

NOTE: Pursuant to Fed. Cir. R. 47.6, this disposition is not citable as precedent. It is a public record.

United States Court of Appeals for the Federal Circuit

04-1326

IOWA STATE UNIVERSITY RESEARCH FOUNDATION, INC.,
VANDERBILT UNIVERSITY,
and METABOLIC TECHNOLOGIES, INC.,

Plaintiff-Appellants,

v.

WILEY ORGANICS, INC.,

Defendant/Third Party Plaintiff-
Appellee,

v.

CORNERSTONE NUTRITIONAL LABS, LLC,

Third Party Defendant.

DECIDED: March 7, 2005

Before LOURIE, SCHALL, and PROST, Circuit Judges.

LOURIE, Circuit Judge.

Iowa State University Research Foundation (“ISURF”), Vanderbilt University (“Vanderbilt”), and Metabolic Technologies, Inc. (“MTI”) appeal from the decision of the United States District Court for the Southern District of Iowa granting a motion for judgment as a matter of law (“JMOL”) that United States Patent 5,348,979 was not

infringed. Iowa State Research Found. v. Wiley Organics, Inc., 291 F. Supp. 2d 883 (S.D. Iowa 2003) (“Claim Construction Order”). Because the district court erred in its claim construction, we vacate and remand.

BACKGROUND

ISURF is an Iowa non-profit corporation that owns and manages intellectual property assets, including patents, for Iowa State University. MTI is an Iowa corporation founded by Iowa State University professor Steven L. Nissen and Vanderbilt University professor Jani N. Abumrad, two of the three listed inventors on the '979 patent. ISURF and Vanderbilt University are co-owners of that patent, and MTI is their exclusive licensee.

The '979 patent, entitled “Method of Promoting Nitrogen Retention in Humans,” relates to the use of β -hydroxy- β -methylbutyric acid, also known as “HMB,” in humans and animals. HMB, a metabolite of the amino acid leucine, occurs naturally in the human body at low levels. The '979 patent discloses that protein sparing and nitrogen retention—biological or physiological processes that promote protein formation and/or inhibit the decomposition of protein—are improved by the use of HMB supplements. Nitrogen balance—the difference between bodily nitrogen intake and total nitrogen excretion—can be estimated by monitoring urinary nitrogen levels. A negative nitrogen balance may be an indicator of protein wasting or loss of muscle protein, concerns for the elderly, injured, or those afflicted with serious diseases. '979 patent, col. 1, ll. 21-48.

The claims of the '979 patent are directed to a method of protein sparing through the administration of HMB. Claim one is representative and reads as follows:

The method of protein sparing, comprising orally or intravenously administering to a human subject an effective amount of β -hydroxy- β -

methylbutyric acid (HMB) for increasing the retention of nitrogen, said HMB being in an edible or intravenously-administrable form selected from (i) its free acid form, (ii) its sodium, potassium, or calcium salt, (iii) its methyl or ethyl ester, or (iv) its lactone, and continuing the said administration of HMB until the amount of nitrogen in the patient's urine has substantially decreased.

Id., col. 6, ll. 7-16.

Wiley Organics, Inc. ("Wiley") is a custom chemical manufacturer that produces bulk quantities of pharmaceuticals, specialty gases, enzymes, resins, polymers, solvents, food additives, and certain natural products. Claim Construction Order, 291 F. Supp. 2d at 885. From 1995 to 2000, Wiley supplied HMB exclusively to MTI. However, in 2000, Wiley began distributing HMB in bulk quantities to other companies, including Cornerstone Nutritional Labs, LLC, Pharmline, Inc., and GCI Nutrients, Inc.

In May 2002, ISURF, Vanderbilt, and MTI (collectively, "Appellants") filed an amended complaint in district court alleging that Wiley infringed the '979 patent by supplying HMB to companies other than MTI without authorization. Specifically, they sought injunctive relief and damages for Wiley's alleged contributory infringement and inducement of infringement. Shortly thereafter, Wiley filed a third-party complaint against Cornerstone Nutritional Labs, LLC, Pharmline, Inc., and GCI Nutrients, Inc., for indemnification in the event that Wiley were found liable.* In April 2003, Appellants filed a motion for claim construction to construe certain claim terms in the '979 patent and a motion for summary judgment of infringement.

Appellants argued in support of its motion for claim construction that the terms "patient" and "subject" meant any individual undergoing the protein sparing therapy

* Pharmline, Inc. and GCI Nutrients, Inc. are not named parties here, and Cornerstone Nutritional Labs, LLC takes no position in this appeal.

described in the claims, including those with a normal nitrogen balance. Wiley asserted that the claim language did not include normal, healthy individuals, such as body builders, who might use HMB to increase lean muscle mass.

In November 2003, the district court issued an opinion construing the '979 patent claims. The court decided that the meaning of “subject” and “patient” could not be resolved by dictionaries, as it found the Oxford English Dictionary definitions of both words inconclusive. Claim Construction Order, 291 F. Supp. 2d at 887. Instead, the court analyzed the use of the terms in the context of the entire claim, particularly the phrase “until the amount of nitrogen in the patient’s urine has substantially decreased.” It determined that the phrase meant that: (1) cessation of the claimed process after a substantial decrease in a patient’s urinary nitrogen levels was contemplated; and (2) the patient was likely in a setting with the capacity to monitor urinary nitrogen levels. Id. As a result, the court construed the claim terms “subject” and “patient” as referring only to individuals in a state of negative nitrogen balance—and not to normal, healthy persons—so that the patent claims were limited to the treatment of individuals who had a negative nitrogen balance. Id.

Appellants requested reconsideration of the claim construction, and the district court denied that request in February 2004. As a result, the parties agreed that Appellants could not establish a prima facie case of infringement based on the adopted construction of the '979 patent claims, and in April 2004, the district court granted a joint motion for JMOL of noninfringement. ISURF, Vanderbilt, and MTI timely appealed. We have jurisdiction pursuant to 28 U.S.C. § 1295(a)(1).

DISCUSSION

Claim construction is a question of law, Markman v. Westview Instruments, Inc., 52 F.3d 967, 970-71 (Fed. Cir. 1995) (en banc), aff'd, 517 U.S. 370 (1996), that we review de novo, Cybor Corp. v. FAS Techs., Inc., 138 F.3d 1448, 1456 (Fed. Cir. 1998) (en banc).

On appeal, Appellants argue that the district court misconstrued the terms “subject” and “patient” as encompassing only individuals with a negative nitrogen balance. They contend that the court erred by interpreting the phrase “until the amount of nitrogen in the patient’s urine has substantially decreased” to mean that: (1) cessation of the claimed process is contemplated; (2) the claimed process relates only to normalizing urinary nitrogen levels; and (3) the claimed process must be conducted in a location wherein the “subject” or “patient” is able to monitor his or her urinary nitrogen levels. Those erroneous conclusions, Appellants argue, led the court to construe the claim terms incorrectly as not including the treatment of normal, healthy individuals. Instead, they assert that by the use of the transitional phrase “comprising,” the claim is open-ended and should be construed to mean that HMB is administered at least until the amount of nitrogen in the patient’s urine has substantially decreased. Appellants also argue that the court mistakenly read the specification as drawing a contrast between groups of individuals within the scope of the claims and other groups that were not; rather, they point out that the references in the specification, as well as the only example, indicated that the treatment of normal subjects was contemplated as part of the invention. Finally, Appellants assert that the court read statements in the prosecution history out of context to support its belief that the treatment of normal humans was not considered within the scope of the '979 patent claims.

Wiley responds by arguing that the claim language and the specification indicate that a substantial decrease in urinary nitrogen levels is an important and necessary step in the claimed method. First, it asserts that removing from the '979 patent claims the need to monitor for such a substantial decrease would render the claims invalid for indefiniteness because it would be impossible to determine whether an effective amount of HMB had been administered. Wiley argues that even Appellants' proposed interpretation would not alter the need to determine when urinary nitrogen has decreased by a substantial amount. Wiley next argues that the example in the specification distinguishes normal, healthy individuals from the contemplated "patients," that is, individuals with a negative nitrogen balance. Lastly, Wiley contends that communications between the examiner and the inventors during the prosecution of the '979 patent show that the intended subjects were ill or elderly persons in a state of negative nitrogen balance.

Thus, the sole issue raised on appeal is whether the district court properly construed the claim terms "subject" and "patient" as referring only to individuals with a negative nitrogen balance. For the reasons stated below, we agree with Appellants that the district court erred in its claim construction and improperly limited the claims of the '979 patent.

We begin our analysis with the claim language itself. First, the claim uses the terms "subject" and "patient" generically and apparently interchangeably. There are no qualifications of those terms, aside from being human subjects. Importantly, there is no mention of sick or elderly individuals in the claim language. Next, the language provides that a "substantial decrease[]" in a subject's urinary nitrogen level is key to the claimed

method. The claim does not use the phrase “normalizing nitrogen balance” or otherwise refer to returning individuals in a negative nitrogen balance to a normal state. Instead, the plain meaning of the claim language indicates simply that a change in urinary nitrogen level—from some initial level to a “substantially decreased” level—is necessary. That relative change in nitrogen levels is all the claim language requires, contrary to the district court’s construction that instead limits the claim to the treatment of individuals in a negative nitrogen balance. Finally, the claim’s terminal phrase, “continuing the said administration of HMB until the amount of nitrogen in the patient’s urine has substantially decreased,” does not mean that the claim covers only a person with negative nitrogen balance. That is so because HMB will decrease the level of nitrogen in the urine of a healthy person as well as in the urine of a sick person, as the study noted below indicates.

We continue our analysis by examining the specification. First, the only experimental example in the specification is a controlled double-blind human study, subjects for which were described as having “been screened for normalcy [and] were well-nourished, healthy adults.” ’979 patent, col. 5, ll. 25-27. Those normal human subjects were studied for changes in urinary nitrogen levels after the administration of HMB and placebo. Strikingly, in describing the results of the experiment, the specification concludes: “HMB appears to be a potent agent for promoting nitrogen retention even in normal subjects.” *Id.*, col. 6, ll. 3-5 (emphasis added). Normal, healthy humans are clearly the subject of the sole experiment detailed in the specification.

Secondly, other passages in the specification describe the treatment of normal, healthy subjects. For example, the “Summary of the Invention” begins: “This invention is based on the discovery that nitrogen retention in humans can be dramatically improved by the administration of [HMB].” Id., col. 2, ll. 61-64. The same paragraph later provides that “[a] substance that can increase nitrogen retention in humans who are not experiencing a negative nitrogen balance has manifest therapeutic potential.” Id., col. 3, ll. 9-12. Those passages do not describe a limited “target population” for the claimed method consisting solely of individuals with a negative nitrogen balance, nor do they distinguish one group of subjects from another. Indeed, on balance, the claims, when read in light of the specification, are fairly read as encompassing the treatment of healthy subjects with a normal nitrogen level.

Finally, we turn to the prosecution history. The district court focused on an Examiner’s Action dated June 16, 1993, in which the examiner rejected the inventors’ claims as being obvious in view of United States Patents 4,677,121 (“Walser”) and 5,087,472 (“Nissen”). In the action letter, the examiner stated:

To the skilled artisan motivated by a reasonable expectation of success, it would have been obvious to employ HMB in patients in a state of excess muscle protein degradation because as highlighted by Nissen, HMB has been found to be more effective for improving growth metabolism of domestic mammals than KIC and the major effect of HMB is to increase markedly the development of lean tissue. . . . The skilled artisan would have immediately appreciated that HMB improves nitrogen balance because muscle development in mammals, i.e., anabolism, necessarily requires a positive nitrogen balance.

(Emphases added.) From that excerpt, the district court determined that the examiner considered the claims to cover the treatment of patients afflicted with muscle protein degradation, not healthy subjects. It also found that the phrase “improves nitrogen

balance” implies that the claims cover normalizing nitrogen levels in the body from a prior imbalanced state. Claim Construction Order, 291 F. Supp. 2d at 891.

Appellants assert that the examiner’s statements do not state or infer that the claims are limited to the treatment of individuals with a negative nitrogen balance because the rejection addressed only obviousness. They contend that the examiner’s rejection and the inventors’ response should be considered in context and should not be interpreted as limiting the claim scope. On the other hand, Wiley argues that the examiner plainly compared the scope of Walser and Nissen to the proposed claims and concluded that the same basic subject matter—treatment of protein degradation in the human body—was at issue. Because the inventors did not clarify the examiner’s understanding of the claim terms, Wiley argues, that acquiescence shows that they also believed that their claims covered only individuals with a nitrogen imbalance, not healthy subjects.

We agree with Appellants that the examiner’s statements and the inventors’ subsequent response do not present a sufficiently clear definition of the claim terms “subject” and “patient” to merit limiting the claim scope. Read in context, the passage was intended to establish a prima facie case of obviousness and did so by explaining the examiner’s interpretation of the relevant prior art, Walser and Nissen. The examiner focused on the relative effects of α -ketoisocaproate (“KIC”) and HMB in the treatment of certain domestic mammals, as described in the prior art. As pointed out by Appellants, the examiner’s use of the phrases “muscle protein degradation” and “improves nitrogen balance” originated from the Abstract of the Walser patent, not the application from which the ’979 patent issued. The inventors’ failure to rebut the examiner’s alleged

interpretation of the claim scope is of no moment, as the substance of the rejection is more about the state of the prior art and the general applicability of HMB, not whether the claims at issue were limited to treating sick patients. The rejection letter as a whole can hardly be described as having limited the intended subjects and patients in the claims to individuals “in a state of excess muscle protein degradation” in a manner warranting some form of rebuttal from the inventors.

Accordingly, based on our analysis of the claims, the specification, and the prosecution history, we conclude that the claim terms “subject” and “patient” are fairly read to include normal, healthy humans and are not limited to individuals with a nitrogen imbalance or negative nitrogen levels. We also construe the claim language “continuing the said administration of HMB until the amount of nitrogen in the patient’s urine has substantially decreased” according to its plain meaning to mean that the administration of HMB must continue up to the time that a patient’s urinary nitrogen levels have been reduced by a substantial amount. Whether Appellants can show that Wiley met that claim language is more appropriately an issue of infringement that the district court may address on remand. Insofar as the district court’s JMOL of noninfringement was based on an erroneous interpretation of those terms, other factual issues remain on infringement. We thus remand for the district court to consider in the first instance whether Wiley infringes the ’979 patent under our revised claim construction.

CONCLUSION

Because the district court erred in its claim construction, we vacate the court's order granting JMOL of noninfringement of the '979 patent and we remand for further proceedings.