IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF ILLINOIS
EASTERN DIVISION

BONE CARE INTERNATIONAL, LLC and GENZYME CORPORATION,	)	
Plaintiffs,	)	Case No. 08-cv-1083
v.	)	Judge Robert M. Dow, Jr.
PENTECH PHARMACEUTICALS, INC., and COBREK PHARMACEUTICALS, INC.,	)	
Defendants.	)	

MEMORANDUM OPINION AND ORDER

On June 4, 2010, this Court issued a memorandum opinion and order [363] construing the single disputed claim at issue in this litigation. Currently before the Court is Defendants' motion for reconsideration [389] of that claim construction order. For the reasons set forth below, Defendants' motion [389] is granted in part and denied in part.

I. Background

The parties asked the Court to construe only one claim – claim 7 – of United States Patent No. 5,602,116 (the "'116 patent"). Claim 7 provides:

> A method for lowering or maintaining lowered serum parathyroid hormone in human patients suffering from hyperparathyroidism secondary to end stage renal disease, comprising: administering to said patients an effective amount of 1α-OH-vitamin D_2 to lower and maintain lowered serum parathyroid hormone levels.

After holding a tutorial and claim construction hearing and considering the parties' claim construction briefs, the Court construed claim 7 of the '116 patent as follows:

> A method for lowering elevated blood concentrations of parathyroid hormone ("PTH") or maintaining lowered blood concentrations of PTH in human patients having increased (*i.e.*, above normal) secretion of PTH by the parathyroid gland as a result of a disease wherein the patients' kidneys no longer function at a level necessary to sustain life and thus require chronic dialysis or kidney transplantation, comprising: administering an effective amount of 1α-OH-vitamin

> D_2 to lower and maintain lowered blood concentrations of PTH with a lower incidence of hypercalcemia than is associated with the extant conventional Vitamin D_3 treatments.

Defendants request reconsideration of the claim construction order in two respects. First, Defendants maintain that the Court committed a manifest error of law by construing claim 7 to include a limitation for "a lower incidence of hypercalcemia than is associated with the extant conventional Vitamin D3 treatments." Second, Defendants contend that the Court misapprehended the evidence when it construed claim 7 as applying to "human patients having increased (*i.e.*, above normal) secretion of PTH," as opposed to patients with "*substantially* elevated PTH levels." In further regard to their second contention, Defendants submit that new evidence – namely, statements made by Plaintiff's expert Dr. Langman in a deposition taken after the *Markman* hearing – also compels reconsideration of the Court's construction of the claim terms "hyperparathyroidism secondary to ESRD."

II. Legal Standard

A motion to reconsider is proper when "the Court has patently misunderstood a party, or has made a decision outside the adversarial issues presented to the Court by the parties, or has made an error not of reasoning but of apprehension." *Bank of Waunakee v. Rochester Cheese Sales, Inc.*, 906 F.2d 1185, 1191 (7th Cir. 1990). A motion for reconsideration "does not provide a vehicle for a party to undo its own procedural failures, and it certainly does not allow a party to introduce new evidence or advance arguments that could and should have been presented to the district court prior to the judgment." *Bordelon v. Chicago School Reform Bd. of Trustees*, 233 F.3d 524, 529 (7th Cir. 2000). In the specific context of claim construction, a motion for reconsideration may be raised at any stage of the case. See, *e.g.*, *Jack Guttman, Inc. v. Kopykake Enterprises, Inc.*, 302 F.3d 1352, 1361 (Fed. Cir. 2002) (after preliminary injunction ruling); *The Chamberlain Group, Inc. v. Lear Corp.*, 2007 WL 551579 (N.D. Ill. Feb. 20, 2007) (after claim

construction), *rev'd*, 516 F.3d 1331 (Fed. Cir. 2008); *Cornell University v. Hewlett-Packard Co.*, 654 F. Supp. 2d 119, 128 (N.D.N.Y. 2009) (in post-trial motion for judgment as a matter of law). Indeed, the Federal Circuit has commented that "[d]istrict courts may engage in a rolling claim construction, in which the court revisits and alters its interpretation of the claim terms as its understanding of the technology evolves." *Jack Guttman*, 302 F.3d at 1361.[1]

III. Analysis

To set the stage, the Court recounts the rationale for the portions of its prior construction with which Defendants take issue in their motion for reconsideration. Defendants' principal objections are directed toward the Court's construction of the term "effective amount" to include a hypercalcemia limitation. As to that term, after undertaking its analysis of the pertinent case law, evidence, and argument, the Court was not persuaded that either party's proposed construction was entirely correct. Contrary to Defendants' position, the Court felt that the disputed term was not clear on its face, and thus required construction. After review of the claim language, the specification, the prosecution history, and the remaining intrinsic and extrinsic evidence presented by the parties, the Court determined that a proper construction must include a hypercalcemia limitation. However, the Court concluded that Plaintiffs' proposed construction – seeking a limitation based on a *low* incidence of hypercalcemia – went further than the language of the claim and specification would permit. Accordingly, although the Court adopted Plaintiff's proposed construction of that term in many respects, the Court adopted its own construction in part. See Federal Judicial Center, PATENT CASE MANAGEMENT JUDICIAL GUIDE § 5.1.4.4, at 5-

[1] While the Court has revised its claim construction in light of the motion for reconsideration and briefing by both sides (see *infra*. pp. 8-11), the Court does not anticipate that additional modification will be required. As the Court has stated at recent status hearings, and the parties have echoed in their briefs, the construction of the disputed claim must be a fixed target, so that the parties can prepare for the impending October trial.

24 (2009) ("The court is free to devise its own construction of claim terms rather than adopt a construction proposed by either of the parties").

After careful review of the parties' briefs on the motion for reconsideration, the Court remains persuaded that a hypercalcemia limitation is appropriate. As the Court stressed in its initial construction, time and again, the '116 patent specification focuses on the toxic side effects associated with the use of 1 α,25-$(OH)_2$ vitamin D_3 and 1α-OH vitamin D_3 to treat hyperparathyroidism secondary to end stage renal disease. See '116 patent, col. 2, ll. 6-9; *id.*, col. 2, ll. 26-29; *id.*, col. 4, ll. 11-17; *id.*, col. 5, ll. 58-62. In particular, the specification states that "the hormonally active vitamin D3 compounds are limited in their therapeutic usefulness due to their inherent toxicities." '116 patent, col. 3, ll. 22-4. It then asserts that the "treatment method of the present invention is an alternative to conventional therapy with 1α,25-$(OH)_2$ vitamin D_3 and 1α-OH vitamin D_3; the method is characterized by providing an active vitamin D compound having *equivalent bioactivity* but *much lower toxicity* than these conventional therapies" and thus touts that "the method addresses a long felt need in secondary hyperparathyroidism therapy."[2] *Id.*, col. 4, ll. 11-19 (emphasis added).

The portions of the specification quoted above, as well as other similar references noted in the Court's original construction opinion, support the Court's conclusions that the term "effective amount" as used in claim 7 incorporates two key comparisons to the prior art. See PATENT CASE MANAGEMENT JUDICIAL GUIDE § 5.2.3.2.3.2, at 5-57 (explaining that "the patentee's manner of distinguishing his invention over the prior art may be definitional" and that "the specification's emphasis on the importance of a particular feature in solving the problems of the prior art is an important factor in defining the claims"). In particular, the Court concludes that an "effective amount" is an amount that has (1) equivalent bioactivity to the prior art – *i.e.*,

[2] See *infra* pp. 8-10.

is equally effective in lowering PTH levels – and (2) lower toxicity than the prior art – *i.e.*, is more effective in preventing the harmful side effect of hypercalcemia. See *Minn. Mining & Mfg. Co. v. Johnson & Johnson Orthopaedics, Inc.*, 976 F.2d 1559, 1566 (Fed. Cir. 1992) (affirming claim construction that looked to specification to determine "fundamental purpose and significance" of invention that was intended to overcome problems associated with prior art); *cf. Abbott Labs. v. Andrx Pharmaceuticals, Inc.*, 452 F.3d 1331, 1345 (Fed. Cir. 2006) (key component of claim is that it improves adverse side effects compared with other compositions).

The remaining question, as Plaintiffs frame it, is "what form should that limitation take?" And in answering that question, the Court agrees with Defendants that some refinement is necessary. However, as explained below, the alterations that the Court deems necessary are not to avoid indefiniteness or invalidity, as Defendants contend, but rather to ensure clarity and accuracy.

A. Defendants' Indefiniteness Argument

Defendants argue that the hypercalcemia limitation set forth in the Court's claim construction order renders claim 7 indefinite and consequently invalid. According to Defendants, the Court committed a manifest error of law by not construing claim 7 to avoid that invalidity.

The definiteness requirement, which is set forth in 35 U.S.C. § 112, provides that "[t]he specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention." The purpose of the requirement is to "ensure that the claims delineate the scope of the invention using language that adequately notifies the public of the patentee's right to exclude." *Young v. Lumenis, Inc.*, 492 F.3d 1336, 1346 (Fed. Cir. 2007) (citation omitted). A claim is considered to be indefinite only

when it is "not amenable to construction or [is] insolubly ambiguous," such that it cannot be "given any reasonable meaning." *Id.* "The test for indefiniteness does not depend on a potential infringer's ability to ascertain the nature of its own accused product to determine infringement, but instead on whether the claim delineates to a skilled artisan the bounds of the invention." *SmithKline Beecham Corp. v. Apotex Corp.*, 403 F.3d 1331, 1340-41 (Fed. Cir. 2005). Put differently, "[a] claim is considered indefinite if it does not reasonably apprise those skilled in the art of its scope." *Amgen, Inc. v. Chugai Pharm. Co.*, 927 F.2d 1200, 1217 (Fed. Cir. 1991).

According to Defendants, the Court's construction – which calls for a comparison between the incidence of hypercalcemia associated with the claimed method and that associated with conventional Vitamin D_3 treatments – has rendered the claim indefinite because a POSA would not understand how to make the requisite comparison. For example, is the proper comparison between compounds (meaning a comparison between doxercalciferol (1α-OH-vitamin D_2) and either calcitriol (1,25-$(OH)_2$ vitamin D_3) or 1α-hydroxyvitamin D_3 (1α-OH-vitamin D_3), with all other factors being kept constant), or between treatments (meaning a comparison between 1α-OH-vitamin D_2 and either calcitriol or 1α-hydroxyvitamin D_3 where other factors such as methods of administration, dosing regimes, suspension of drug use, and drug potency are not held constant)? Defendants take the position that the comparison should be between compounds; Plaintiffs contend that it should be between treatments. If the comparison is between compounds, should the drugs be compared at equipotent doses (the doses at which the drugs achieve the same level of PTH suppression), or at equal doses, regardless of the efficacy associated with those doses?

Plaintiffs respond that because Defendants' indefiniteness argument focuses on the words used in the Court's claim construction – as opposed to the language of claim 7 itself – the

argument is improper under Federal Circuit precedent. See *Minn. Mining & Mfg. Co.*, 976 F.2d at 1567; *Honeywell Int'l, Inc. v. U.S.*, 2010 WL 2037233, at *8 (Fed. Cir. May 25, 2010). In *Minn. Mining & Mfg.*, the Defendant argued that the court's claim construction, which used the term "slippery" to define and explain the claim term "lubricant," rendered the claims indefinite because it was impossible to know how "slippery" the product had to be. 976 F.2d at 1567. The Federal Circuit rejected that argument, stating that it was "improperly framed in its use of the term 'slippery' because this term is not used in the claims." *Id.* The court went on to state that it did "not perceive any difficulty or confusion in determining what is 'lubricated' and what is not lubricated in terms of the Scholz patent." *Id.*

Minn. Mining & Mfg. and *Honeywell Int'l, Inc.* indicate that Defendants' argument – which focuses on the Court's language, not the claim language – does not identify a proper basis for a finding of claim invalidity based on indefiniteness. Moreover, the Court agrees with Judge Moran's view that an indefiniteness argument is better viewed as "a purported consequence of claim construction, not a misapprehension" (*Baldwin Graphic Systems, Inc. v. Siebert, Inc.*, 2005 WL 4034698, at *1 n.1 (N.D. Ill. Dec. 21, 2005)), and thus an argument that may be better made at a later stage of this case.[3] See also *Phillips v. AWH Corp.*, 415 F.3d 1303, 1327 (Fed. Cir. 2005) (expressing reservations about "a regime in which validity analysis is a regular component of claim construction"); *id.* at 1327-28 (noting that the doctrine of construing claims to preserve their validity is "of limited utility" and comes into play only where "the court concludes, after applying all the available tools of claim construction, that the claim is still ambiguous"). Finally, the Court believes that its revised claim construction (see below) addresses most, if not all, of Defendants' indefiniteness concerns.

[3] Plaintiffs appear to acknowledge (see Response at 8, n.10), they may have to confront at a later stage of the case what Defendants' refer to (see Reply at 3) as the "elephant in the room."

B. Defendants' Invalidity Argument

Defendants also contend that the Court must construe the claim to preserve its validity. But the Court only is required to construe claim 7 to preserve its validity if the claim is ambiguous and is susceptible to two constructions, one of which would not render it invalid. See *Phillips*, 415 F.3d at 1327 ("the maxim that claims should be construed to preserve their validity" has not been "applied * * * broadly" and is not "a regular component of claim construction." Rather, it is "limited * * * to cases in which 'the court concludes, after applying all the available tools of claim construction, that the claim is still ambiguous.'"). Here, the Court did not find any terms of the claim to be ambiguous. Rather, the Court included the hypercalcemia limitation based on its conclusion that, in the specification, the patentee had narrowed the scope of claim 7 to amounts of doxercalciferol that result in less hypercalcemia than could be achieved with 1α-OH vitamin D_3 or 1 α,25-$(OH)_2$ vitamin D_3. Consequently, the doctrine of construing claims to preserve their validity has no applicability here.

C. The Court's Revised Claim Construction

Although the Court is not persuaded by the arguments addressed above, the apparent confusion that has arisen in regard to the Court's construction persuades the Court that some clarification of its prior construction is advisable. The Court's inclusion of a hypercalcemia limitation in its construction of claim 7 followed from numerous statements in the specification which, in the Court's view, limited the scope of the claim. As noted above, those statements repeatedly compared the "present invention" to the prior art and stressed that, vis-à-vis the prior art, the present invention had equivalent bioactivity and lower toxicity. In the interest of clarity, the Court revisits the critical portions of the specification and places a finer point on its construction of claim 7.

- "These studies also indicate that at the dosage ranges required for [1 α,25-$(OH)_2$ vitamin D_3 and 1α-OH vitamin D_3] to be truly effective, toxicity in the form of hypercalcemia and hypercalciuria becomes a major problem." '116 patent, col. 2, ll. 6-9.

- "Thus, the prior art teaches that due to their toxicity, 1-hydroxylated vitamin D compounds can only be administered at dosages that are, at best, modestly beneficial in preventing or treating loss of bone or bone mineral content." '116 patent, col. 2, ll. 26-29.

- "The treatment method of the present invention is an alternative to conventional therapy with 1 α,25-$(OH)_2$ vitamin D_3 or 1α-OH vitamin D_3; the method is characterized by providing an active vitamin D compound having equivalent bioactivity but much lower toxicity than these conventional therapies." '116 patent, col. 4, ll. 11-17

- "1α-OH vitamin D_2 is equally active as 1α-OH vitamin D_3 in the healing of rickets, in the stimulation of intestinal calcium absorption and in the elevation of serum inorganic phosphorous of rachitic rats." '116 patent, col. 4, ll. 22-25.

- "In accordance with the invention, it has been found that when the analogs of formula (I) are administered to end stage renal disease patients with elevated serum parathyroid hormone, PTH concentration is lowered with significantly less hypercalcemia and hyperphosphatemia than is observed after the same amount of activated vitamin D administered in previously known formulations. Thus, the compounds of formula (I) have an improved therapeutic index relative to vitamin D_3 analogs." '116 patent, col. 5, ll. 1-9.

- "In parent application, Ser. No. 08/119,895 and its parent application, now U.S. Pat. No. 5,104,864, it has been shown that 1α-OH vitamin D_2 has the same biopotency as 1α-OH vitamin D_3 and 1 α,25-$(OH)_2$ vitamin D_3 but is much less toxic." '116 patent, col. 5, ll. 58-62.

On the basis of its reexamination of the language of the specification and the parties' commentary on the prior construction, the Court believes that certain modifications are in order. To begin with, the Court construes "effective amount" to be "an amount sufficient to" – a construction that finds support in several Federal Circuit cases. See, *e.g.*, *Abbott Laboratories v. Baxter Pharmaceutical Products, Inc.*, 334 F.3d 1274, 1277-78 (Fed. Cir. 2003) (noting that "the term 'effective amount' has a customary usage * * * mean[ing] 'the amount of Lewis acid inhibitor that will prevent the degradation of sevoflurane by a Lewis acid."); *Minn. Mining &*

Mfg. Co. v. Chemque, Inc., 303 F.3d 1294, 1299, 1304 (Fed. Cir. 2002) (affirming the district court's construction of the claim term "effective amount" to mean "a sufficient amount of the specified component to form an encapsulant having the specified properties under the specified conditions, if any"). In addition, the Court alters the back end of its construction to make clear that (1) the comparison made throughout the specification is between 1α-OH-vitamin D_2 and two specific vitamin D_3 compounds – namely, 1 α,25-$(OH)_2$ vitamin D_3 and 1α-OH vitamin D_3; and (2) the present invention claims to lower PTH with a lower incidence of hypercalcemia than would be observed using the prior art to achieve the same level of PTH suppression.[4] The Court's revised construction of claim 7 thus reads:

> A method for lowering elevated blood concentrations of parathyroid hormone ("PTH") or maintaining lowered blood concentrations of PTH in human patients having increased (*i.e.*, above normal) secretion of PTH by the parathyroid gland as a result of a disease wherein the patients' kidneys no longer function at a level necessary to sustain life and thus require chronic dialysis or kidney transplantation, comprising: administering an amount of 1α-OH-vitamin D_2 sufficient to lower and maintain lowered blood concentrations of PTH with a lower incidence of hypercalcemia than would result from using 1α,25-$(OH)_2$ vitamin D_3 or 1α-OH vitamin D_3 to achieve the same level of PTH suppression.

Within those parameters – equivalent effectiveness with respect to PTH suppression and lower toxicity – a person of ordinary skill in the art (1) would understand that the particular effective

[4] Defendants complain that the Court's claim construction resolves disputed issues of fact. Not so. The claim construction rests on what has been claimed, not what has been proven. In other words, the claim construction makes no assumptions concerning the actual superiority (or inferiority) of 1α-OH-vitamin D_2 as compared to 1α,25-$(OH)_2$ vitamin D_3 or 1α-OH vitamin D_3. Rather, the construction rests on an assertion of superiority. To the extent that there may be a gap between what has been claimed in the '116 patent and what can be proved by the evidence, that is not a claim construction issue. Nothing in the Court's claim construction forecloses Defendants from arguing (and presenting evidence) that treatment with 1α,25-$(OH)_2$ vitamin D_3 or 1α-OH vitamin D_3 is not associated with high (or higher) incidence of hypercalcemia or that Plaintiffs have no evidence that treatment with 1α-OH-vitamin D_2 results in less hypercalcemia that treatment with the vitamin D_3 compounds. If Defendants are correct as to Plaintiffs' failure of evidence, then the likely result would be that claim 7 is inoperable, not indefinite. See *Exxon Research & Eng'g Co. v. United States*, 265 F.3d 1371, 1382 (Fed.Cir.2001) (stating that inoperable embodiments present "an issue of enablement, and not indefiniteness"); *Miles Labs., Inc. v. Shandon Inc.*, 997 F.2d 870, 875 (Fed. Cir. 1993) ("The invention's operability may say nothing about a skilled artisan's understanding of the bounds of the claim.").

dosage of the various vitamin D_2 and vitamin D_3 compounds (*i.e.*, 1α-OH-vitamin D_2 or 1 α,25-$(OH)_2$ vitamin D_3 or 1α-OH vitamin D_3) varies from patient to patient and (2) would be able to determine the appropriate dosage regime to treat a given patient. Indeed, both parties acknowledge that "[d]etermination of the 'effective amount' for a given patient is within the skill of the POSA." Def.'s Claim Construction Brief [229] at 16; Pl.'s Response [433] at 8 n.8; see also *Geneva Pharmaceuticals, Inc. v. GlaxoSmithKline PLC*, 349 F.3d 1373, 1383-84 (Fed. Cir. 2003) ("'effective amount' is a common and generally acceptable term for pharmaceutical claims and is not ambiguous or indefinite, provided that a person of ordinary skill in the art could determine the specific amounts without undue experimentation").

D. Elevated v. Substantially Elevated

Finally, Defendants also seek reconsideration of the portion of the Court's construction construing claim 7 as applying to patients with "elevated PTH levels," as opposed to "substantially elevated PTH levels," as Defendants had urged. According to Defendants, the Court erred in not construing "hyperparathyroidism secondary to end stage renal disease" as a unitary term. According to Defendants, had the Court done so, it would have concluded that claim 7 is limited to patients with *substantially* elevated PTH levels. Although it is far from clear, Defendants' position appears to be that the Court's claim construction encompasses all patients with renal osteodystrophy, while (according to Defendants) it should only encompass a subset of those patients – those with secondary hyperparathyroidism. But it is not clear that only patients with secondary hyperparathyroidism have *substantially* elevated PTH levels, whereas those renal osteodystrophy patients who do not have secondary hyperparathyroidism (*i.e.*, those with osteomalacia) have only elevated PTH levels. Nor does the Court have any basis for drawing the kinds of lines that Defendants propose between "elevated," "modestly elevated," and

"substantially elevated" PTH levels. See Def. Br. at 15. Therefore, the Court declines to reconsider its construction of the term "hyperparathyroidism secondary to end stage renal disease."

IV. Conclusion

For the reasons stated above, Defendants' motion for reconsideration [389] of the Court's June 4 claim construction order is granted in part and denied in part.

Dated: July 30, 2010

Robert M. Dow, Jr.
United States District Judge