained that, by calibrating the SEC column mentioned in the specification using methods that were well known at the time of filing, a skilled artisan could confirm the synthesis of copolymer-1 within the claimed molecular weight range. *Id.* The district court weighed this testimony against that of Appellants' experts and found it to be more convincing. *See, e.g.*, *Opinion*, 876 F. Supp. 2d at 398 (Appellants' expert "failed to address the extensive literature that existed [at the time of filing] regarding SEC, self-standards, and universal calibration."); *see also id.* at 392. We thus agree with Teva that the district court did not err in concluding that utilizing the calibration methods discussed by Dr. Grant would not require undue experimentation.

Appellants' arguments relating to Teva's own alleged calibration struggles also fail to demonstrate that the district court committed a reversible error. Appellants' assertion that the district court ignored Teva's internal experimentation is simply inaccurate. *See id.* at 391. Moreover, Appellants point to no evidence that undermines the district court's understanding that "it is entirely plausible that Teva experimented with different methods to deal with regulatory and other scale-up issues, rather than to correct faulty measurements." *Id.*; *see also Edwards Lifesciences AG v. CoreValve, Inc.*, 699 F.3d 1305, 1309–10 (Fed. Cir. 2012) (explaining that failure to enable a commercial embodiment does not demonstrate nonenablement under 35 U.S.C. § 112(a)). Nor do Appellants adequately explain why the claimed invention

cannot be practiced without the calibration method that Teva deleted from its draft patent application. We therefore affirm the district court's conclusion of no invalidity for lack of enablement.

III. Obviousness

A patent claim is invalid under 35 U.S.C. § 103 "if the differences between the claimed invention and the prior art are such that the claimed invention as a whole would have been obvious before the effective filing date of the claimed invention to a person having ordinary skill in the art to which the claimed invention pertains." "Obviousness . . . is a legal conclusion based on underlying facts." *Allergan, Inc. v. Sandoz Inc.*, _ F.3d _, 2013 WL 1810852, at *4 (Fed. Cir. May 1, 2013). "The underlying factual considerations in an obviousness analysis include the scope and content of the prior art, the differences between the prior art and the claimed invention, the level of ordinary skill in the art, and any relevant secondary considerations," which include "commercial success, long-left but unsolved needs, failure of others, and unexpected results." *Id.* (citations omitted).

The district court held that the asserted claims would not have been obvious in view of copolymer-1 compounds with a molecular weight higher than 10 kDa disclosed in U.S. Patent No. 3,849,550 (Teitelbaum) and other prior art references. *Opinion*, 876 F. Supp. 2d at 401–19. It found that Teitelbaum disclosed a preference for copolymer-1 compositions having molecular weights of 18–20 kDa and greater, and that other references explicitly taught away from the claimed lower molecular weight copolymer-1. The court also determined that various secondary considerations supported the conclusion of nonobviousness.

Appellants argue that the asserted claims would have been obvious because the claimed copolymer-1 differs from known copolymer-1 by only one kilodalton unit and

behaves similarly to the prior art material. Specifically, they contend that there is no evidence that copolymer-1 with a molecular weight less than 10 kDa exhibits an improved toxicity profile over the prior art copolymer-1. Appellants also dispute the district court's conclusion that the prior art taught away from the claimed invention. They acknowledge that one paragraph in a 1974 prior art reference stated that copolymer-1 with a molecular weight lower than 17 kDa was ineffective for treating multiple sclerosis. *See* J.A. 49058–59. But they counter that more recent art taught that copolymer-1 of lower molecular weight yielded promising results in human trials. *See* J.A. 36696–702. With regard to secondary considerations, Appellants urge that Teva failed to prove a nexus between lower molecular weight and Copaxone®'s commercial success. They further contend that there was no long-felt need for the claimed material because higher molecular weight copolymer-1 was known to be effective.

We see no error in the district court's obviousness analysis. The court did not clearly err when it found that the prior art expressed a preference for higher molecular weight copolymer-1, and therefore taught away from the claimed invention. *See, e.g.*, Teitelbaum, col. 1 ll. 61–62, col. 2 ll. 19–32; *see also* J.A. 20391–93, 49058–59. The court also did not clearly err in the fact findings relevant to secondary considerations, which further support the conclusion of nonobviousness. For example, the court found that "Copaxone® is coextensive with the asserted claims," *Opinion*, 876 F. Supp. 2d at 406, triggering a presumption of a nexus between the drug's commercial success and the claimed invention, *see Brown & Williamson Tobacco Corp. v. Philip Morris, Inc.*, 229 F.3d 1120, 1130 (Fed. Cir. 2000). Because Copaxone®'s commercial success is undisputed and Appellants have not rebutted the presumption of a nexus, this consideration favors Teva. We affirm the district court's determination that

Appellants failed to establish that the claimed invention would have been obvious.

IV. Infringement

Claim construction is an issue of law that we review *de novo*. *Cybor Corp. v. FAS Techs., Inc.*, 138 F.3d 1448, 1454–55 (Fed. Cir. 1998) (en banc). In construing a claim term, we look at the term's plain meaning. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1313 (Fed. Cir. 2005) (en banc). "There are only two exceptions to this general rule: 1) when a patentee sets out a definition and acts as his own lexicographer, or 2) when the patentee disavows the full scope of a claim term either in the specification or during prosecution." *Thorner v. Sony Computer Entm't Am., LLC*, 669 F.3d 1362, 1365 (Fed. Cir. 2012). In order for the doctrine of prosecution disclaimer to apply, a statement in prosecution must constitute a clear and unmistakable disclaimer of claim scope. *Omega Eng'g, Inc. v. Raytek Corp.*, 334 F.3d 1314, 1326 (Fed. Cir. 2003). Infringement is a question of fact reviewed for clear error after a bench trial. *Alza Corp. v. Mylan Labs., Inc.*, 464 F.3d 1286, 1289 (Fed. Cir. 2006).

The district court construed "copolymer-1" to mean "a mixture of polypeptides composed of alanine, glutamic acid, lysine, and tyrosine in a molar ratio of approximately 6:2:5:1." *Markman Order*, 810 F. Supp. 2d at 585; *see* '808 patent, col. 1 ll. 32–43. This construction is not in dispute. The court explained after trial that, in order to facilitate a comparison with the accused products, it converted the 6:2:5:1 ratio into percentages (42.9% alanine, 14.3% glutamic acid, 35.7% lysine, and 7.1% tyrosine). *Opinion*, 876 F. Supp. 2d at 336, 339–40. Based on various examples of copolymer-1 disclosed in the references cited in the specification, the court determined that an accused product meets the "approximately 6:2:5:1" limitation as long as its amino acid composition does not vary from the "ideal" percentages by an aggregate of more

than 12%. *Id.* at 340. The court found that the Mylan accused product and the Sandoz accused product differ from the "ideal" percentages by an aggregate of 4.4% and 4.5% respectively, and thus infringe literally. *Id.* at 335–44, 356–63. The court also found that Mylan and Sandoz infringe under the doctrine of equivalents because the overall differences between the amino acid amounts in the claims and the accused products are insubstantial. *Id.* at 345–49, 358.

A. Standard of Review

The parties dispute whether the district court's consideration of the percentages in conjunction with its consideration of the "approximately 6:2:5:1" limitation constitutes a "derivative" claim construction or a part of its infringement analysis. The former is a question of law; the latter is a question of fact. We hold that whether the amino acid percentages in the accused products meet the "approximately 6:2:5:1" limitation is a part of the district court's infringement analysis. Thus, we review the district court's conclusions for clear error.

B. "Approximately 6:2:5:1"

Appellants argue that the district court erred in its analysis of "approximately 6:2:5:1." They contend that the 6:2:5:1 ratio captures *relative* proportions of the four amino acids in copolymer-1 to one another. Appellants argue that the court "eviscerated" these relationships by analyzing "approximately 6:2:5:1" in terms of an *aggregate* amount of percent variation in the amino acid content. Mylan Br. 30. Appellants urge that examples of copolymer-1 in the references cited in the specification define the scope of "approximately 6:2:5:1," and argue that these examples allow for at most 16% variation of any particular amino acid from the "ideal" 6:2:5:1 ratio.

Appellants point out that their products contain the four amino acids in the ratios 4.6: 1.6: 3.7: 1.0 (Mylan

product) and 4.6: 1.5: 3.7: 1.0 (Sandoz product). They argue that the accused products do not literally infringe the asserted claims because, for example, the ratio of lysine to tyrosine, 3.7: 1, deviates by more than 16% from the "ideal" ratio of 5:1. Appellants further contend that the district court erred in its finding of infringement under the doctrine of equivalents because its analysis vitiated the "6:2:5:1" requirement.

Teva counters that the district court rightly decided, based on the intrinsic record and expert testimony, that "approximately 6:2:5:1" covers compositions that differ from the "ideal" percentages by an aggregate of at most 12%. Teva argues that Appellants improperly seek to limit the scope of the claims to prior art examples of copolymer-1. It also contends that Appellants fail to adequately explain why the district court's analysis should have focused on the relative ratios of the four amino acids to one another rather than their proportions relative to the whole.

Teva further contends that Appellants perform a "mathematical sleight of hand" by normalizing the ratio relative to tyrosine, the least abundant amino acid in copolymer-1. Teva Br. 32. Teva points out that, while the 6:2:5:1 ratio sets the scale at 14 (= 6 + 2 + 5 +1), Appellant Mylan's expression of the ratio in its product bases the scale on the incommensurate value of 10.9 (= 4.6 +1.5 + 3.7 + 1.0).[3] Teva argues that, in order to properly compare the Mylan accused product to the claims, the correct way to express the accused amino acid ratio is 6.0: 2.0: 4.7: 1.3 (*i.e.*, a total of 14) or to perform the comparison in terms of percentages. Teva contends that either of these approaches demonstrates that the accused products meet the "copolymer-1" limitation as construed by the district

[3] These arguments apply equally to Sandoz's accused product.

court. Teva further argues that, when rounding error is taken into account, it becomes clear that the accused products contain the four amino acids in the 6:2:5:1 ratio. Finally, it contends that the district court correctly determined that Appellants infringe under the doctrine of equivalents because the differences between the claims and the accused products are insubstantial.

We agree with Teva that the district court did not clearly err in concluding that the accused products literally infringe the asserted claims. We see no basis for overturning the district court's finding that the 6:2:5:1 ratio must be converted to percentages to ensure a comparison on the same scale with the amino acid percentages in the accused products. That comparison reveals that, in the aggregate, the four percentages in Mylan's product (42.7%, 14.4%, 33.6%, and 9.2%) differ from the "ideal" percentages (42.9%, 14.3%, 35.7%, and 7.1%) by only 4.5%.[4] Furthermore, no single amino acid differs from its corresponding "ideal" percentage by more than about 2%. *Id.* at 338.

The district court did not clearly err in determining that these small differences from the "ideal" percentages mean that the accused products literally infringe. The court's conclusion is supported by its findings regarding prior art examples of copolymer-1. *See id.* at 339–40. These examples show that, even when one of the amino acids (lysine) differs from its "ideal" percentage by more than 5%, the material is still considered "copolymer-1." *Id.* (discussing "Batch 2"); J.A. 49042. The district court's conclusion is reinforced by the undisputed testimony of Teva's expert, Dr. George Gokel, that the amino acid content in copolymer-1 is uncertain due to experimental

[4] In Sandoz's product, the corresponding percentages are 43.6%, 14.7%, 33.4%, 8.3%, amounting to an aggregate difference of 4.5% from the "ideal" percentages.

variations and measurement errors. *Id.* at 339; J.A. 19825–28. We need not decide whether a material that differs by 12% from the 6:2:5:1 ratio (expressed in percentages) infringes the asserted claims because the Mylan and Sandoz accused products deviate from the ratio by less than 5%. We see no clear error in the district court's determination that these products, which differ from the "ideal" percentages by less than 5% in the aggregate, meet the "approximately 6:2:5:1" limitation. Given this conclusion, we do not need to reach the parties' arguments regarding infringement under the doctrine of equivalents.

3. Prosecution Disclaimer

The district court also rejected Appellants' argument that Teva disclaimed copolymer-1 compositions having M_w greater than 10 kDa during prosecution. *Markman Order*, 810 F. Supp. 2d at 596–98. Appellants challenge this conclusion on appeal. They contend that their proposed products have M_w less than 10 kDa and thus do not infringe.

During prosecution of several of the asserted patents, Teva overcame rejections based on the Teitelbaum patent by arguing that, in contrast to Teitelbaum's copolymer-1 with a "minimum molecular weight of 10 kilodaltons," the pending claims cover "copolymer-1 having a molecular weight of about 5 to 9 kilodaltons." *E.g.*, J.A. 34747. Teitelbaum does not explain whether its references to "molecular weight" mean M_p or M_w, but cites an article that describes the measurement process in more detail. Teitelbaum, col. 4 ll. 31–32 (citing J.A. 49043).

Appellants argue that Teva's statements constitute a disclaimer of copolymer-1 compositions with M_w greater than 10 kDa. They contend that the article cited in Teitelbaum describes a technique that can measure only M_w. Appellants argue that an ordinary artisan would thus understand the prosecution history statements to

refer to M_w and to surrender coverage of any copolymer-1 with M_w greater than 10 kDa.

We agree with Teva that its prosecution history statements do not constitute a clear and unmistakable disclaimer. The phrase "molecular weight of 10 kilodaltons" does not expressly refer to any specific molecular weight measurement—indeed, Group I claims are indefinite due in part to the ambiguity in the meaning of "molecular weight." The connection between this statement and the article cited in Teitelbaum is too attenuated to limit the scope of the claims to copolymer-1 with M_w less than 10 kDa. Moreover, the technique discussed in that article can yield M_w or a different type of molecular weight measure, which fails to resolve the ambiguity.

CONCLUSION

We have considered the parties' remaining arguments and do not find them to be persuasive. We hold that the district court did not err in its conclusions that the claims are infringed, that Appellants failed to prove that the claims would have been obvious and are not enabled, and that Appellants failed to prove that Group II claims are indefinite. We also hold that the district court erred in concluding that Group I claims have not been proven indefinite. Accordingly, we *affirm* the district court's judgments of infringement and no invalidity with respect to Group II claims, *reverse* its judgment of no invalidity with respect to Group I claims, and *remand*.[5]

COSTS

No costs.

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[5] We note that, according to the Orange Book, all of Teva's Copaxone® patents expire on the same date: May 24, 2014. We remand for the district court to determine whether there exists any need to modify its injunction.

AFFIRMED-IN-PART, REVERSED-IN-PART AND REMANDED