

IN THE UNITED STATES DISTRICT COURT  
FOR THE WESTERN DISTRICT OF WISCONSIN

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ILLUMINA, INC.,

Plaintiff,

v.

AFFYMETRIX, INC.,

Defendant.

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OPINION and ORDER

09-cv-277-bbc

09-cv-665-bbc

The primary issue raised in plaintiff Illumina, Inc.'s complaints in these consolidated cases is whether defendant Affymetrix, Inc. is infringing two related patents, U.S. Patent Nos. 7,510,841 and 7,612,020. The patents share the same specification and disclose "an apparatus and method for the detection of target analytes using composite arrays of bioactive agents." Dft.'s PFOF ¶ 2, dkt. #127; Plt.'s Resp. to Dft.'s PFOF ¶ 2, dkt. #164.<sup>1</sup> Defendant has filed a motion for summary judgment on the ground of noninfringement, dkt. #125; plaintiff has filed a motion for partial summary judgment on various invalidity counterclaims and defenses raised by defendant. Dkt. #133.

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<sup>1</sup> The citations to the record correspond to case no. 09-cv-277-bbc.

These motions have been ready for decision since October, but I have not been able to resolve them thus far because of a challenge defendant is making to the inventorship of the two patents, raising questions about the interplay of issues such as prudential standing, patent correction under 35 U.S.C. § 256 and invalidity under 35 U.S.C. § 102(f). However, for the reasons stated below, I conclude that the question of inventorship need not be resolved in these cases and that there are no further barriers to resolving the merits. Because the undisputed facts show that the accused products do not include a “substrate,” as required by each of the asserted claims, I will grant summary judgment to defendant. This conclusion makes it unnecessary to decide defendant’s alternative argument on noninfringement, which is that the accused products do not have “discrete sites.”

#### OPINION

Defendant first raised issues of inventorship in its motion to dismiss for “lack of jurisdiction.” Dkt. #122. In that motion, defendant argued that plaintiff lacked standing to sue under the ‘841 and ‘020 patents because it failed to join as a plaintiff Gregory Kirk, who defendant contends is an inventor and therefore an owner of the two patents. Defendant relied on the rule that a co-owner of a patent does not have standing to sue unless it joins the other co-owners. Israel Bio-Engineering Project v. Amgen, Inc., 475 F.3d 1256, 1264-65 (Fed. Cir. 2007). In the alternative, defendant stated that the patents are invalid

under 35 U.S.C. § 102(f), which states that a person is not entitled to a patent if “he did not himself invent the subject matter sought to be patented.” However, defendant did not develop a separate argument under § 102(f), but treated the issue as identical to its standing argument.

In an order dated October 28, 2010, dkt. #192, I noted that a potential problem with defendant’s standing argument is that Kirk is not named as an inventor on the ‘841 and ‘020 patents. Defendant ignored this fact, even though all the appellate cases it cited for its standing argument involved a failure to join a named inventor. Accordingly, I asked the parties to submit supplemental briefing on the questions whether (1) the patent needed to be corrected to add Kirk as an inventor before his absence from the lawsuit could be a ground for challenging plaintiff’s standing to sue; and (2) whether the patent should be corrected under 35 U.S.C. § 256 in the context of this case.

After reviewing the parties’ supplemental briefs, I concluded that “the named owners and their assignees have standing to sue until the patent is corrected to reflect any omitted inventors.” Dkt. #208, at 6. However, I also concluded that it made sense to allow defendant to seek a correction in the context of this case because district courts have authority under § 256 to order correction of a patent “on notice and hearing of all parties concerned” and because the Court of Appeals for the Federal Circuit has stated that a court should not invalidate a patent under § 102(f) unless correction is not a viable option. Pannu

v. Iolab Corp., 155 F.3d 1344, 1348 (Fed. Cir. 1998). In addition, I concluded that a hearing under § 256 was appropriate because defendant had made a prima facie showing that Kirk was an inventor through his testimony, the testimony of the named inventors, the opinion of defendant's expert and a lengthy email that Kirk sent to one of named inventors in March 1998. Accordingly, I scheduled a hearing to determine inventorship for December 15, 2010.

A few days later I canceled the hearing in response to a motion for reconsideration filed by plaintiff. Dkt. ##210 and 215. In scheduling the hearing, I had overlooked the fact that resolution of the correction issue is intertwined with defendant's § 102(f) defense because both require a determination of inventorship. Although motions under § 256 are resolved by the court, factual disputes related to invalidity are decided by the jury. When there is an overlap, the court must allow the jury to resolve the dispute. Shum v. Intel Corp., 499 F.3d 1272, 1277 (Fed Cir. 2007). Defendant argued that no jury trial is necessary on inventorship because "the undisputed facts establish that Dr. Kirk is an inventor" of the patents at issue, Dft.'s Br., dkt. # 214, at 1, but I disagreed because the primary piece of evidence on which defendant relies to show Kirk's status as an inventor, Kirk's March 1998 email, is ambiguous about the origin of the ideas in the email.

Now defendant has filed a motion for "clarification," which is more accurately described as a motion to raise new arguments on its defense under § 102(f). Dkt. #217. In

its motion, defendant argues for the first time that “the specific identity of the omitted inventor is immaterial” to that defense. Dkt. #217, at 2. Further, it argues that the undisputed facts show as a matter of law that the named inventors “are not, and cannot be, the true and correct inventors of the patents-in-suit.” Id. at 3. Because defendant did not raise this argument in its summary judgment motion, the motion for “clarification” will be denied.

Even if defendant had raised this argument earlier, it is far from clear whether it would prevail. Defendant cites Pannu, 155 F.3d at 1349-50, for the proposition that § 102(f) “makes the naming of the correct inventor or inventors a condition of patentability; failure to name renders a patent invalid.” This quotation is misleading, however, because the court later says that a patent may be saved from invalidity if “the error occurred without any deceptive intent on the part of the unnamed inventor.” Id. at 1350. Defendant does not address the issue of deceit in its motion for summary judgment or its motion for “clarification.”

Plaintiff argues in its motion for partial summary judgment that the § 102(f) defense fails as a matter of law because such a defense requires proof that the named inventors received information that “enabled one of ordinary skill in the art to make the patented invention.” Gambro Lundia AB v. Baxter Healthcare Corp., 110 F.3d 1573, 1576 (Fed. Cir. 1997). See also Eaton Corp. v. Rockwell Intern. Corp., 323 F.3d 1332, 1344 (Fed. Cir.

2003) (“The communication must be sufficient to enable one of ordinary skill in the art to make the patented invention.”) In response, defendant does not argue that it can show enablement. Instead, it argues that cases such as Gambro Lundia relate to a “derivation” defense, but in this case it is asserting a “joint inventorship” defense.

Defendant cites no authority for the proposition that § 102(f) includes two separate defenses. Rather, most of the cases it cites in support of its argument regarding joint inventorship relate to correcting ownership, not invalidating the patent. Vanderbilt University v. ICOS Corp., 601 F.3d 1297 (Fed. Cir. 2010); Eli Lilly & Co. v. Aradigm Corp., 376 F.3d 1352 (Fed. Cir. 2004); Ethicon, Inc. v. U.S. Surgical Corp., 135 F.3d 1456 (Fed. Cir. 1998); Fina Oil & Chemical Co. v. Ewen, 123 F.3d 1466, 1473 (Fed. Cir. 1997). The one exception is Pannu, which is a case in which the court discusses a defense under § 102(f) without requiring a showing of enablement. Although Pannu may raise questions about the scope of the holdings in Eaton Corp. and Gambro Lundia, defendant does not provide a way to reconcile them.

In its brief in opposition to defendant’s motion for “clarification,” plaintiff cites new testimony from one of the named inventors, Steven Augur, and seeks leave to file new additional proposed findings of fact relating to that testimony. Dkt. #219. In particular, plaintiff says that Augur’s testimony supports the view that he conceived of the inventions in the ‘841 and ‘020 patents before Kirk sent his email, precluding a decision on

inventorship as a matter of law.

Ultimately, I need not resolve these thorny questions about inventorship or the other invalidity defenses and counterclaims because defendant is entitled to summary judgment on the ground of noninfringement. Because I have concluded that plaintiff's standing remains intact until the patent has been corrected, I find no jurisdictional barrier to proceeding to the merits. Further, defendant did not raise a separate counterclaim under § 256 for correction of the patents, so it is not entitled to a declaration of Kirk's ownership rights in the context of this case. (Of course, defendant and Kirk are free to bring a stand-alone claim under § 256 in a separate case if they wish. Fina Oil & Chemical, 123 F.3d at 1471 (Fed. Cir. 1997) (Section 256 "provides a cause of action to interested parties to have the inventorship of a patent changed to reflect the true inventors of the subject matter claimed in the patent."))

Neither side argues that a justiciable controversy remains as to validity if all claims are dismissed for noninfringement. Hyperphrase Technologies, LLC v. Google, Inc., 580 F. Supp. 2d 797, 815 (W.D. Wis. 2008) ("It appears that final resolution of all infringement claims prior to trial eliminates any case or controversy, particularly when defendant has produced no evidence of other, different products.") (citing Benitec Australia, Ltd. v. Nucleonics, Inc., 495 F.3d 1340, 1347-49 (Fed. Cir. 2007)). Even if it had, district courts have discretion to dismiss invalidity counterclaims in cases such as this one, in which

noninfringement is clear, but validity is not. Phonometrics, Inc. v. Northern Telecom Inc., 133 F.3d 1459, 1468 (Fed. Cir. 1998) (quoting Leesona Corp. v. United States, 530 F.2d 896 (Cl. Ct.1976)).

I turn then to the question of infringement. With respect to the '841 patent, plaintiffs are asserting independent claim 1, along with dependent claims 2-3, 8, 10, 13-21 and 24-26. With respect to the '020 patent, plaintiffs are asserting independent claims 1, 20, 36, 51 and 64, along with dependent claims 3-4, 7, 9, 11, 16, 18-19, 21, 24, 26, 28, 33-35, 40, 42, 44, 49, 50, 52, 55, 57, 59, 63, 66, 69, 71, 73 and 76. Plt.'s PFOF ¶ 27, dkt. #136; Dft.'s Resp. to Plt.'s PFOF ¶ 27, dkt. #157. For the purpose of these cases, claim 1 for each patent is representative:

Claim 1 of the '841 patent reads:

A method of detecting the presence or absence of a plurality of different target analytes, comprising

(a) providing a first substrate with a surface comprising a plurality of assay wells, wherein said assay wells contain sample solutions each having a plurality of different target analytes;

(b) providing a second substrate comprising a plurality of array locations, each array location comprising a plurality of discrete sites on a projection, wherein said sites comprise different bioactive agents;

(c) dipping the projections of said second substrate into said assay wells such that each array location of said second substrate contacts sample solution in a different well of said first substrate under conditions suitable for binding of said different target analytes to said different bioactive agents, thereby

processing said sample solutions in parallel; and

(d) detecting the presence or absence of said target analytes.

Claim 1 of the '020 patent reads:

An array of arrays comprising:

(a) a first substrate with a surface comprising a plurality of assay wells comprising samples; and

(b) a second substrate comprising a plurality of projections, each projection comprising an array location, each array location comprising a plurality of discrete sites, wherein said sites comprise different bioactive agents, and wherein said first substrate and said second substrate are arranged such that projections of said second substrate are fitted into assay wells of the first substrate.

To defeat defendant's motion for summary judgment, plaintiff must show that there is a genuine issue of material fact as to whether the accused products meet every element of the claims, either literally or under the doctrine of equivalents. In re Gabapentin Patent Litigation, 503 F.3d 1254, 1259 (Fed. Cir. 2007). The parties agree that each of the asserted claims requires a "substrate," which I defined in the claim construction order to mean "a material that can be modified to contain discrete individual sites appropriate for the attachment or association of beads and is amenable to at least one detection method." Dkt. #80, at 12. This definition was taken verbatim from the patent specification. '841 pat., col. 7, lns. 32-36.

It is undisputed that the accused products, defendant's microarrays, do not use beads. Dft.'s PFOF ¶ 25, dkt. #127; Plt.'s Resp. to Dft.'s PFOF ¶ 25, dkt. #164. Rather, defendant describes its products as follows:

The accused Affymetrix microarray products are fabricated with photolithography techniques used in the semiconductor industry. The raw material from which Affymetrix makes the support on which the arrays are manufactured is a glass wafer.

In order to attach the oligonucleotide probes (i.e., the accused bioactive agents) to make the array, Affymetrix first functionalizes the raw glass wafer. Affymetrix does so by immersing the raw glass into a silane bath to apply a uniform silane layer to the surface of the wafer. Next, Affymetrix applies a layer of polyethylene glycol linker to the surface of the silanated wafer. The silane and linker layers create a . . . surface of chemical functionalities. . . .

Oligonucleotides are synthesized after the wafer is functionalized with the . . . surface of silane and linker. The synthesis of the oligonucleotides is performed by alternating steps of selective exposure to ultraviolet light and chemical exposure to single-base building blocks of the oligonucleotides.

These probes include oligonucleotides that contain the desired 25-base sequence, together with other oligonucleotides of varying sequences and varying length, which are interspersed among the desired oligonucleotide sequences.

Once the synthesis of oligonucleotides is completed, the wafer is then cleaned and diced into individual arrays. The individual arrays are then glued onto pegs, which are assembled into array plates or array strips as part of the packaging process.

Dft.'s PFOF ¶¶ 21-24, dkt. #127 (citations omitted). Plaintiff does not dispute these aspects of the accused products.

Defendant's expert testified that modifying the accused products to make them "appropriate for the attachment or association of beads" as required by the asserted claims would "destroy the arrays as manufactured by" defendant because the accused products' "oligonucleotide probes have been synthesized across the surface of the arrays." Goldberg Decl. ¶ 8, dkt. # 128. Plaintiff does not challenge the admissibility of Goldberg's opinion or cite any contrary evidence. Although plaintiff's expert testified that glass can be modified as a general matter for the use of beads, he did not say whether any of the accused products may be so modified. Mrksich Decl. ¶ 77, dkt. #175.

In its brief, plaintiff argues that "[t]he substrate need only be capable of being modified to have a bead. It need not actually be modified. The fact (if it is a fact) that the modification might destroy the array does not mean the Affymetrix product lacks a second substrate." Plt.'s Br., dkt. #160, at 20. This argument does not make any sense. If the accused products become inoperable when they are modified to allow the use of beads, then those products will no longer be able to satisfy the other elements of the asserted claims. Thus, for the purpose of the '841 and '020 patents, the accused products cannot be "modified to contain discrete individual sites appropriate for the attachment or association of beads." This resolves plaintiff's claim for literal infringement. Because plaintiff does not argue that it can prove infringement under the doctrine of equivalents, defendant's motion for summary judgment on the ground of noninfringement must be granted.

ORDER

IT IS ORDERED that

1. Defendant Affymetrix, Inc.'s motion for "clarification," dkt. #217 (case no. 09-cv-277-bbc) and dkt #173 (case no. 09-cv-655-bbc), is DENIED.

2. Plaintiff Illumina, Inc.'s motion for leave to file supplemental proposed findings of fact, dkt. #219 (09-cv-277-bbc) and dkt. #175(09-cv-655-bbc), is DENIED as moot.

2. Defendant's motion for summary judgment on noninfringement, dkt. #125 (09-cv-277-bbc) and dkt. #81 (09-cv-655-bbc), is GRANTED.

3. Defendant's motion to strike the expert report of Cameron Weiffenbach, dkt. #118 (09-cv-277-bbc) and dkt. #74 (09-cv-655-bbc), defendant's motion for leave to file a reply brief in support of its motion to strike, dkt. #150 (09-cv-277-bbc) and dkt. #106 (09-cv-655-bbc), and plaintiff's motion for partial summary judgment, dkt. #133 (09-cv-277-bbc) and dkt. #89 (09-cv-655-bbc), are DENIED as moot.

4. Defendant's counterclaims for invalidity are DISMISSED without prejudice to defendant's refiling them at a later date.

5. The clerk of court is directed to enter judgment in favor of defendant and close

these cases.

Entered this 14th day of December, 2010.

BY THE COURT:  
/s/  
BARBARA B. CRABB  
District Judge