UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF INDIANA
INDIANAPOLIS DIVISION

ELI LILLY AND COMPANY,	)	
	)	
Plaintiff/Counter Defendant,	)	
	)	
v.	)	Case No. 1:17-cv-02865-TWP-MPB
	)	
APOTEX, INC.,	)	
	)	
Defendant/Counter Claimant.	)	

ENTRY ON CROSS-MOTIONS FOR SUMMARY JUDGMENT

This matter is before the Court on Cross-Motions for Summary Judgment filed pursuant to Federal Rule of Civil Procedure 56 by Plaintiff Eli Lilly and Company ("Lilly") (Filing No. 231) and Defendant Apotex, Inc. ("Apotex") (Filing No. 254). Lilly is the assignee of U.S. Patent No. 7,772,209 (the "'209 patent"), titled "Antifolate Combination Therapies," which was issued on August 10, 2010. Lilly initiated this patent infringement action against Apotex, alleging that Apotex's New Drug Application filed with the U.S. Food and Drug Administration ("FDA") for the manufacture and sale of its Pemetrexed for Injection products, infringes upon the '209 patent. The parties filed Cross-Motions for Summary Judgment on the infringement claim. For the following reasons, the Court **grants** Lilly's Motion for Summary Judgment and **denies** Apotex's Motion.

I. BACKGROUND

Lilly is a corporation organized and existing under the laws of the State of Indiana with its principal place of business in Indiana. Lilly is in the business of formulating, manufacturing, and selling pharmaceutical products. Apotex is a corporation organized and existing under the laws of

Canada, having a place of business in Toronto, Ontario, Canada. Apotex is also in the business of developing, manufacturing, and selling pharmaceutical products.

The patent at issue in this infringement action, the '209 patent, is titled "Antifolate Combination Therapies" and relates to Lilly's anti-cancer agent ALIMTA®. The '209 patent was issued on August 10, 2010, and Lilly is the assignee of the '209 patent. ALIMTA® is used to treat patients with malignant pleural mesothelioma or for the initial treatment of locally advanced or metastatic nonsquamous non-small cell lung cancer. ALIMTA® is also indicated as a single-agent for the treatment of patients with locally advanced or metastatic nonsquamous non-small cell lung cancer after prior chemotherapy. ALIMTA® is also indicated for maintenance treatment of patients with locally advanced or metastatic nonsquamous non-small cell lung cancer whose disease has not progressed after four cycles of platinum-based first-line chemotherapy. Lilly sells ALIMTA® in the United States pursuant to a New Drug Application that has been approved by the FDA (Filing No. 232-1 at 1–9, 294).

ALIMTA® is an antifolate drug that is known to disrupt the folic acid pathway, which can contribute to the reduction of cancer cells. The '209 patent concerns a method of administering pemetrexed disodium along with folic acid and vitamin B12, a methylmalonic acid lowering agent, in order to reduce the toxicities associated with the administration of pemetrexed disodium. This discovery made by Lilly results in a reduction of certain toxic effects caused by the administration of antifolates through the presence of a methylmalonic acid lowering agent without adversely affecting the therapeutic efficacy of the antifolate. *Id.* at 3–4.

In its Complaint, Lilly contends that the New Drug Application filed by Apotex with the FDA for the manufacture and sale of its Pemetrexed for Injection products before the '209 patent expires infringes upon the '209 patent. Lilly further contends that Apotex's Pemetrexed for

Injection products will be marketed as a competing product to ALIMTA® (Filing No. 1; Filing No. 232-1 at 365–68).

The prosecution history of the '209 patent, began in June 2000 when Lilly filed its earliest patent application leading to the '209 patent. The application claimed methods of administering an antifolate in combination with a methylmalonic acid lowering agent and folic acid. The application specifically claimed the antifolate ALIMTA® (Filing No. 258-3 at 65–80). In April 2001, Lilly filed another patent application in the chain leading to the '209 patent. Like the June 2000 application, the April 2001 application claimed methods of administering an antifolate in combination with a methylmalonic acid lowering agent and folic acid, and the application specifically claimed the antifolate ALIMTA® (Filing No. 258-4 at 57–76).

In June 2001, Lilly filed an international application under the Patent Cooperation Treaty leading to the '209 patent. The Patent Cooperation Treaty application also claimed methods of administering an antifolate in combination with a methylmalonic acid lowering agent and folic acid, and the application specifically claimed the antifolate ALIMTA®. *Id.* at 88–108.

In September 2004, the USPTO rejected Lilly's claims using "wherein the antifolate is ALIMTA." (Filing No. 258-7 at 111–21.) The office action explained,

> The following is a quotation of the second paragraph of 35 U.S.C. 112:
>
> > The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
>
> Claims 9, 29, 30, and 33 (as depending from claim 9) are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The instant claims refer to the trade name "ALIMTA." It is improper claim language to use a trademark or trade name in a claim to identify or describe a material or product. This not only renders a claim indefinite, but also constitutes an improper use of the trademark or trade name (MPEP § 2173.05 (u)).

(Filing No. 258-7 at 116.)

In January 2005, Lilly submitted its response to the September 2004 rejections. Lilly amended the claims to read "pemetrexed disodium" rather than "antifolate" and canceled its claims that used "ALIMTA." Lilly explained to the USPTO that the deletion of the "ALIMTA" claims rendered the patent examiner's September 2004 rejections moot. *Id.* at 145–55. In September 2005, the USPTO issued a notice of allowability of several of the claims, which ultimately issued as the '209 patent. *Id.* at 191–96.

In November 2005, Lilly filed with the USPTO a preliminary amendment. In the preliminary amendment, Lilly amended its claims from "antifolate" to "pemetrexed disodium" and canceled its claims that recited the administration of "ALIMTA." *Id.* at 201–05. Following Lilly's preliminary amendment, the USPTO rejected Lilly's claims in February 2007 (Filing No. 258-8 at 94–102). Among other things, the office action explained to Lilly, "[i]n claim 3, line 8, the applicant may wish to insert the word -- disodium --, after the word 'pemetrexed'." *Id.* at 99.

The patent examiner from the USPTO telephoned Lilly in August 2007 to ask whether Lilly was going to respond to the February 2007 rejections. Lilly informed the examiner that a response was not going to be filed, and the USPTO issued a notice of abandonment of the claims. *Id.* at 110–12.

In July 2007, Lilly again filed with the USPTO a preliminary amendment. In this preliminary amendment, Lilly again amended its claims from "antifolate" to "pemetrexed disodium" and canceled its claims that recited the administration of "ALIMTA." *Id.* at 103–09. In December 2008, Lilly filed a second preliminary amendment with the USPTO, canceling the earlier claims and reasserting claims for the administration of "pemetrexed disodium" rather than "antifolate." Lilly explained that no new matter was introduced by the amendments. *Id.* at 113–16.

The USPTO rejected Lilly's claims in February 2009. *Id.* at 117–25. Throughout the following months, Lilly and the USPTO engaged in additional communications to address the claim rejections (Filing No. 258-8 at 126–50). Then on August 10, 2010, the USPTO issued the '209 patent. *Id.* at 174–83.

Apotex filed a New Drug Application with the FDA for the manufacture and sale of its Pemetrexed for Injection products in May 2017. Apotex provided notice of its New Drug Application to Lilly and then informed the FDA of the Lilly notice in August 2017 (Filing No. 232-1 at 365–69). Thereafter, Lilly initiated this patent infringement action against Apotex on August 21, 2017. The parties' Cross-Motions for Summary Judgment then followed.

II. SUMMARY JUDGMENT STANDARD

The purpose of summary judgment is to "pierce the pleadings and to assess the proof in order to see whether there is a genuine need for trial." *Matsushita Elec. Indus. Co. v. Zenith Radio Corp.*, 475 U.S. 574, 587 (1986). Federal Rule of Civil Procedure 56 provides that summary judgment is appropriate if "the pleadings, depositions, answers to interrogatories, and admissions on file, together with the affidavits, if any, show that there is no genuine issue as to any material fact and that the moving party is entitled to a judgment as a matter of law." *Hemsworth v. Quotesmith.com, Inc.*, 476 F.3d 487, 489–90 (7th Cir. 2007). In ruling on a motion for summary judgment, the court reviews "the record in the light most favorable to the non-moving party and draw[s] all reasonable inferences in that party's favor." *Zerante v. DeLuca*, 555 F.3d 582, 584 (7th Cir. 2009) (citation omitted). "However, inferences that are supported by only speculation or conjecture will not defeat a summary judgment motion." *Dorsey v. Morgan Stanley*, 507 F.3d 624, 627 (7th Cir. 2007) (citation and quotation marks omitted). Additionally, "[a] party who bears the burden of proof on a particular issue may not rest on its pleadings, but must affirmatively

demonstrate, by specific factual allegations, that there is a genuine issue of material fact that requires trial." *Hemsworth*, 476 F.3d at 490 (citation omitted). "The opposing party cannot meet this burden with conclusory statements or speculation but only with appropriate citations to relevant admissible evidence." *Sink v. Knox County Hosp.*, 900 F. Supp. 1065, 1072 (S.D. Ind. 1995) (citations omitted).

"In much the same way that a court is not required to scour the record in search of evidence to defeat a motion for summary judgment, nor is it permitted to conduct a paper trial on the merits of [the] claim." *Ritchie v. Glidden Co.*, 242 F.3d 713, 723 (7th Cir. 2001) (citations and quotation marks omitted). "[N]either the mere existence of some alleged factual dispute between the parties nor the existence of some metaphysical doubt as to the material facts is sufficient to defeat a motion for summary judgment." *Chiaramonte v. Fashion Bed Grp., Inc.*, 129 F.3d 391, 395 (7th Cir. 1997) (citations and quotation marks omitted).

These same standards apply even when each side files a motion for summary judgment. The existence of cross-motions for summary judgment does not imply that there are no genuine issues of material fact. *R.J. Corman Derailment Serv., LLC v. Int'l Union of Operating Eng'rs.*, 335 F.3d 643, 647 (7th Cir. 2003). The process of taking the facts in the light most favorable to the non-moving party, first for one side and then for the other, may reveal that neither side has enough to prevail without a trial. *Id.* at 648. "With cross-motions, [the court's] review of the record requires that [the court] construe all inferences in favor of the party against whom the motion under consideration is made." *O'Regan v. Arbitration Forums, Inc.*, 246 F.3d 975, 983 (7th Cir. 2001) (citation and quotation marks omitted).

III. DISCUSSION

The parties filed Cross-Motions for Summary Judgment regarding Lilly's claim of infringement of the '209 patent. In the midst of the parties filing their summary judgment motions and briefs, the United States Court of Appeals for the Federal Circuit issued its decision in *Eli Lilly & Co. v. Hospira, Inc.*, 933 F.3d 1320 (Fed. Cir. 2019), which considered Lilly's '209 patent, literal infringement, the doctrine of equivalents, and prosecution history estoppel. Following that decision, "Lilly withdr[ew] its assertion of literal infringement against Apotex in this case." (Filing No. 248 at 1.) Additionally, "Apotex withdr[ew] its contingent assertion that the claims of the '209 patent are invalid for failing to meet the written description requirement under 35 U.S.C. § 122." *Id.* at 2. The parties also acknowledged that "[t]he portions of Lilly's Motion for Summary Judgment relating to Apotex's invalidity defense are now moot." *Id.* In light of the parties' withdrawals and the Federal Circuit's decision in *Eli Lilly & Co. v. Hospira*, the Court will focus its discussion on the remaining issue pending on summary judgment—whether Lilly's amendment of "ALIMTA®" gives rise to prosecution history estoppel and whether exceptions apply for Lilly to avoid prosecution history estoppel.

As an initial matter, the Court notes that Lilly argued in its opening brief that "Apotex's only defense to infringement under the doctrine of equivalents is prosecution history estoppel. If the Court determines that Lilly is not barred from pursuing the doctrine of equivalents, Apotex has conceded that its product will infringe." (Filing No. 232 at 35.) Lilly further argued that it is entitled to summary judgment that Apotex will induce and contribute to infringement of the '209 patent.

> Because there is direct infringement by physicians, and those physicians will be directed to practice the claimed methods by Apotex's proposed labeling, Apotex is liable for inducement of infringement under 35 U.S.C. § 271(b). And because there is no substantial noninfringing use of the product it seeks to sell, it also will

> contribute to infringement under 35 U.S.C. § 271(c). Accordingly, the filing of Apotex's NDA infringed the '209 patent under 35 U.S.C. § 271(e)(2).

Id. at 37. Lilly repeated these same arguments in its Response/Reply Brief, noting Apotex's apparent concession (Filing No. 274 at 40–41).

Apotex did not acknowledge, address, or respond to Lilly's arguments in its Response Brief or its Reply Brief. "The Seventh Circuit has clearly held that a party who fails to respond to points made . . . concedes those points." *Myers v. Thoman*, 2010 U.S. Dist. LEXIS 107502, at *11 (S.D. Ind. Oct. 6, 2010). *See also Bonte v. U.S. Bank, N.A.*, 624 F.3d 461, 466 (7th Cir. 2010) ("Failure to respond to an argument . . . results in waiver," and "silence leaves us to conclude" a concession.); *Cintora v. Downey*, 2010 U.S. Dist. LEXIS 19763, at *12 (C.D. Ill. Mar. 4, 2010) ("The general rule in the Seventh Circuit is that a party's failure to respond to an opposing party's argument implies concession."); *Sequel Capital, LLC v. Pearson*, 2010 U.S. Dist. LEXIS 109087, at *22 (N.D. Ill. Oct. 12, 2010) (same); *Thomas v. Am. Family Mut. Ins. Co.*, 2008 U.S. Dist. LEXIS 92440, at *13–14 (N.D. Ind. Nov. 13, 2008) (same). Because Apotex did not respond, the Court agrees that Apotex has conceded the merits of doctrine-of-equivalents infringement and that it will induce and contribute to infringement of the '209 patent.

The Court will now address the issue of prosecution history estoppel. The Federal Circuit has explained,

> Prosecution history estoppel arises when a patent applicant narrows the scope of his claims during prosecution for a reason substantially relating to patentability. Such a narrowing amendment is presumed to be a surrender of all equivalents within the territory between the original claim and the amended claim, but the presumption is overcome if the patentee can show the applicability of one of the few exceptions identified by the Supreme Court. Whether prosecution history estoppel applies to bar a doctrine of equivalents claim is a question of law.

Hospira, 933 F.3d at 1330 (internal citations and punctuation marks omitted).

"The first question in a prosecution history estoppel inquiry is whether an amendment filed in the Patent and Trademark Office ('PTO') has narrowed the literal scope of a claim. If the amendment was not narrowing, then prosecution history estoppel does not apply." *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 344 F.3d 1359, 1366 (Fed. Cir. 2003) (internal citation omitted). "[I]f the accused infringer establishes that the amendment was a narrowing one, then the second question is whether the reason for that amendment was a substantial one relating to patentability." *Id.* If "a narrowing amendment has been made for a substantial reason relating to patentability . . . then the third question in a prosecution history estoppel analysis addresses the scope of the subject matter surrendered by the narrowing amendment." *Id.* at 1367.

Apotex argues that prosecution history estoppel bars Lilly from asserting infringement under the doctrine of equivalents. Apotex asserts that, beginning with Lilly's January 2005 amendment, the claim term "ALIMTA" was amended to be "pemetrexed disodium," and that amendment was a narrowing amendment, subjecting Lilly to prosecution history estoppel. Apotex contends the claims and the specification do not define the term "ALIMTA," and the term would have been understood to mean "pemetrexed," not "pemetrexed disodium." Thus, when Lilly amended the claims from "ALIMTA"—meaning "pemetrexed"—to "pemetrexed disodium," Lilly narrowed its claims from "pemetrexed" to "pemetrexed disodium." Apotex further argues that nothing in the prosecution history record reveals the reason for Lilly's amendment of "ALIMTA," which amendments were repeated by Lilly in November 2005 and July 2007. Therefore, because the amendment of the claims from "ALIMTA" to "pemetrexed disodium" was a narrowing amendment, prosecution history estoppel applies.

Lilly responds that the specification and the prosecution history record make clear that "ALIMTA" means "pemetrexed disodium," not the broader "pemetrexed" as argued by Apotex.

The patent specification refers to "pemetrexed disodium (Alimta®, Eli Lilly and Company, Indianapolis, IN)" and "Pemetrexed Disodium (ALIMTA), as manufactured by Eli Lilly & Co." (Filing No. 232-1 at 3–4; Filing No. 258-3 at 68.) Lilly asserts that, "[e]ven when guidance is not provided in explicit definitional format, the specification may define claim terms by implication such that the meaning may be found in or ascertained by a reading of the patent documents." *Irdeto Access, Inc. v. Echostar Satellite Corp.*, 383 F.3d 1295, 1300 (Fed. Cir. 2004) (internal citations and quotation marks omitted). Consequentially, the specification makes clear that "ALIMTA" means "pemetrexed disodium," not "pemetrexed."

Looking to the prosecution history record, Lilly relies on its response to the patent examiner's claim rejection to show that the amendment from "ALIMTA" to "pemetrexed disodium" was to address the issue of using a trademark or trade name, which was an improper use and rendered the claim indefinite. The amendment was not to narrow the claims from "pemetrexed" to "pemetrexed disodium" as Apotex argues.

The patent examiner explained to Lilly that the claims were rejected

> as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The instant claims refer to the trade name "ALIMTA." It is improper claim language to use a trademark or trade name in a claim to identify or describe a material or product. This not only renders a claim indefinite, but also constitutes an improper use of the trademark or trade name (MPEP § 2173.05 (u)).

(Filing No. 258-7 at 116.) In January 2005, in response to the patent examiner's rejection, Lilly canceled its claims that used "ALIMTA" and explained to the patent examiner "that the deletion of these Claims render[s] this rejection moot." *Id.* at 151. These same amendments were reasserted by Lilly in November 2005 and July 2007. Thus, Lilly argues, the prosecution history record clearly shows the amendment from "ALIMTA" to "pemetrexed disodium" was to address the

problem of using a trademark or trade name. It did not narrow the claim from "pemetrexed" to "pemetrexed disodium."

Lilly further asserts that the patent examiner clearly understood "ALIMTA" to mean "pemetrexed disodium," as the examiner, in explaining a different claim rejection, noted the "administration of the multitargeted antifolate pemetrexed disodium, LY231514 (also known by the trade name ALIMTA)." *Id.* at 117. Lilly contends that the specification shows "ALIMTA" means "pemetrexed disodium," and the prosecution history record shows "ALIMTA" was amended to "pemetrexed disodium" to resolve the trademark/trade name problem. Thus, when "ALIMTA" was amended to "pemetrexed disodium," Lilly's claims were not narrowed from "pemetrexed" to "pemetrexed disodium," and therefore, prosecution history estoppel does not apply.

The Court has carefully reviewed the evidence submitted by the parties, reviewed the patent claims, specification, and prosecution history record, and concludes that Lilly's amendment from "ALIMTA" to "pemetrexed disodium" was not a narrowing of Lilly's claims. Therefore, prosecution history estoppel does not apply to bar Lilly from asserting infringement based on the doctrine of equivalents.

While the term "ALIMTA" was used throughout the patent applications to refer to an "antifolate," the patent applications did not use "ALIMTA" to refer to "pemetrexed" in isolation. And the '209 patent claims and specification do not use the term "pemetrexed" without combining it with "disodium." The June 2000 patent application referred to "pemetrexed disodium (Alimta®, Eli Lilly and Company, Indianapolis, IN)." (Filing No. 258-3 at 68.) The April 2001 patent application referred to "pemetrexed disodium (Alimta®, Eli Lilly and Company, Indianapolis, IN)." (Filing No. 258-4 at 60.) And the June 2001 Patent Cooperation Treaty application referred

to "pemetrexed disodium (Alimta®, Eli Lilly and Company, Indianapolis, IN)." (Filing No. 258-4 at 90.) Then in September 2004, the patent examiner rejected the "ALIMTA" claims because using the trademark or trade name was improper and rendered the claims indefinite. The patent examiner understood "ALIMTA" to mean "pemetrexed disodium." The examiner explicitly noted that pemetrexed disodium was "also known by the trade name ALIMTA." (Filing No. 258-7 at 117.) Directly responding to the September 2004 rejections, Lilly canceled the "ALIMTA" claims to moot the rejections concerning the use of the trademark or trade name. The language in the specification and the prosecution history record indicate that "ALIMTA" means "pemetrexed disodium," and when Lilly amended its claims, it was not narrowing its claims from "pemetrexed" to "pemetrexed disodium."

Apotex resists this conclusion on multiple bases. First, it notes that, after the exchange of communications between Lilly and the USPTO, Lilly submitted its NDA product label to the USPTO. Apotex argues that the product label is vague and includes uses of "ALIMTA" that mean "pemetrexed." While there are some references throughout the product label pairing "ALIMTA" and "pemetrexed," a review of the product label discloses on the very first page that "ALIMTA" is "pemetrexed disodium." *See* Filing No. 258-8 at 151 ("ALIMTA (pemetrexed disodium)"). Furthermore, in what appears to the be last communication from Lilly to the USPTO before the issuance of the '209 patent, Lilly explained to the patent examiner, "Today, Lilly's pemetrexed disodium product, ALIMTA®, is an FDA approved product in the United States . . . ." (Filing No. 258-8 at 148.)

Next, Apotex points out that, "b[y] May 2001, a publication referred to pemetrexed as 'pemetrexed.'" (Filing No. 255 at 14.) However, a closer look at the May 2001 publication reveals that the article's authors begin by referring to "pemetrexed disodium (ALIMTA®, 'pemetrexed'),"

and thus, later references in the article to "pemetrexed" would refer to "pemetrexed disodium (ALIMTA®)." (Filing No. 258-4 at 77.)

Apotex argues that the patent examiner, citing earlier publications from "John" and "Worzalla," associated the words "multitargeted antifolate," "pemetrexed disodium," "LY231514," and "ALIMTA," and the compound code "LY231514" is used by Lilly to mean pemetrexed. Thus, Apotex asserts it would be understood that the earlier use of "ALIMTA" meant "pemetrexed," and Lilly amended the claims to use "pemetrexed disodium," thereby narrowing the claims. However, the patent examiner did not use the term "ALIMTA" to refer to "pemetrexed," and the publications cited by the examiner actually contradict Apotex's position. (*See* Filing No. 232-1 at 445–51 ("John" publication refers to "pemetrexed disodium, ALIMTA"); Filing No. 258-2 at 111–15 ("Worzalla" publication does not mention ALIMTA)).

The evidence before the Court leads to the conclusion that "ALIMTA" means "pemetrexed disodium," and when Lilly amended its claims, it was not narrowing its claims from "pemetrexed" to "pemetrexed disodium." Therefore, because Lilly did not narrow its claims with the amendment of "ALIMTA," prosecution history estoppel does not apply in this case.

As noted above, Apotex has conceded the merits of doctrine-of-equivalents infringement and that it will induce and contribute to infringement of the '209 patent. Thus, summary judgment is appropriate for Lilly on its infringement claim under the doctrine of equivalents.

IV. CONCLUSION

For the reasons stated above, the Court **GRANTS** Lilly's Motion for Summary Judgment on its infringement claim (Filing No. 231) and **DENIES** Apotex's Motion for Summary Judgment (Filing No. 254). The filing of NDA No. 210661 by Apotex infringes the '209 patent. Pursuant to 35 U.S.C. § 271(e)(4)(A), the effective approval date of any product that is the subject of Apotex's

NDA No. 210661 shall be not earlier than the latest date of expiration of the '209 patent, including any extensions of the period of exclusivity.

All other pending motions (Filing No. 198; Filing No. 250) are **denied as moot**. The trial and final pretrial conference are hereby **vacated**. Final judgment will issue under separate order.

SO ORDERED.

Date: 12/30/2019

TANYA WALTON PRATT, JUDGE
United States District Court
Southern District of Indiana

Distribution to all counsel of record via CM/ECF.