United States Court of Appeals for the Federal Circuit

2008-1594, 2009-1070

IN RE '318 PATENT INFRINGEMENT LITIGATION

JANSSEN PHARMACEUTICA N.V., JANSSEN L.P.,
and SYNAPTECH, INC.,

Plaintiffs-Appellants,

v.

TEVA PHARMACEUTICALS USA, INC. and TEVA PHARMACEUTICAL INDUSTRIES, LTD.,

Defendants,

and

MYLAN PHARMACEUTICALS, INC. and MYLAN LABORATORIES, INC.,

Defendants-Appellees,

and

DR. REDDY'S LABORATORIES, INC. and DR. REDDY'S LABORATORIES, LTD.,

Defendants,

and

BARR LABORATORIES, INC.,

Defendant-Appellee,

and

PUREPAC PHARMACEUTICAL CO. and ACTAVIS GROUP,

Defendants,

and

ALPHAPHARM PTY LTD.,

Defendant-Appellee.

2009-1088

JANSSEN PHARMACEUTICA, N.V., JANSSEN, L.P.,
ORTHO-MCNEIL NEUROLOGICS, INC., and SYNAPTECH, INC.,

Plaintiffs-Appellants,

v.

BARR LABORATORIES, INC., and BARR PHARMACEUTICALS, INC.,

Defendants-Appellees.

George F. Pappas, Covington & Burling LLP, of Washington, DC, argued for all plaintiffs-appellants. With him on the brief for Janssen Pharmaceutica, N.V., et al. were Christopher N. Sipes and Kurt G. Calia. Of counsel on the brief for plaintiff-appellant Synaptech, Inc. were Edward V. Filardi and Rachel Blitzer, Skadden, Arps, Slate, Meagher & Flom LLP, of New York, New York.

William A. Rakoczy, Rakoczy Molino Mazzochi Siwik LLP, of Chicago, Illinois, argued for defendants-appellees Mylan Pharmaceuticals, Inc., Mylan Laboratories, Inc., and Alphapharm Pty Ltd. With him on the brief for defendants-appellees Mylan Pharmaceuticals, Inc., et al. were Christine J. Siwik and Amy D. Brody; Mona Gupta, Alan H. Bernstein, James J. Kozuch, and William C. Youngblood, Caesar Rivise Bernstein Cohen & Pokotilow, Ltd., of Philadelphia, Pennsylvania, for defendant-appellee Alphapharm Pty Ltd.

George C. Lombardi, Winston & Strawn LLP, of Chicago, Illinois, argued for defendant-appellee Barr Laboratories, et al. With him on the brief were Taras A. Gracey, Lynn M. Ulrich, Ryanne L. Easley and William P. Ferranti. Of counsel was Steven J. Winger.

Appealed from: United States District Court for the District of New Jersey

Judge Joel A. Pisano

Appealed from: United States District Court for the District of Delaware

Judge Sue L. Robinson

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PUREPAC PHARMACEUTICAL CO. and ACTAVIS GROUP,

Defendants,

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ALPHAPHARM PTY LTD.,

Defendant-Appellee.

Appeals from the United States District Court for the District of Delaware, in consolidated case nos. 05-CV-356, 05-CV-371, 05-CV-380, 05-CV-381, 05-CV-382, 05-CV-420, and 05-CV-451, Judge Sue L. Robinson.

2009-1088

JANSSEN PHARMACEUTICA, N.V., JANSSEN, L.P.,
ORTHO-MCNEIL NEUROLOGICS, INC., and SYNAPTECH, INC.,

Plaintiffs-Appellants,

v.

BARR LABORATORIES, INC. and BARR PHARMACEUTICALS, INC.,

Defendants-Appellees.

Appeal from the United States District Court for the District of New Jersey in case no. 06-CV-3008, Judge Joel A. Pisano.

DECIDED: September 25, 2009

Before MAYER, GAJARSA, and DYK, Circuit Judges.

Opinion for the court filed by Circuit Judge DYK. Dissenting opinion filed by Circuit Judge GAJARSA.

DYK, Circuit Judge.

Janssen Pharmaceutica N.V., Janssen L.P., and Synaptech, Inc. ("Janssen"), appeal from a final judgment of the United States District Court for the District of Delaware. After a bench trial, the district court determined that the claims of U.S.

Patent No. 4,663,318 ("the '318 patent") were invalid for lack of enablement. In re '318 Patent Infringement Litig., 578 F. Supp. 2d 711, 737 (D. Del. 2008). We affirm.

BACKGROUND

Janssen's '318 patent claims a method for treating Alzheimer's disease with galanthamine. Claim 1 is representative. It claims "[a] method of treating Alzheimer's disease and related dementias which comprises administering to a patient suffering from such a disease a therapeutically effective amount of galanthamine or a pharmaceutically-acceptable acid addition salt thereof." '318 patent col.3 ll.6–10.[1] The application for the '318 patent was filed on January 15, 1986, by Dr. Bonnie Davis, the claimed inventor.

Alzheimer's disease is a form of progressive dementia in which memory and mental abilities steadily decline. At the time of the '318 patent's application in early 1986, researchers had observed a correlation between Alzheimer's disease symptoms and a reduced level of the neurotransmitter acetylcholine in the brain. During neurotransmission, acetylcholine is released by a transmitting neuron and binds to receptors on a receiving neuron. The two main types of acetylcholine receptors are nicotinic receptors and muscarinic receptors. Nicotinic and muscarinic receptors are present in neurons in both the central nervous system (which includes the brain and spinal cord) and the peripheral nervous system (which connects the central nervous system to muscles and organs).

In early 1986, many researchers focused primarily on the importance of central

[1] The six additional claims in the '318 patent claim the administration of galantamine orally, parenterally, or intracerebroventricularly in various dosage ranges.

nervous system muscarinic receptors in developing treatments for Alzheimer's disease. At that time, galanthamine (also spelled "galantamine"), a small molecule compound, was known to inhibit acetylcholinesterase, an enzyme that breaks down acetylcholine. Acetylcholinesterase inhibitors like galantamine increase the amount of acetylcholine available for binding to muscarinic or nicotinic receptors.

The specification for the '318 patent was only just over one page in length, and it provided almost no basis for its stated conclusion that it was possible to administer "an effective Alzheimer's disease cognitively-enhancing amount of galanthamine." Id. col.1 ll.47–48. The specification provided short summaries of six scientific papers in which galantamine had been administered to humans or animals.[2] The specification summarized the first paper as showing that administering galantamine with the drug

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[2] The specification stated:

> Galanthamine and acid addition salts thereof have, for many years, been known to have anticholinesterase properties. Cozanitis in Anaesthesia 29 163–8 (1974) describes the effect of galanthamine hydrobromide on plasma cortisol of patients receiving relaxant anaesthesia and Cozanitis et al in Acta Anesth. Scand. 24:166–168 (1980) describe the effect of galanthamine on plasma ACTH values during anaethesia. These studies showed an increase in both plasma cortisol and plasma ACTH when galanthamine was administered to patients together with atropine.
>
> Il'yuchenok et al (Chemical Abstracts 70 36296K describe the appearance of θ-rhythm on an electroencephalogram when galanthamine is administered intravenously to rabbits.
>
> Increase in short-term memory in dogs by use of galanthamine is described by Krauz in Chemical Abstracts 81 72615Z.
>
> The antagonistic effect of galanthamine to scopolamine-induced amnesia in rats is described by Chaplygina et al in Chemical Abstracts 86 115157Z, and in Zhurnal Vysshei Nervnoi Deiatelnosti imeni P. Pavlova (MOSKVA) 26:1091-1093, 1976.

'318 patent col.1 ll.11–33.

atropine to humans under anesthesia raised blood levels of the hormone cortisol, and the second paper as showing that administering galantamine and atropine together during anesthesia also raised levels of adrenocorticotropic hormone ("ACTH") in humans. See id. col.1 ll.13–21. There was no explanation of the significance of increasing cortisol or ACTH levels, but it was known to those skilled in the art in early 1986 that the production of cortisol and ACTH was controlled by the central nervous system rather than the peripheral nervous system, and that the studies thus suggested that galantamine was able to cross the blood-brain barrier and have effects within the brain.

The specification then provided brief summaries of four scientific papers reporting brain effects and positive effects on memory from administering galantamine to animals. See id. col.1 ll.22–33. The first paper concluded that galantamine intravenously administered to rabbits affected brain wave activity. The second paper concluded that galantamine increased short-term memory in dogs. The third and fourth papers concluded that galantamine reversed amnesia in rats that had been induced by administering the drug scopolamine. The specification did not suggest that such scopolamine-induced amnesia was similar to Alzheimer's disease. The specification did not provide analysis or insight connecting the results of any of these six studies to galantamine's potential to treat Alzheimer's disease in humans.

The specification noted that another prior art scientific paper described an animal testing model for replicating in animals the acetylcholine deficit and other effects of

Alzheimer's disease.[3] The specification agreed that acetylcholine deficiency in animals is a "good animal model for Alzheimer's disease in humans" because the deficiency produces "[n]umerous behavioral deficits, including the inability to learn and retain new information." Id. col.2 ll.50–52. The specification cited the prior art for the conclusion that "[d]rugs that can normalize these abnormalities would have a reasonable expectation of efficacy in Alzheimer's disease." Id. col.2 ll.52–54. However, the specification did not refer to any then-existing animal test results involving the administration of galantamine in connection with this animal model of Alzheimer's disease.

In April 1986 an examiner at the United States Patent and Trademark Office ("PTO") rejected the claims in the '318 patent's application for indefiniteness and obviousness. The examiner found the patent application's claim of a method of "diagnosing" Alzheimer's disease to be indefinite, because diagnosing "has nothing to do with treating" and because the claims thus "fail[ed] to particularly point out and distinctly claim the subject matter which applicant regards as the invention." J.A. 4108. The examiner also found the patent application's claim of a method of treating

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[3] The specification of the '318 patent stated:

> The following test provides a good animal model for Alzheimer's disease in humans: A selective lesion is placed in a subcortical nucleus (nucleus basalis of Meynert) with a resultant cortical cholinergic [i.e., acetylcholine] deficiency, similar in magnitude to that seen in early to moderate stage Alzheimer's disease. Numerous behavioral deficits, including the inability to learn and retain new information, characterizes this lesion. Drugs that can normalize these abnormalities would have a reasonable expectation of efficacy in Alzheimer's disease. Haroutunian, V, Kanof P, Davis, KL: Pharmacological alleviations of cholinergic-lesion-induced memory defects in rats. Life Sciences 37:945-952, 1985.

'318 patent col.2 ll.45–57.

Alzheimer's disease obvious—in light of the animal studies cited in the specification describing the use of galantamine to treat scopolamine-induced amnesia and in improving short-term memory. The examiner did not reject the application for lack of enablement.

In September 1986 the applicant, Dr. Davis, responded to the examiner's indefiniteness rejection by narrowing the claim language, deleting the words "and diagnosing" from the original application's claim of "[a] method of treating and diagnosing Alzheimer's disease." Dr. Davis responded to the obviousness rejection by explaining that, because the brains of the animals in the studies cited in the specification were "normal" (rather than having "physiological changes" similar to Alzheimer's disease), the studies were conducted under "circumstances having no relevance to Alzheimer's disease," and that it thus would be "baseless" to predict from such studies that galantamine would be useful to treat Alzheimer's disease. J.A. 4407.

In addition, Dr. Davis responded by stating that "experiments [are] underway using animal models which are expected to show that treatment with galanthamine does result in an improvement in the condition of those suffering from Alzheimer's disease," and that it was "expected that data from this experimental work will be available in two to three months and will be submitted to the Examiner promptly thereafter." J.A. 4405. The '318 patent issued on May 5, 1987. Dr. Davis did not learn the results of the animal testing experiments—which suggested that galantamine could be a promising Alzheimer's disease treatment—until July 1987, after the '318 patent had issued. These studies required several months and considerable effort by researchers at the Johns Hopkins University under the supervision of Dr. Joseph T. Coyle. No such testing

results were ever submitted to the PTO.

After the '318 patent issued in May 1987, Dr. Davis licensed the patent in November 1995 to Janssen. In February 2001 Janssen received approval from the Food and Drug Administration ("FDA") for using galantamine to treat mild to moderate Alzheimer's disease.

In February 2005 several generic drug manufacturers filed abbreviated new drug applications ("ANDAs") and so-called "Paragraph IV" certifications with the FDA, and Janssen sued each manufacturer for infringing the '318 patent.[4] The actions were consolidated, the defendants conceded infringement of claims 1 and 4 of the '318 patent, and a bench trial was held in May 2007 on the invalidity issues of anticipation, obviousness, and enablement.

The district court found that the '318 patent was neither anticipated nor obvious. However, the district court concluded that the '318 patent was invalid for lack of enablement on two distinct grounds. The district court found that the specification did not demonstrate utility because relevant animal testing experiments were "not finished . . . by the time the '318 patent was allowed" and the specification provided only "minimal disclosure" of utility. '318 Patent Infringement Litig., 578 F. Supp. 2d at 723, 735; see also id. at 736–37 & n.39. The district court alternatively found that the specification and claims did not "teach one of skill in the art how to use the claimed method" because the application "only surmise[d] how the claimed method could be used" without providing sufficient galantamine dosage information. Id. at 736. The

[4] A Paragraph IV certification "is defined as an act of infringement for litigation purposes." Sanofi-Synthelabo v. Apotex, Inc., 550 F.3d 1075, 1078 (Fed. Cir. 2008); see 21 U.S.C. § 355(j)(2)(A)(vii)(IV); 35 U.S.C. § 271(e).

district court entered judgment in favor of the defendants that the '318 patent was invalid for lack of enablement.

Janssen timely appealed. We have jurisdiction under 28 U.S.C. §§ 1291 and 1295(a)(1).

DISCUSSION

Enablement is a question of law we review without deference. Invitrogen Corp. v. Clontech Labs., Inc., 429 F.3d 1052, 1070 (Fed. Cir. 2005). We review the factual issues underlying enablement for clear error. Enzo Biochem, Inc. v. Calgene, Inc., 188 F.3d 1362, 1369 (Fed. Cir. 1999).

The enablement requirement is stated in 35 U.S.C. § 112.[5] Enablement is determined as of the effective filing date of the patent's application. Plant Genetic Sys., N.V. v. DeKalb Genetics Corp., 315 F.3d 1335, 1339 (Fed. Cir. 2003).

Enablement is closely related to the requirement for utility.[6] As we noted in

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[5] The statute states:

> The specification shall contain a written description of the invention, and of 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, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention.

35 U.S.C. § 112, ¶ 1 (emphases added).

[6] The utility requirement is stated in 35 U.S.C. § 101:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

(emphases added).

Process Control Corp. v. HydReclaim Corp., 190 F.3d 1350, 1358 (Fed. Cir. 1999),

> The enablement requirement of 35 U.S.C. § 112, ¶ 1 requires that the specification adequately discloses to one skilled in the relevant art how to make, or in the case of a process, how to carry out, the claimed invention without undue experimentation. The utility requirement of 35 U.S.C. § 101 mandates that any patentable invention be useful and, accordingly, the subject matter of the claim must be operable. If a patent claim fails to meet the utility requirement because it is not useful or operative, then it also fails to meet the how-to-use aspect of the enablement requirement.

(emphasis added, citations and footnote omitted). See also 3 Donald A. Chisum, Chisum on Patents § 7.03(6) (2007). The Supreme Court in Brenner v. Manson, 383 U.S. 519 (1966), discussing the utility requirement, stated that inventions must have "substantial utility" and "specific benefit exist[ing] in currently available form." Id. at 534–35.

The utility requirement prevents mere ideas from being patented. As we noted in Genentech, Inc. v. Novo Nordisk A/S, 108 F.3d 1361, 1366 (Fed. Cir. 1997), "[p]atent protection is granted in return for an enabling disclosure of an invention, not for vague intimations of general ideas that may or may not be workable. . . . Tossing out the mere germ of an idea does not constitute enabling disclosure." See also In re Fisher, 421 F.3d 1365, 1373 (Fed. Cir. 2005) (inventions fail to meet the utility requirement if their "asserted uses represent merely hypothetical possibilities, objectives which the claimed [inventions] . . . could possibly achieve, but none for which they have been used in the real world").

The utility requirement also prevents the patenting of a mere research proposal or an invention that is simply an object of research. Again as the Supreme Court stated in Brenner, "a patent is not a hunting license. It is not a reward for the search, but compensation for its successful conclusion." 383 U.S. at 536. A process or product

"which either has no known use or is useful only in the sense that it may be an object of scientific research" is not patentable. Id. at 535. As we observed in Fisher, inventions do not meet the utility requirement if they are "objects upon which scientific research could be performed with no assurance that anything useful will be discovered in the end." 421 F.3d at 1373. Allowing ideas, research proposals, or objects only of research to be patented has the potential to give priority to the wrong party and to "confer power to block off whole areas of scientific development, without compensating benefit to the public." Brenner, 383 U.S. at 534 (footnote omitted).

Typically, patent applications claiming new methods of treatment are supported by test results. But it is clear that testing need not be conducted by the inventor. In addition, human trials are not required for a therapeutic invention to be patentable. Our predecessor court, the United States Court of Customs and Patent Appeals, held in In re Krimmel that patent applications need not "prove that compounds or other materials which [the applicant] is claiming, and which [the applicant] has stated are useful for 'pharmaceutical applications' are safe, effective, and reliable for use with humans." 292 F.2d 948, 954 (CCPA 1961). As we observed in In re Brana, "[w]ere we to require Phase II testing [human trials] in order to prove utility, the associated costs would prevent many companies from obtaining patent protection on promising new inventions, thereby eliminating an incentive to pursue . . . potential cures." 51 F.3d 1560, 1568 (Fed. Cir. 1995); see also Scott v. Finney, 34 F.3d 1058, 1063–64 (Fed. Cir. 1994).

We have held that results from animal tests or in vitro experiments[7] may be

[7] "In vitro" experiments are performed in artificial environments outside living organisms (such as in a test tube or culture media), while "in vivo" experiments are performed within living organisms. Brana, 51 F.3d at 1562 n.3; Cross v. Iizuka,

sufficient to satisfy the utility requirement. Our predecessor court held in Krimmel that animal tests showing that a new nonobvious compound "exhibits some useful pharmaceutical property" are sufficient to demonstrate utility. 292 F.2d at 953. We noted in Cross v. Iizuka that "[w]e perceive no insurmountable difficulty, under appropriate circumstances, in finding that the first link in the screening chain, in vitro testing, may establish a practical utility for the [pharmaceutical] compound in question" in order for a patent to issue. 753 F.2d 1040, 1051 (Fed. Cir. 1985). We concluded that in vitro test results for a claimed pharmaceutical compound, combined with animal test results for a structurally similar compound, showed "a reasonable correlation between the disclosed in vitro utility and an in vivo activity, and therefore a rigorous correlation is not necessary where the disclosure of pharmacological activity is reasonable based upon the probative evidence." Id. at 1050.

In this case, however, neither in vitro test results nor animal test results involving the use of galantamine to treat Alzheimer's-like conditions were provided. The results from the '318 patent's proposed animal tests of galantamine for treating symptoms of Alzheimer's disease were not available at the time of the application, and the district court properly held that they could not be used to establish enablement.[8]

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753 F.2d 1040, 1043 n.6 (Fed. Cir. 1985).

[8] In Brana we held that the patent applicants had established the utility of claimed therapeutic compounds by presenting in vitro test results and evidence of structural similarity between the claimed and prior art compounds when filing the application. 51 F.3d at 1566. The applicants also submitted animal testing results for the claimed compounds to the PTO after the filing date, but our finding of enablement did not depend on these post-application test results. In Brana, moreover, unlike the present case, the testing was submitted to the PTO during prosecution. Id. at 1567.

Nor does Janssen contend that the prior art animal testing summarized in the '318 patent application's specification established utility. Indeed, both in responding to the examiner's obviousness rejection and in responding to the obviousness defense at trial, the inventor (Dr. Davis) and Janssen's witnesses explicitly stated that the utility of the invention could not be inferred from the prior art testing described in the application. The response of the inventor, Dr. Davis, to the examiner's obviousness rejection stated, with regard to studies cited in the specification showing galantamine's ability to reverse scopolamine-induced amnesia in normal rats, that "[n]othing in this teaching leads to an expectation of utility against Alzheimer's disease." J.A. 4409. The response of Dr. Davis also stated that "predict[ing] that galanthamine would be useful in treating Alzheimer's disease just because it has been reported [in the prior art studies cited in the specification] to have an effect on memory in circumstances having no relevance to Alzheimer's disease" would be "as baseless as a prediction that impaired eyesight due to diabetes would respond to devices (eyeglasses) or treatments (eye exercises) known to improve the vision of normal persons." J.A. 4407. Janssen's other expert Dr. Raskind testified that studying a compound's effects on scopolamine-induced amnesia "ignores the whole other [nicotinic] part that's damaged in Alzheimer's disease" and thus "doesn't mimic Alzheimer's disease." J.A. 9301–02. The district court agreed, finding, for example, that the utility of galantamine in treating scopolamine-induced amnesia did not establish galantamine's utility in treating Alzheimer's disease. See '318 Patent Infringement Litig., 578 F. Supp. 2d at 731 ("[S]copolamine['s] . . . usefulness as a model for [Alzheimer's disease] research has limitations. . . . [A] person of skill in the art

would not have a reasonable expectation of success for using a drug that worked for scopolamine-induced delirium to treat [Alzheimer's disease].").

However, Janssen argues that in some circumstances utility may be established without testing the proposed treatment in the claimed environment or a sufficiently similar or predictive environment; that is, Janssen argues that utility may be established by analytic reasoning. Although no case has been called to our attention where utility was established simply by analytic reasoning,[9] the PTO's Manual of Patent Examining Procedure ("MPEP") has recognized that "arguments or reasoning" may be used to establish an invention's therapeutic utility.[10]

Janssen goes on to argue that the specification here establishes utility by analytic reasoning. Relying on trial testimony, Janssen reasons that the selection and description of the prior art tests, while not directly pertinent, "set[] forth the evidence from existing studies demonstrating galantamine's effects on central nicotinic as well as muscarinic receptors and connect[ed] it to a model for Alzheimer's therapy rendering

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[9] Cases cited by Janssen did not involve patents that relied solely on analysis to establish utility. See, e.g., Brana, 51 F.3d at 1565–66 (holding that patent applicants had established the utility of claimed therapeutic compounds by presenting in vitro test results and evidence of structural similarity to therapeutically useful compounds); Atlas Powder Co. v. E.I. Dupont de Nemours & Co., 750 F.2d 1569, 1576–77 (Fed. Cir. 1984) (upholding a district court's judgment of enablement because the examples in the specification "were based on actual experiments").

[10] As stated in the MPEP, establishing "a reasonable correlation between" a compound's activity and its asserted therapeutic use may involve "statistically relevant data documenting the activity of a compound or composition, arguments or reasoning, documentary evidence (e.g., articles in scientific journals), or any combination thereof." MPEP § 2107.03 (8th ed., Rev. 7, July 2008). See also Fisher, 421 F.3d at 1372 ("The MPEP and [PTO Utility] Guidelines are not binding on this court, but may be given judicial notice to the extent they do not conflict with the statute." (quotation marks omitted)).

those effects therapeutically relevant." Janssen Reply Br. 17 n.2. Janssen asserts that the prior art tests summarized in the specification would lead one skilled in the art to infer that galantamine affected the ability of acetylcholine to bind to both nicotinic and muscarinic receptors in the brain. Janssen also asserts that the animal tests proposed in the specification as a model for Alzheimer's disease would further lead one skilled in the art to infer that the model's method of impairing brain acetylcholine availability would allow both muscarinic and nicotinic effects to be observed. Janssen thus argues that because nicotinic receptors in the brain are involved with the ability to learn, the specification suggested that galantamine could have beneficial effects on learning (unlike prior art treatments, which had primarily affected muscarinic receptors). These insights, however, are nowhere described in the specification. Nor was there evidence that someone skilled in the art would infer galantamine's utility from the specification, even if such inferences could substitute for an explicit description of utility.

Janssen relies on the testimony of its expert Dr. Coyle, the scientist who later supervised the performance of the animal studies suggested in the specification. He testified that the specification "connected the dots" for galantamine as a potential Alzheimer's disease treatment, listing the "dots" as "[g]alanthamine in humans safe and well tolerated[,] [c]holinesterase inhibitor, selective nicotinic effects, and very modest muscarinic receptor side effects." J.A. 9057–58. This testimony of Dr. Coyle on which Janssen relies, however, characterized the use of galantamine to treat Alzheimer's disease as "a <u>proposal</u> that connected the dots that raised very interesting questions and <u>worth the effort to check it out</u> in a model in which . . . both nicotinic and muscarinic

receptors would come into play." Id. (emphases added).[11] Similarly, agreement by another of Janssen's expert witnesses, Dr. Raskind, that a person of ordinary skill in the art in early 1986 would have viewed the "invention as set forth in the patent as scientifically grounded" falls far short of demonstrating that a person of ordinary skill in the art would have recognized that the specification conveyed the required assertion of a credible utility. J.A. 9305. In fact, the inventor's own testimony reveals that an ordinarily skilled artisan would not have viewed the patent's disclosure as describing the utility of galantamine as a treatment for Alzheimer's disease: "[W]hen I submitted this patent, I certainly wasn't sure, and a lot of other people weren't sure that cholinesterase inhibitors[, a category of agents that includes galantamine,] would ever work." J.A. 8747; see '318 Patent Infringement Litig., 578 F. Supp. 2d at 736.

Thus, at the end of the day, the specification, even read in the light of the knowledge of those skilled in the art, does no more than state a hypothesis and propose testing to determine the accuracy of that hypothesis. That is not sufficient. See Rasmusson v. SmithKline Beecham Corp., 413 F.3d 1318, 1325 (Fed. Cir. 2005) ("If mere plausibility were the test for enablement under section 112, applicants could obtain patent rights to 'inventions' consisting of little more than respectable guesses as to the likelihood of their success. When one of the guesses later proved true, the

[11] Janssen also relies on conclusory testimony by defendants' witness Dr. Levey to establish that the specification demonstrated utility. See J.A. 8329–30 (Dr. Levey agreeing that "the idea of using galanthamine as a treatment[] for Alzheimer's disease in 1986 [was a] scientifically reasonable judgment"). The testimony by defendants' witness Dr. Levey was in support of an obviousness defense and was not credited by the district court, and Dr. Levey testified that if the district court rejected his opinion that the '318 patent was obvious, then it was his opinion that the patent was not enabled. See J.A. 8248, 8253.

'inventor' would be rewarded the spoils instead of the party who demonstrated that the method actually worked. That scenario is not consistent with the statutory requirement that the inventor enable an invention rather than merely proposing an unproved hypothesis.").

The '318 patent's description of using galantamine to treat Alzheimer's disease thus does not satisfy the enablement requirement because the '318 patent's application did not establish utility.[12]

CONCLUSION

For the foregoing reasons, the decision of the district court is affirmed.

AFFIRMED

[12] Under circumstances where the record would not support a finding of utility, the absence of findings by the district court on the issue of whether a person skilled in the art could infer galantamine's utility from the selected prior art described in the '318 patent's specification is not error. Where disputed factual findings are irrelevant, it is not error not to make them. See 28 U.S.C. § 2111 ("On the hearing of any appeal . . . the court shall give judgment after an examination of the record without regard to errors or defects which do not affect the substantial rights of the parties."); Sampson v. Murray, 415 U.S. 61, 87 n.58 (1974) ("Admittedly, the District Court did not comply with Fed. Rule Civ. Proc. 52(a), but we do not think that we are thereby foreclosed from examining the record to determine if sufficient allegations or sufficient evidence supports the issuance of injunctive relief."); Baxter Healthcare Corp. v. Spectramed, Inc., 49 F.3d 1575, 1582 (Fed. Cir. 1995) (declining to remand because "[o]n appeal we are free to examine the record to determine whether the facts support the judgment"); Consol. Aluminum Corp. v. Foseco Int'l Ltd., 910 F.2d 804, 814 (Fed. Cir. 1990) ("[R]emand should not be a matter of rote in every case in which findings and reason are not expressly set forth. An appellate court need not close its eyes to the record where, as in this case, there is a way clearly open to affirm the district court's action."); see also Jenkens & Gilchrist v. Groia & Co., 542 F.3d 114, 119 (5th Cir. 2008) ("[A] remand is not necessary if the record would not support a finding . . . and if such a finding would be deemed clearly erroneous had it been made." (quotation marks omitted)); United States v. $242,484.00, 389 F.3d 1149, 1154 (11th Cir. 2004) ("We can and have decided appeals on the merits where the district court has not even entered any findings on each separate factual issue so long as a complete understanding of the issues is possible." (quotation marks omitted)).

COSTS

No costs.

United States Court of Appeals for the Federal Circuit

2008-1594, 2009-1070

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Defendants,

and

MYLAN PHARMACEUTICALS, INC. and MYLAN LABORATORIES, INC.,

Defendants-Appellees,

and

DR. REDDY’S LABORATORIES, INC. and DR. REDDY’S LABORATORIES, LTD.,

Defendants,

and

BARR LABORATORIES, INC.,

Defendant-Appellee,

and

PUREPAC PHARMACEUTICAL CO. and ACTAVIS GROUP,

Defendants,

and

ALPHAPHARM PTY LTD.,

Defendant-Appellee.

Appeals from the United States District Court for the District of Delaware, in consolidated case nos. 05-CV-356, 05-CV-371, 05-CV-380, 05-CV-381, 05-CV-382, 05-CV-420 and 05-CV-451, Judge Sue L. Robinson.

2009-1088

JANSSEN PHARMACEUTICA, N.V., JANSSEN, L.P.,
ORTHO-MCNEIL NEUROLOGICS, INC., and SYNAPTECH, INC.,

Plaintiffs-Appellants,

v.

BARR LABORATORIES, INC. and BARR PHARMACEUTICALS, INC.,

Defendants-Appellees.

Appeal from the United States District Court for the District of New Jersey in case no. 06-CV-3008, Judge Joel A. Pisano.

GAJARSA, Circuit Judge, dissenting.

I respectfully dissent from the majority's affirmance because the district court did not undertake the required legal analysis to determine whether an ordinarily skilled artisan reading the patent would understand it to reveal a credible utility for the invention. In addition, the district court failed to make the factual findings necessary to support the ultimate legal conclusion regarding enablement. See Koito Mfg. Co. v. Turn-Key-Tech, LLC, 381 F.3d 1142, 1149 (Fed. Cir. 2004) ("Enablement is a matter of law that we review without deference; however, this Court reviews the factual underpinnings of enablement for substantial evidence."). Thus, I would vacate the

judgment of non-enablement and remand for the district court to make the required factual findings and to perform the necessary legal analysis in the first instance.

The parties do not dispute that Dr. Davis's insight regarding galantamine's utility for treating Alzheimer's Disease (AD) was correct; later animal studies and human clinical trials proved and confirmed galantamine's effectiveness. The relevant question here is whether, at the time Dr. Davis filed her application, the patent's written description would have credibly revealed to an ordinarily skilled artisan galantamine's utility for AD treatment. See In re Cortright, 165 F.3d 1353, 1356 (Fed. Cir. 1999) (noting that the patent's written description must "illuminate a credible utility" to meet the enablement requirement). The district court failed to answer that question. Instead, the district court reasoned:

> Dr. Davis did not receive any confirming data until after the '318 patent was allowed. In view of the prior art disclosures regarding the flaws of physostigmine [a compound chemically similar to galantamine] in AD treatment, discussed previously in the context of obviousness, it does not follow that a person of ordinary skill in the art, reading the '318 patent, would have recognized that galanthamine would be effective in treating AD in the absence of any experimental proof. Put another way, since plaintiffs rely exclusively on the prior art to establish enablement, the court agrees with defendants that the '318 patent cannot both be non-obvious and enabled.

In re '318 Patent Infringement Litig., 578 F. Supp. 2d 711, 736 (D. Del. 2008) (citation and footnote omitted) ("District Court Decision").

The district court's reasoning is flawed. In general terms, an inventor may look at the prior art differently than those before her, arrive at a novel and nonobvious insight, and submit a patent application that compiles the prior art findings that led her to the insight in such a way as to render obvious in hindsight what was wholly nonobvious at

the time she filed her application. See KSR Int'l Co. v. Teleflex Inc., 550 U.S. 398, 420 (2007) ("The question is not whether the combination was obvious to the patentee but whether the combination was obvious to a person with ordinary skill in the art."); Grain Processing Corp. v. Am. Maize-Products Co., 840 F.2d 902, 907 (Fed. Cir. 1988) (In considering obviousness, "[c]are must be taken to avoid hindsight reconstruction by using 'the patent in suit as a guide through the maze of prior art references, combining the right references in the right way so as to achieve the result of the claims in suit.'" (quoting Orthopedic Equip. Co. v. United States, 702 F.2d 1005, 1012 (Fed. Cir. 1983))). As a result, the proper focus when assessing enablement is on what is disclosed in the patent, not what is taught in the prior art. See In re Ziegler, 992 F.2d 1197, 1201 (Fed. Cir. 1993) ("The how to use prong of section 112 incorporates as a matter of law the requirement of 35 U.S.C. § 101 that the specification disclose as a matter of fact a practical utility for the invention." (emphases added)). In terms of the present case, if Dr. Davis used her unique neuroendocrine perspective to examine the prior art and arrive at a novel insight about galantamine based on selected prior art findings, then the invention may be nonobvious; and if her patent disclosed those selected findings in such a manner that a person of ordinary skill would credit her insight regarding galantamine's utility, then the invention is enabled.

Unfortunately, the district court committed error here by focusing generally on what the prior art does or does not teach—the primary factual consideration underlying obviousness—while neglecting to consider what the patent text discloses to an ordinarily skilled artisan—the primary factual consideration underlying enablement. Specifically, although the '381 patent describes particular findings from six prior art

publications, the district court noted only one such publication, see District Court Decision, 578 F. Supp. 2d at 722, and did not determine how one of ordinary skill would understand those cited findings, either independently or in combination with one another. Thus, it is clear that the district court failed to focus on the necessary underlying factual findings required to ascertain how an ordinarily skilled artisan would understand the text of the patent for the purpose of establishing utility and thus enablement. Under the district court's erroneous approach, a court can invalidate for lack of enablement a patent claim to a nonobvious combination of prior art elements without ever considering what the patent actually discloses to one of ordinary skill in the art. That is contrary to law.

Nor was the district court's error harmless. See Majority Op. at 17 n.12. Because the district court failed to make the required fact-findings, which stemmed from its erroneous legal analysis, the majority must engage in extensive appellate fact-finding in order to affirm the district court's judgment. It is improper for an appellate court to become the fact-finder. This court cannot presume to have the skills of the ordinary artisan and cannot substitute its weighing of the evidence and factual conclusions for those of the fact-finder. According to the majority, even though the district court failed to make the appropriate findings or conduct the proper legal analysis, we need not vacate here because "the record would not support a finding of utility." Id. I respectfully disagree. The record clearly includes evidence that may support a finding of utility,

which the majority discounts in order to reach its erroneous conclusion.[1] For example, Janssen provided evidence indicating that the specific findings recited in the patent, as understood by one of ordinary skill in the art, disclose the following: (1) galantamine administration increases blood cortisol levels and plasma acetylcholine when muscarinic function is blocked, an indication that galantamine increases the function of central nicotinic receptors, J.A. 8906–07; J.A. 9296–97; J.A. 9302–03; (2) galantamine can cross into the brain and affect brain function, J.A. 9298; J.A. 9303; (3) galantamine also has muscarinic effects in the brain, as indicated by its ability to improve memory in

[1] In particular, the majority discounts both the disclosures made in the '318 patent specification and the value of the post-filing test results offered to support a finding of credible utility. In so doing, the majority attempts to distinguish this court's decision in In re Brana, 51 F.3d 1560 (Fed. Cir. 1995). See Majority Op. at 12 n.8. I do not believe a distinction may so readily be made. Rather, as here, evidence of post-filing test results was presented to support a finding of utility. That evidence, the court found, "alone should have been sufficient to satisfy applicants' burden [even assuming the PTO had met its initial burden, thereby shifting the burden to applicants]." Brana, 51 F.3d at 1567. The majority's claim that "unlike the present case, the testing [in Brana] was submitted to the PTO during prosecution" is misleading. The appeal in Brana was taken from the Board of Patent Appeals to this court during prosecution of a patent application. And thus the Brana panel could not possibly have intended to provide for a distinction between test results offered to support the credible utility of an otherwise enabling disclosure pre– and post–patent issuance.

Moreover, the majority's relentless focus on the need for timely test results as evidence of utility appears to conflate credible utility in the context of enablement, at issue here, with the notion of reduction to practice, which is not at issue. See, e.g., Majority Op. at 13 ("[N]o case has been called to our attention where utility was established simply by analytic reasoning [without testing]."). Such a conflation risks the introduction of an actual reduction-to-practice requirement into patent law, contrary to more than a century of settled precedent. See The Telephone Cases, 126 U.S. 1, 536 (1888) ("The law does not require that a discoverer or inventor, in order to get a patent for a process, must have succeeded in bringing his art to the highest degree of perfection; it is enough if he describes his method with sufficient clearness and precision to enable those skilled in the matter to understand what the process is, and if he points out some practicable way of putting it into operation."). To reiterate: the question here is whether the written description of the '318 patent would have illuminated to a person of ordinary skill in the art a credible utility, not whether actual utility was in fact demonstrated.

animals that have been administered scopolamine (a muscarinic receptor blocker) to induce amnesia, J.A. 8250; J.A. 8963; J.A. 9298–99; and (4) the patent discloses the importance of nicotinic receptors in AD by describing an animal model for AD that includes muscarinic and nicotinic receptors, J.A. 9302. Thus, one of ordinary skill—having the relevant background knowledge and reading the patent text at the time the application was filed—may have understood the patent to disclose the importance of nicotinic receptors in AD intervention and galantamine's promising effects on nicotinic function and memory, such that she would recognize in the patent text galantamine's credible utility as an AD treatment. Moreover, the defendants' expert agreed that "[a] person in 1986 reading the patent would believe that galanthamine would be a treatment for Alzheimer's Disease." J.A. 8327. Although the defendants' expert gave that testimony in support of his assertion that the claims are obvious, see Majority Op. at 15 n.11, the testimony is nonetheless evidence that may support a finding for the patentee on enablement. Because there is evidence of record that supports a conclusion that the '318 patent claims are not invalid, it is inappropriate for this court to weigh the evidence and make contrary factual findings, especially in the absence of any consideration by the district court of numerous prior art references that were specifically discussed in the patent. Thus, in my judgment the district court's failure to make the necessary findings and conduct the proper legal analysis is reversible error. We should remand to the district court for it to make the appropriate factual findings instead of weighing the evidence ourselves.

Finally, I disagree with the majority opinion's emphasis on the sufficiency of the evidence presented by Janssen. As both parties' correctly note, the question before us

is "whether the defendants have shown, by clear and convincing evidence, that the patent's marshalling of evidence from the technical literature of galantamine's effects, combined with its model for Alzheimer's therapy, is not sufficient for a skilled artisan to believe the invention's utility." Appellant's Br. at 27; Appellee's Br. at 29. That is a correct articulation of the question presented on appeal because, unlike many of the cases upon which the majority and district court rely, the claims in dispute here are issued patent claims, and are thus presumed valid. Yet, the majority fails to establish the defendants' burden and instead focuses almost exclusively on the sufficiency of Janssen's showing and the merit of Janssen's arguments. See, e.g., Majority Op. at 15–16 ("Similarly, [the testimony of Janssen's expert witness, Dr. Raskind] falls far short of demonstrating that a person of ordinary skill in the art would have recognized that the specification conveyed the required showing of utility."). That focus is improper. Because the district court erred as a matter of law and failed to make certain required factual findings, we cannot defer to the district court's legal conclusion or fact-findings, and thus, it is particularly problematic for the majority to require Janssen to demonstrate on appeal that its patent is valid.

For the foregoing reasons, I respectfully dissent from the majority's decision.