United States Court of Appeals for the Federal Circuit

02-1581, -1612, 03-1011

SMITHKLINE BEECHAM CORP.
(doing business as GlaxoSmithKline),

Plaintiff-Appellant,

v.

EXCEL PHARMACEUTICALS, INC.,

Defendant-Appellee,

and

ABC CO.,

Defendant.

Stephen B. Judlowe, Morgan Lewis & Bockius LLP, of New York, New York, argued for plaintiff-appellant. With him on the brief were Brian P. Murphy, Robert G. Gibbons, Esther H. Steinhauer, David Leichtman, and Timothy P. Heaton.

William G. Gaede III, Cooley Godward LLP, of Palo Alto, California, argued for defendant-appellee. With him on the brief were Lori R.E. Ploeger and Michele E. Moreland. Of counsel was Alan A. Wright.

Appealed from: The United States District Court for the Eastern District of Virginia and
The United States District Court for the District of New Jersey

Judge Rebecca Beach Smith and
Judge William H. Walls

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DECIDED: January 29, 2004

Before RADER, Circuit Judge, PLAGER, Senior Circuit Judge, and GAJARSA, Circuit Judge.

RADER, Circuit Judge.

On summary judgment, the United States District Court for the Eastern District of Virginia determined that Excel Pharmaceuticals, Inc. and ABC Co. (collectively Excel) did not infringe Smithkline Beecham Corporation's (Glaxo's) patent on a controlled sustained release formulation of bupropion hydrochloride. SmithKline Beecham Corp. v. Excel Pharm., Inc., 214 F. Supp. 2d 581 (E.D. Va. 2002). Because an issue of material fact remains unresolved, this court vacates the judgment of the trial court and remands.

I.

Glaxo owns U.S. Patent No. 5,427,798 (the '798 patent) directed to controlled sustained release tablets containing bupropion hydrochloride. Pharmacologically, bupropion (m-chloro-α-t-butylaminopropiophenone) is a monocyclic aminoketone antidepressant. See U.S. Patent No. 4,393,078 (issued July 12, 1983) (the '078 patent). These compounds treat depression and inebriation. In addition, they facilitate the cessation of smoking by producing neural stimulation in mammalian systems. See '798 patent, col. 1, ll. 5-10; '078 patent, col. 1, ll. 29-39; U.S. Patent No. 3,819,706 (issued June 23, 1974). Due to this action as a stimulant, a spike in bupropion concentrations can have the side effect of causing seizures. '798 patent, col. 1, ll. 15-25.

To avoid the need for multiple dosages with the attendant fluctuations in plasma bupropion concentrations, Glaxo invented a sustained release formulation of the compound. While bupropion hydrochloride itself was separately patented, Glaxo obtained the '798 patent to protect its sustained release formulation of the drug. Glaxo markets this patented sustained release formulation as Wellbutrin®SR for treatment of depression and as Zyban® for smoking cessation. The key ingredient for achieving sustained release in this invention is hydroxypropyl methylcellulose (HPMC), which is a partly *O*-methylated and *O*-(2-hydroxypropylated) cellulose. In oral preparations, HPMC extends drug release by transforming into a gel that swells upon ingestion. The hydrogel state of HPMC releases bupropion hydrochloride from an ingested tablet over a period of time.

The '798 patent claims a sustained release tablet containing an admixture of bupropion hydrochloride and HPMC. However, many of the claims as originally filed did not recite HPMC as a limitation. During prosecution on the merits in the United States Patent and Trademark Office (Patent Office), the examiner rejected the claims that did not recite HPMC for lack of enablement under 35 U.S.C. § 112, ¶ 1. Glaxo amended those claims to overcome the rejection. The exemplary independent claims[1] of the '798 patent state:

1. A controlled release tablet comprising 25 to 500 mg of bupropion hydrochloride and hydroxypropyl methylcellulose, the amount of hydroxypropyl methylcellulose to one part bupropion hydrochloride being 0.19 to 1.1 and said tablet having a surface to volume ratio of 3:1 to 25:1 cm^{-1} and said tablet having a shelf life of at least one year at 59° to 77° F. and 35 to 60% relative humidity, said tablet releasing between about 20 and 60 percent of bupropion hydrochloride in water in 1 hour, between about 50 and 90 percent in 4 hours and not less than about 75 percent less in 8 hours.

14. A controlled sustained release tablet comprising an admixture of 100 mg of bupropion hydrochloride and hydroxypropyl methylcellulose which after oral administration of a single one of said tablets in adult men produces plasma levels of bupropion as free base ranging between the minimum and maximum levels as shown in Fig. 5 over twenty four hours.

18. A sustained release tablet containing a mixture of (a) 100 mg of bupropion hydrochloride and (b) means for releasing between about 25 and 45% of bupropion hydrochloride in one hour, between 60 and 85% in 4 hours and not less than 80% in eight hours in distilled water said means comprising hydroxypropyl methylcellulose.

'798 patent, col. 11, l. 40 – col. 12, l. 60 (emphases added).

Excel Pharmaceuticals, Inc. is a subsidiary of Alpharma, Inc. that licenses generic pharmaceuticals for sale by other companies. Excel filed two Abbreviated New Drug Applications (ANDAs) with the United States Food and Drug Administration, one proposing a generic substitute for Wellbutrin®SR and the other a generic substitute for Zyban®. In both ANDAs, Excel made a paragraph IV certification that its proposed sustained release bupropion hydrochloride tablets do not infringe Glaxo's '798 patent. The sustained release agent in Excel's generic composition is polyvinyl alcohol (PVA), a hydrogel-forming polymer. Glaxo, upon receiving notice of Excel's ANDA filings, commenced infringement actions in Virginia and New Jersey, alleging infringement of claims 14-15 and 18-19 of the '798 patent. The Eastern District of Virginia assigned Glaxo's case on the anti-depressant formula to the Norfolk division and assigned the case on the smoking cessation formula to the Alexandria division.

During litigation, Excel moved for summary judgment of noninfringement because its formulation does not contain HPMC. Excel contended that prosecution history estoppel precludes infringement under the doctrine of equivalents. Glaxo opposed and filed a cross-motion for an extension of time to conduct discovery. The district court determined: "When the patentee rewrote the claims to include HPMC, the amendment narrowed the scope of these claims from claiming a generic concept, sustained release of bupropion hydrochloride into the bloodstream, to a 'single species' of polymer to accomplish this property: HPMC." SmithKline, 214 F. Supp. 2d at 590. The court also concluded: "[T]his amendment was made to satisfy the requirements of 35 U.S.C. § 112, and, therefore, the amendment was 'made for a reason related to patentability.'" Id. at 591. The district court therefore granted Excel's motion for summary judgment because the ANDA does not literally infringe the '798

patent and because prosecution history estoppel bars Glaxo from invoking the doctrine of equivalents. Id. at 592.

The same day that the Norfolk division issued its opinion in the antidepressant case, the Alexandria division reassigned its smoking cessation case to Norfolk. Excel then invoked res judicata in its motion for summary judgment in the smoking cessation case. The trial court also granted that motion. Likewise, the presiding judge in the District of New Jersey dismissed that case sua sponte due to the res judicata effect of the summary judgment in the identical Virginia action.

Glaxo timely appealed these judgments to this court, which consolidated these appeals into this single appeal. Glaxo argues the district court erred in granting summary judgment to Excel, because PVA is an equivalent to HPMC which Glaxo did not surrender during prosecution of the '798 claims. This court has exclusive jurisdiction under 28 U.S.C. § 1295(a)(1).

II.

This court reviews summary judgment without deference, drawing all reasonable factual inferences in favor of the nonmoving party. Anderson v. Liberty Lobby, Inc., 477 U.S. 242, 255 (1986); Johns Hopkins Univ. v. Cellpro, Inc., 152 F.3d 1342, 1353 (Fed. Cir. 1998). This court reviews infringement, either literal or by equivalents, as a question of fact. RF Del., Inc. v. Pac. Keystone Techs., Inc., 326 F.3d 1255, 1266 (Fed. Cir. 2003). Prosecution history estoppel as a limit on the doctrine of equivalents presents a question of law. Wang Labs., Inc. v. Mitsubishi Elecs. Am., Inc., 103 F.3d 1571, 1578 (Fed. Cir. 1997). Thus, Excel is entitled to summary judgment only if the facts and inferences, when viewed in the light most favorable to Glaxo, would not persuade a reasonable jury to return a verdict for Glaxo, the nonmoving party. Anderson, 477 U.S. at 255.

A. Narrowing Amendment

Excel does not literally infringe the '798 patent because HPMC, a recited claim limitation, is not present in its sustained release bupropion formulation. Instead, Glaxo seeks a judgment of infringement under the doctrine of equivalents. Therefore, infringement depends on whether the prosecution history

of the ’798 patent forecloses Glaxo’s reliance on the doctrine of equivalents. Specifically this court must examine whether Glaxo narrowed claims 14-15 and 18-19 of the ’798 patent during prosecution, thereby presumptively surrendering the territory that embraces Excel’s sustained release agent.

According to the Supreme Court in Festo, “a narrowing amendment made to satisfy any requirement of the Patent Act may give rise to an estoppel.” Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., 535 U.S. 722, 736 (2002) (Festo VIII). Such a narrowing amendment, whether made to avoid prior art or to comply with § 112, creates a presumption that the patentee surrendered the territory between the original claims and the amended claims. Id. at 741. The patentee may rebut that presumption by showing that the alleged equivalent could not reasonably have been described at the time the amendment was made, or that the alleged equivalent was tangential to the purpose of the amendment, or that the equivalent was not foreseeable (and thus not claimable) at the time of the amendment. Id. at 740-41. This court has recently acknowledged and applied these rebutting criteria. Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., 344 F.3d 1359 (Fed. Cir. 2003) (Festo IX).

Glaxo amended claims 14-15 and 18-19 of the ’798 patent to recite HPMC. Glaxo’s application did not disclose any other sustained release mechanism. Therefore, Glaxo’s disclosure of HPMC alone could not support a broad generic claim to other sustained release mechanisms. Nonetheless Glaxo contends that this amendment did not surrender other hydrogels equivalent to HPMC. Rather, Glaxo contends that it only added HPMC to the claims to distinguish the sustained release agent in its invention from other disclosed excipients in the application.

The examiner rejected originally filed claims 14-15 and 18-19 of the ’798 patent for lack of enablement. The application claimed controlled sustained release tablets with particular plasma concentration profiles over twenty-four hours and specific bupropion release rates. The application, however, did not recite the release mechanism responsible for these profiles. The disclosed rate of release, according to the examiner, distinguished the claimed “unique tablet” from instant release tablets known in the art. The examiner stated that bupropion’s rate of release is “directly related to the release

retarding affect [sic] of hydroxypropylmethylcellulose." Thus, the examiner considered the recitation of HPMC "critical" for the controlled or sustained release aspect of the claims. The examiner also noted that the application's disclosure of a single species (HPMC) does not support claims to a "generic concept."

The examiner did not require the recitation of HPMC to distinguish the claims from other disclosed excipients. Those excipients had no bearing on the patentability of the claimed sustained release tablets over conventional instant release tablets. Rather, the examiner required Glaxo to restrict the claims to a particular controlled drug release agent, i.e., HPMC. The claims as originally written embraced all controlled sustained release tablets comprising bupropion hydrochloride. The application did not enable any sustained release agents other than HPMC, however, because it only disclosed HPMC's time release and plasma profiles. Indeed the original claims recited those profiles. The examiner expressly stated that only HPMC enabled claims with these profiles. The application did not enable one of skill in the art to make and use a broader genus of sustained release agents. Thus, the examiner's enablement argument, which Glaxo did not rebut, shows that Glaxo surrendered other controlled sustained release agents known to act as equivalents of HPMC. Festo, 535 U.S. at 734 ("A rejection indicates that the patent examiner does not believe the original claim could be patented. While the patentee has the right to appeal, his decision to forgo an appeal and submit an amended claim is taken as a concession that the invention as patented does not reach as far as the original claim.").

Glaxo also contends that claims 14-15 were not narrowed upon amendment because the amendment consisted of removing the originally recited "shelf life" limitation and replacing it with the sustained release HPMC limitation. Glaxo, relying on Lockheed, states that while the "overall scope" of these claims was "surely narrowed," the HPMC limitation itself was never narrowed by amendment because it was added while a completely unrelated limitation was deleted. See Lockheed Martin Corp. v. Space Sys./Loral Inc., 249 F.3d 1314, 1327 (Fed. Cir. 2001) (affirming the district court's finding that prosecution history estoppel barred the application of the doctrine of equivalents), vacated by 535 U.S. 1109 (2002), remanded to 324 F.3d 1308, 1321 (Fed. Cir. 2003).

To the contrary, the examiner explained that the original claims broadly embraced a genus of sustained release compounds. Because the claims did not enable use of that broader genus, the examiner required an amendment. The "sustained release tablet" phrase recited in the preamble gives life and meaning to the claims, because sustained release is an essential feature of the invention. Generally, "a preamble limits the [claimed] invention if it recites essential structure or steps, or if it is 'necessary to give life, meaning, and vitality' to the claim." Catalina Mktg. Int'l, Inc. v. Coolsavings.com, Inc., 289 F.3d 801, 808 (Fed. Cir. 2002). Thus, the amendment did not simply replace the shelf life limitation with an entirely new HPMC limitation. Rather, the amendment limited the sustained release feature to HPMC, thereby narrowing the claims. The elimination of the shelf life limitation did not affect the question of equivalents and the question of whether the claims embrace sustained release agents beyond HPMC.

B. Rebutting the Presumption

In its Festo decision, the Supreme Court explained that not all narrowing amendments surrender subject matter that the doctrine of equivalents cannot later recapture. The Court noted:

> The equivalent may have been unforeseeable at the time of the application; the rationale underlying the amendment may bear no more than a tangential relation to the equivalent in question; or there may be some other reason suggesting that the patentee could not reasonably be expected to have described the insubstantial substitute in question. In those cases the patentee can overcome the presumption that prosecution history estoppel bars a finding of equivalence.

Festo VIII, 535 U.S. at 740-41.

This court recently gave more guidance on factors influencing a finding of foreseeability:

> This criterion presents an objective inquiry, asking whether the alleged equivalent would have been unforeseeable to one of ordinary skill in the art at the time of the amendment. Usually, if the alleged equivalent represents later-developed technology (e.g., transistors in relation to vacuum tubes, or Velcro® in relation to fasteners) or technology that was not known in the relevant art, then it would not have been foreseeable. In contrast, old technology, while not always foreseeable, would more likely have been foreseeable. Indeed, if the alleged equivalent were known in the prior art in the field of the invention, it certainly should have been foreseeable at the time of the amendment. By its very nature, objective unforeseeability depends on underlying factual issues relating to, for example, the state of the art and the understanding of a hypothetical person of ordinary skill in the art at the time of the amendment. Therefore, in determining whether an alleged equivalent would have been unforeseeable, a district court may

> hear expert testimony and consider other extrinsic evidence relating to the relevant factual inquiries.

Festo IX, 344 F.3d at 1369 (citation omitted).

In this case, Glaxo could not have added PVA as an amendment in 1994 without drawing a new matter rejection; Glaxo had not recited in its application any reference to PVA or other sustained release agents beyond HPMC. Glaxo also notes that the Supreme Court emphasized an applicant's ability to claim an alleged equivalent as a hallmark of the unforeseeability excuse: "The patentee must show that at the time of the amendment one skilled in the art could not reasonably be expected to have drafted a claim that would have literally encompassed the alleged equivalent." Festo VIII, 535 U.S. at 741. Because it could not have added PVA to its claims at the time of amendment (without drawing a new matter rejection), Glaxo contends that it has on that basis alone sufficiently rebutted the Festo presumption and justified its invocation of the doctrine of equivalents. For several reasons, Glaxo is incorrect.

In the first place, new matter prohibitions are not directly germane to the doctrine of equivalents or the patentee's proof to overcome the Festo presumption. The new matter doctrine prevents an applicant from adding new subject matter to the claims unless the specification shows that the inventor had support for the addition at the time of the original filing. See Kolmes v. World Fibers Corp., 107 F.3d 1534, 1539 (Fed. Cir. 1997). Thus, the new matter doctrine ensures the temporal integrity of the amendment process in the Patent Office and does not apply to nontextual infringement. See 35 U.S.C. § 132 (2000); TurboCare Div. of Demag Delaval Turbomachinery Corp. v. Gen. Elec. Co., 264 F.3d 1111, 1118 (Fed. Cir. 2001). In fact, the quintessential example of an enforceable equivalent, after-arising technology, would always be unclaimable new matter. In that sense, the doctrine of equivalents compensates for the patentee's inability to claim unforeseeable new matter.

Glaxo also removes the Supreme Court's passage in Festo VII from its proper context. The Supreme Court ties foreseeability to whether the applicant would have been expected to know of, and thus properly claim, the proposed equivalent at the time of amendment. The Supreme Court's passage addresses the time of amendment only and does not address the instance where the applicant could not

properly claim a known equivalent because it had purposely left that known substitute out of its disclosure at the time of filing. In such an instance, the applicant should have foreseen and included the proposed equivalent in its claims at the time of filing. The Supreme Court states clearly in Festo: "The patentee, as the author of the claim language, may be expected to draft claims encompassing readily known equivalents." 535 U.S. at 740. The Supreme Court excuses an applicant from failure to claim a proposed equivalent in the event "[t]he equivalent may have been unforeseeable at the time of application," id., or, as this court has explained, at the time of the amendment. Festo IX, 344 F.3d at 1365 n.2 ("[T]he time when the narrowing amendment was made . . . is the relevant time for evaluating unforeseeability, for that is when the patentee presumptively surrendered the subject matter in question and it is at that time that foreseeability is relevant."). In any event, read in context, the Supreme Court in Festo neither excuses an applicant from failing to claim "readily known equivalents" at the time of application nor allows a patentee to rebut the Festo presumption by invoking its own failure to include a known equivalent in its original disclosure. Instead, the critical inquiry is whether Glaxo could have foreseen sustained release agents for bupropion other than HPMC at the time of filing or amendment.[2]

On this point, the record shows that at the time the amendments were made, no known hydrogels other than HPMC had been tested with bupropion hydrochloride to achieve sustained release. Thus, with respect to bupropion alone, a portion of the record might suggest that PVA was not a known sustained release agent at the time of the amendment. PVA later proved to work as a sustained release agent for bupropion, suggesting a undeniable ground for unforeseeability, namely that PVA perhaps may qualify as a later-developed technology. Because the parties developed this record before the Supreme Court's Festo opinion with its doctrines for rebuttal of the presumption, this court cannot ascertain whether Glaxo should have foreseen PVA as a sustained release agent for bupropion and included it within its literal claims.

This undeveloped record simply does not show whether ordinarily skilled artisans in this field at this time had verifiable scientific reasons to regard PVA as a foreseeable and claimable sustained release compound for bupropion or similar formulations. Glaxo relies on the declaration of its expert, Dr. Lowman, to support its contention that PVA and HPMC are functional equivalents in retarding the

release of bupropion hydrochloride from an ingested tablet. However, the record does not disclose whether HPMC and PVA were recognized as interchangeable sustained release hydrogel-forming polymers used in the art of pharmaceutical formulation at the time the claims were amended. On this incomplete record, this court cannot discern whether the prior art disclosed PVA as an alternative to HPMC as a sustained release agent so that Glaxo could rationally foresee that a competitor might substitute PVA for HPMC in designing around the amended '798 patent claims or whether PVA was not a foreseeable sustained release agent for bupropion or similar formulations.

In Glaxo Wellcome, Inc. v. Impax Laboratories, Inc., No. 03-1013, a companion case issued today, this court discredited a foreseeability rebuttal for HPC in this exact field because the record abundantly disclosed that compound's use as a release agent at the relevant time. In contrast, this record for PVA does not permit a similar finding. Because foreseeability "depends on underlying factual issues," Festo IX, 344 F.3d at 1369, this court remands to facilitate development of the record on this key point. On remand, the trial court may inquire into the specific use of PVA in the prior art of sustained drug release compositions to ascertain whether artisans of ordinary skill in this art would have foreseen the potential substitution of PVA for HPMC at the time the '798 patent claims were amended.

C. Summary

Record evidence shows that Glaxo narrowed the scope of claims 14-15 and 18-19 by amendment during prosecution of the '798 patent to recite the critical term HPMC. The reason for making these narrowing amendments was to overcome a rejection for lack of enablement because the claims improperly embraced a genus of sustained release agents. However, the present record does not address the foreseeability of PVA at the time of the narrowing amendment. Thus, this record does not address whether Glaxo has rebutted the presumption of surrendered equivalents. Upon remand, the trial court may address whether PVA constitutes a foreseeable sustained release agent or an unforeseeable technology. Because a material issue of fact remains to be resolved, Excel was not entitled to summary judgment of noninfringement as a matter of law.

III.

The district court's grant of summary judgment of noninfringement to Excel is vacated, and the case is remanded for further adjudication on the merits.

COSTS

Each party shall bear its own costs.

VACATED AND REMANDED

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[1] Independent claims 15 and 19 mirror claims 14 and 18, respectively, but recite 150 mg of bupropion hydrochloride.

[2] Of course, if PVA were a foreseeable equivalent at the time of the amendment but not at the time of the application, Glaxo could have filed a continuation-in-part application to disclose and claim the additional subject matter.