NOT FOR PUBLICATION

UNITED STATES DISTRICT COURT
DISTRICT OF NEW JERSEY

WYETH, *et al.* Plaintiffs, v. ABBOTT LABORATORIES, *et al.*, Defendants.	Civil Action No. 08-230 (JAP)
WYETH, *et al.* Plaintiffs, v. MEDTRONIC INC., *et al.*, Defendants.	Civil Action No. 08-1021(JAP) **OPINION**

PISANO, District Judge.

Plaintiffs Wyeth and Cordis Corporation (together "Cordis" or "Plaintiff") bring this patent infringement action against Defendants Abbott Laboratories, Abbott Cardiovascular Systems, Inc., (together, "Abbott") Boston Scientific Corporation, Boston Scientific Scimend, Inc. (together, "BSC"), Medtronic Inc., and Medtronic Ave. Inc. (together, "Medtronic") (Abbott, BSC and Medtronic, collectively, "Defendants"). The patents at issue

in this case are United States Patent No. 5,516,781, entitled "Method of Treating Restenosis with Rapamycin" ("the '781 patent"), United States Patent No. 5,563,146, entitled "Method of Treating Hyperproliferative Vascular Disease" ("the '146 patent"), and United States Patent No. 5,665,728, entitled "Method of Treating Hyperproliferative Vascular Disease" ("the '728 patent") (collectively, the "Morris patents"). Wyeth is the owner of these patents and Cordis an exclusive licensee. The asserted claims of these patents are directed to treating hyperproliferative vascular diseases such as restenosis through the administration of "rapamycin." Restenosis is a condition in which the growth of certain cells causes the re-narrowing of the treated blood vessel after an angioplasty procedure was performed to widen the vessel.

Defendants are manufacturers of certain drug-eluting stents that Plaintiffs allege infringe the claims of the '781, '146, and '728 patents. Abbott is the manufacturer of a drug-eluting stent named XIENCE V Everolimus Eluting Coronary Stent System ("XIENCE V stent"). According to Plaintiffs, BSC intends to launch a version of the XIENCE V stent called the Promus stent. Medtronic is the manufacturer of a drug-eluting stent known as the Endeavor Zotaralimus-Eluting Coronary Stent System. Each of these accused products allegedly compete directly with Cordis's CYPHER drug-eluting stent, which is used for the treatment of coronary artery disease.

Presently before the Court is the parties' request for claim construction. The Court held a *Markman* hearing on July 15, 2010. This Opinion addresses the proper construction of the disputed claim terms.

I. Standards for Claim Construction

In order to prevail in a patent infringement suit, a plaintiff must establish that the patent claim "covers the alleged infringer's product or process." *Markman v. Westview Instrs., Inc*., 517 U.S. 370, 116 S.Ct. 1384, 134 L.Ed.2d 577 (1996). Consequently, the first step in an infringement analysis involves determining the meaning and the scope of the claims of the patent. *Johnson Worldwide Assocs., Inc. v. Zebco Corp.*, 175 F.3d 985, 988 (Fed. Cir. 1995). Claim construction is a matter of law, *Markman v. Westview Instrs., Inc*., 52 F.3d 967, 979 (Fed. Cir. 1995) *aff'd* 517 U.S. 370 (1996), therefore, it is "[t]he duty of the trial judge . . . to determine the meaning of the claims at issue." *Exxon Chem. Patents, Inc. v. Lubrizoil Corp.*, 64 F.3d 1553, 1555 (Fed. Cir. 1995).

In *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005), the Federal Circuit emphasized that "[i]t is a bedrock principle of patent law that the claims of a patent define the invention to which the patentee is entitled the right to exclude." 415 F.3d 1312 (internal quotations omitted) (citing *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576 (Fed. Cir. 1996) ("we look to the words of the claims themselves . . . to define the scope of the patented invention"); *Markman*, 52 F.3d at 980 ("The written description part of the specification itself does not delimit the right to exclude. That is the function and purpose of claims."). Generally, the words of a claim are given their "ordinary and customary meaning," which is defined as "the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention." *Id.* at 1312-13 (citations omitted). In this regard, the Federal Circuit has noted that

It is the person of ordinary skill in the field of the invention through whose

> eyes the claims are construed. Such person is deemed to read the words used in the patent documents with an understanding of their meaning in the field, and to have knowledge of any special meaning and usage in the field. The inventor's words that are used to describe the invention--the inventor's lexicography--must be understood and interpreted by the court as they would be understood and interpreted by a person in that field of technology. Thus the court starts the decisionmaking process by reviewing the same resources as would that person, viz., the patent specification and the prosecution history.

Id. (quoting *Multiform Desiccants, Inc. v. Medzam, Ltd.*, 133 F.3d 1473, 1477 (Fed.Cir.1998)).

In the process of determining the meaning of a claim as understood by a person of ordinary skill in the art, a court may look to various sources from which the proper meaning may be discerned. These sources include "the words of the claims themselves, the remainder of the specification, the prosecution history, and extrinsic evidence concerning relevant scientific principles, the meaning of technical terms, and the state of the art." *Id.* at 1314. While a court is permitted to turn to extrinsic evidence, such evidence is generally of less significance and less value in the claim construction process. *Id.* at 1317. Extrinsic evidence would include evidence that is outside the patent and prosecution history, and may include expert testimony, dictionaries and treatises. *Id.* The Federal Circuit has noted that caution must be exercised in the use of extrinsic evidence, as this type of evidence may suffer from inherent flaws affecting its reliability in the claim construction analysis. *Id.* at 1319 ("We have viewed extrinsic evidence in general as less reliable than the patent and its prosecution history in determining how to read claim terms."). While "extrinsic evidence may be useful to the court, . . . it is unlikely to result in a reliable interpretation of patent claim scope unless considered in the context of the intrinsic evidence."

II. The Disputed Claim Terms

The parties have identified a number of disputed claim terms in each patent. The Court will address each of these in turn.

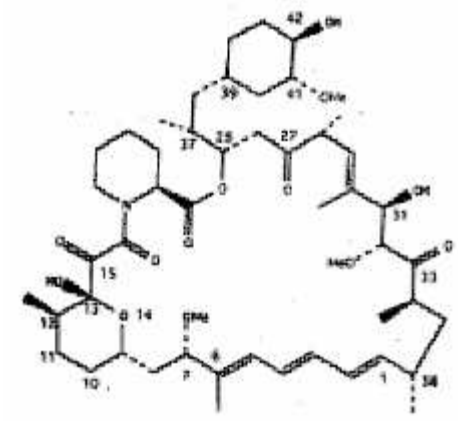
1. "Rapamycin"

This disputed term is found in claims 1 and 2 of the '781 patent, claim 1 of the '146 patent and claim 2 of the '728 patent. Claim 1 of the '781 is representative of how the term appears in the asserted claims:

> A method of treating restenosis in a mammal resulting from said mammal undergoing a percutaneous transluminal coronary angioplasty procedure which comprises administering an antirestenosis effective amount of **rapamycin** to said mammal orally, parenterally, intravascularly, intranasally, intrabronchially, transdermally, rectally, or via a vascular stent impregnated with rapamycin.

'781 patent, Claim 1.

Cordis contends that this term means "a compound containing a macrocyclic triene ring structure produced by *Streptomyces hygroscopicus*, having immunosuppressive and antirestenotic effects." Defendants argue that this disputed term should be defined to mean "the chemical compound produced by *Streptomyces hygroscopicus* which has the following structure:



The difference in the two constructions is significant–under the Plaintiff's proposed construction, "rapamycin" refers to a family of compounds, each compound in the class having a macrocyclic triene ring structure and each having immunosuppressive and antirestenotic effects. Defendants construction, on the other hand, limits "rapamycin" to a single compound known as sirolimus.

Cordis bases its proposed construction primarily upon the language of the specification of the Morris patents,[1] which describes rapamycin as follows:

> Rapamycin, a macrocyclic triene antibiotic produced by *Streptomyces hygroscopicus* [U.S. patent No. 3,929,992] has been shown to prevent the formation of humoral (IgE-like) antibodies in response to albumin allergic challenge [Martel, R., *Can. J. Physiol. Pharm*. 55:48 (1977)], inhibit murine T-cell activation [Staruch, M. *FASEB* 3:3411 (1989)], prolong survival time of organ gratis in histoincompatible rodents [Morris, R., *Med Sci. Res.* 17:877 (1989)], and inhibit transplantation rejection in mammals [Calne, R., European Patent Application 401,747]. Rapamycin blocks calcium-dependent, calcium independent, cytokine-independent and consitutive T and B cell division at the G1-s interface. Rapamycin inhibits gamma-interferon production induced by n-1 and also inhibits the gamma-interferon induced expression of membrane antigen [Morris, R. E., Transplantation Rev. 6:39 (1992)].

'781 patent, col. 3, lines 1-24. According to Plaintiff, its construction is basically "succinct shorthand" for what someone skilled in the art would understand rapamycin to be based upon this detailed description in the specification. Danishefsky Dec. ¶ 32.

Plaintiff also contends that extrinsic evidence supports its proposed construction. In January 1992, about the time the initial patent application was filed, the inventor of the Morris patents published an article in the Journal *Transplantation* entitled "**Rapamycins**:

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[1]The three patents-in-suit share the same specification.

Antifungal, Antitumor, Antiproliferative, Immunosuppressive Macrolides." Danishefsky Decl. Ex. 14 (emphasis added). Cordis points to several other more recent articles that describe various different compounds as "rapamycin." Danishefsky Decl. Exs. 9, 11, 12, 13.

Last, Cordis points to the prosecution history in support of its proposed construction. During prosecution, the examiner rejected pending claims for obviousness-type double patenting based on two other Wyeth patents. Those two other patents, U.S. Patent Nos. 5,252,579 and 5,256,790 involved changes to the macrocyclic triene ring of rapamycin. In response to the rejection, the applicant explained that the compounds in these two patents had an intentionally modified macrocyclic triene ring where the "rapamycin" in the pending application did not have these kind of changes to the ring structure.

As noted, under the Defendants proposed construction, rapamycin refers to a single chemical compound. In support of their proposed construction, they argue first that the language of the claims themselves use the word in its singular form. Second, Defendants argue that the specification similarly refers to "rapamycin" in a singular form. Further, Defendants argue that the various test results in the specification are for a single compound and cannot be for a broad class of compounds because each compound in the alleged class would not produce the same test results.

Turning to the prosecution history, Defendants argue again that the applicant, in communications with the PTO, used the term rapamycin in its singular form. Defendants also refer to the same portion of the prosecution history relied upon by Cordis as described above. In that regard, Defendants argue that because the applicant allegedly convinced the PTO that the Morris patents' "rapamycin" claims are limited to a specific rapamycin

compound and do not cover rapamycin derivatives either literally or under the doctrine of equivalents (including derivatives with only one point of structural difference), Plaintiffs are legally barred from taking a contrary position. Last, Defendants point to deposition testimony from Dr. Gregory Kopia, a former Cordis employee who, several years prior to this lawsuit, conducted a review of the Morris patents and concluded they covered only a single compound and not a class of compounds.

Having carefully examined the claim language, the specifications, the prosecution history and the extrinsic evidence cited to by the parties, the Court finds Defendants' arguments unpersuasive. First, the Court rejects the notion that because the claims and specification refers to, for example, "rapamycin" instead of "rapamycins," the patents must encompass a single compound. As Plaintiff points out, many words can be used in the singular form to refer to a group. For example, BSC's expert testified that the term "penicillin" may be used to refer to a group of antibiotics. (Weiner Decl. Ex. 19, Dorland's Illustrated Medical Dictionary (28th Ed. 1994) 1252; Weiner Decl. Ex. 4, Wandless Dep. 24:10-13.).

Second, given express definition of rapamycin in the specification, the Court declines Abbott's invitation to limit construction of the term to only the compound used in the experiments. Third, the Court is not persuaded by Defendants' prosecution history arguments and finds no clear disclaimer of additional compounds in the prosecution history. An "argument made to an examiner constitutes a disclaimer only if it is clear and unmistakable," and an "ambiguous disavowal will not suffice." *Schindler Elevator Corp. v. Otis Elevator Co.*, 593 F.3d 1275, 1286 (Fed. Cir. 2010). Last, the Court finds the extrinsic

evidence relied upon by Defendants to be of little help. Dr. Kopia, for example, does not appear to have had any involvement with the invention or prosecuting the patents-in-suit. Consequently, the Court adopts Plaintiff's proposed construction, which is derived from and is consistent with the language in the specification, and shall construe "rapamycin" to mean "a compound containing a macrocyclic triene ring structure produced by *Streptomyces hygroscopicus*, having immunosuppressive and antirestenotic effects."

2. "stent impregnated [with rapamycin]"

This disputed term is found in claims 1 and 2 of the '781 patent, claim 1 of the '146 patent and claim 2 of the '728 patent. The parties have agreed that the term "stent" should mean "a device for placement in a vessel, such as a coronary artery, to provide support." Transcript of July 15, 2010 hearing at 88. This leaves the term "impregnated" for the Court to construe.

Plaintiff argue that the term "impregnated" should mean "filled, imbued, mixed, furnished, saturated, diffused, or permeated with another substance." Defendants proposed construction is very similar: "diffused, saturated, or permeated with another substance." Defendants, however, take issue in particular with Plaintiff's use of the term "furnished," which they argue is far too broad given the context of the term as it is used in the claim. The Court agrees. As Abbott points out, "furnished" can connote any conceivable pairing of two items, which is not contemplated by the plain language of the claim. Considering the various dictionary definitions provided by the parties and the plain language of the claim, the Court finds that a person of ordinary skill in the art would understand the term "impregnated" as it is used in claims 1 and 2 of the '781 patent, claim 1 of the '146 patent

and claim 2 of the '728 patent to mean "filled, imbued, saturated, diffused or permeated with another substance," and the Court shall construe it as such.

3. "parenterally"

This disputed term is found in claims 1 and 2 of the '781 patent, claim 1 of the '146 patent and claim 2 of the '728 patent. Claim 1 of the '781 is representative of how the term appears in the asserted claims:

> A method of treating restenosis in a mammal resulting from said mammal undergoing a percutaneous transluminal coronary angioplasty procedure which comprises administering an antirestenosis effective amount of rapamycin to said mammal orally, **parenterally**, intravascularly, intranasally, intrabronchially, transdermally, rectally, or via a vascular stent impregnated with rapamycin.

'781 patent, Claim 1.

Plaintiff contends that "parenterally" means "other than by way of the intestines." Abbott and Medtronic propose that the term means "systemic administration of a substance by injection given either intervenously, intra-arterially, subcutaneously, intramuscularly, or intraperioneally." BSC proposed construction is "systemic administration of a substance by means other than through the gastrointestinal tract, in particular via intravenous, subcutaneous, intramuscular or intramedullary injection."

"[T]he claims themselves provide substantial guidance as to the meaning of particular claim terms. . . . To begin with, the context in which a term is used in the asserted claim can be highly instructive." *Phillips*, 415 F.3d at 1314. As set forth above, the Morris patents claim eight different routes of administration – "orally, parenterally, intravascularly, intranasally, intrabronchially, transdermally, rectally, or via a vascular stent impregnated

with rapamycin." Plaintiff's proposed construction, as Defendants assert, is simply too broad; there is far too much overlap with to other described routes of administration for the Court to be persuaded that a person of skill in the art would understand the term, as it is used in the Morris patents, to mean "other than by way of the intestines."

The Court finds Defendants proposed constructions to be more consistent with the ordinary meaning of the term. As defined in one medical dictionary, "parenteral" administration of a drug includes administration "[b]y some other means than through the gastrointestinal tract; referring particularly to the introduction of substances into an organism by intravenous, subcutaneous, intramuscular, or intramedullary injection." (DeWitt Decl. Ex. 22 at 1139-40). Considering the totality of the intrinsic and extrinsic evidence, the Court shall construe the term "parenterally" as "by means other than through the gastrointestinal tract, in particular via injection."

4. "antirestenosis effective amount" and "antiproliferative effective amount"

The term "antirestenosis effective amount" is found in claims 1 and 2 of the '781 patent and claim 1 of the '146 patent. The term "antiproliferative effective amount" is found in claim 2 of the '728 patent. The center of the dispute regarding this claim term is on the phrase "effective amount." Plaintiff contend that this term means "an amount that is capable of reducing the incidence or degree of [restenosis or cell proliferation]." Defendants, on the other hand, first argue that this term is indefinite. Alternatively, Defendants assert that the term should be construed as "an amount sufficient to stop or significantly reduce [restenosis or cell proliferation]."

Under § 112 of the Patent Act, to be sufficiently definite, a patent specification must

"conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention." 35 U.S.C. § 112, ¶ 2. The boundaries of the claim must be discernible to one skilled in the art based on the language of the claim, the specification, and the prosecution history, as well as that person's knowledge of the relevant field of art. *See Halliburton Energy Servs., Inc. v. M-I LLC*, 514 F.3d 1244, 1249-51 (Fed. Cir. 2008). Claims that are "not amenable to construction" or "insolubly ambiguous" are indefinite. *Datamize LLC v. Plumtree Software, Inc.*, 417 F.3d 1342, 1347 (Fed. Cir.2005).

As recently noted by the Federal Circuit, "because claim construction frequently poses difficult questions over which reasonable minds may disagree, proof of indefiniteness must meet an exacting standard." *Haemonetics Corp. v. Baxter Healthcare Corp.*, 607 F.3d 776, 783 (Fed. Cir. 2010) (quotations omitted). Consequently, to show indefiniteness, an accused infringer is required to "demonstrate by clear and convincing evidence that one of ordinary skill in the relevant art could not discern the boundaries of the claim based on the claim language, the specification, the prosecution history, and the knowledge in the relevant art." *Id.*

The Court finds Defendants have not met this burden. " '[E]ffective 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." *Geneva Pharms., Inc. v. GlaxoSmithKline PLC*, 349 F.3d 1373, 1383-84 (Fed. Cir. 2003). Defendants argue that the claim term "effective amount" is indefinite because the patents fail to provide any benchmark for what amount of

rapamycin provides an effective reduction in restenosis or proliferation. But Defendants simply have not shown by clear and convincing evidence that a person of ordinary skill in the art would be unable to determine the specific amounts without undue experimentation. Plaintiffs, on the other hand, have presented a declaration from Dr. Nigel Buller, a cardiologist experienced in the field of stents and restenosis, who notes that the specification of the Morris patents explains how an effective amount of rapamycin can be determined: by starting "with small dosages," and increasing the dose "until the optimum effect under the circumstances is reached." '781 patent at 12:14-17. Dr. Buller explains that by using the teachings in the specification, a person of ordinary skill could determine an effective amount by employing different amounts of rapamycin and measuring the results using standard angiographic and sonographic techniques. Buller Decl. ¶ 18.

Finding that the disputed term is not ambiguous and is amenable to construction, the Court must next determine the appropriate construction. The Court finds Defendants' proposed construction – which require that an "effective amount" be "sufficient to stop or significantly reduce" restenosis or cell proliferation – is flawed in that it improperly reads into the claim an "effect" that goes beyond merely a measurable effect. There simply is not support for such a requirement. The Court, therefore, shall adopt Plaintiff's proposed construction, and shall construe "antiproliferative effective amount" to mean "an amount that is capable of reducing the incidence or degree of cell proliferation." "Antirestenosis effective amount" shall be construed to mean "an amount that is capable of reducing the incidence or degree of restenosis."

III. Conclusion

For the reasons set forth above, the disputed terms at issue will be construed as indicated. An appropriate Order shall accompany this Opinion.

/s/ JOEL A. PISANO
United States District Judge

Dated: July 27, 2010