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**UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF CALIFORNIA**

THE REGENTS OF THE UNIVERSITY
OF CALIFORNIA; and BECTON,
DICKINSON and COMPANY,

Plaintiffs,

v.

AFFYMETRIX, INC.; and LIFE
TECHNOLOGIES CORP.,

Defendants.

Case No.: 17-cv-01394-H-NLS

**ORDER DENYING DEFENDANTS'
MOTION FOR SUMMARY
JUDGMENT OF NON-
INFRINGEMENT OF THE '673
PATENT AND THE '113 PATENT**

[Doc. No. 143.]

On April 2, 2018, Defendants Affymetrix, Inc. and Life Technologies Corp. filed a motion for summary judgment of non-infringement of U.S. Patent No. 8,110,673 and U.S. Patent No. 8,835,113. (Doc. No. 143.) On April 30, 2018, Plaintiffs the Regents of the University of California, Becton, Dickinson and Company, Sirigen, Inc., and Sirigen II Limited filed an opposition to Defendants' motion for summary judgment. (Doc. No. 167.) On May 7, 2018, Defendants filed their reply. (Doc. No. 175.)

The Court held a hearing on the matter on May 14, 2018. Donald R. Ware, Barbara Fiacco, and Jesse Hindman appeared for Plaintiffs. Douglas E. Lumish, Roger J. Chin, and Brent T. Watson appeared for Defendants. For the reasons below, the Court denies Defendants' motion for summary judgment of non-infringement of the '673 patent and the

1 '113 patent.

2 **Background**

3 **I. Procedural History**

4 On July 10, 2017, Plaintiffs Regents and Becton, Dickinson filed a complaint for
5 patent infringement against Defendants Affymetrix and Life Technologies, alleging
6 infringement of U.S. Patent No. 9,085,799, U.S. Patent No. 8,110,673, and U.S. Patent No.
7 8,835,113. (Doc. No. 1, Compl.) On September 8, 2017, Defendants filed an answer to
8 Plaintiffs' complaint. (Doc. No. 37.)

9 On October 6, 2017, the Court issued a scheduling order. (Doc. No. 55.) On
10 November 20, 2017, the Court denied Plaintiff Becton, Dickinson's motion for a
11 preliminary injunction without prejudice. (Doc No. 69.) On November 30, 2017, the Court
12 issued an amended scheduling order. (Doc. No. 76.)

13 On February 7, 2018, the Court granted the parties' joint motion for leave for
14 Plaintiffs to file a first amended complaint and to modify the scheduling order. (Doc. No.
15 100.) On February 9, 2018, Plaintiffs filed an amended complaint: (1) adding Sirigen and
16 Sirigen II as additional Plaintiffs and adding claims that Defendants' products infringe four
17 Sirigen patents: U.S. Patent No. 9,547,008, U.S. Patent No. 9,139,869, U.S. Patent No.
18 8,575,303, and U.S. Patent No. 8,455,613; (2) adding infringement allegations against
19 additional accused products; and (3) adding allegations of induced infringement against
20 Defendants. (Doc. No. 101, FAC.)

21 On February 23, 2018, the Court issued a second amended scheduling order. (Doc.
22 No. 105.) On March 26, 2018, the Court issued a claim construction order, construing
23 disputed claim terms from the '799 patent, the '673 patent, and the '113 patent. (Doc. No.
24 138.) On May 1, 2018, the Court granted Defendants' motion for summary judgment of
25 non-infringement of the '799 patent. (Doc. No. 170.) By the present motion, Defendants
26 move for summary judgment of non-infringement of the '673 patent and the '113 patent.
27 (Doc. No. 157 at 1, 6.)

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1 **II. The '673 Patent and the '113 Patent**

2 The '673 patent is entitled "Aggregation Sensor and Solutions and Kits Comprising
3 the Same," and the '113 patent is entitled "Methods and Compositions for Assaying a
4 Sample for an Aggregant." U.S. Patent No. 8,110,673, at (54) (filed Feb. 7, 2012); U.S.
5 Patent No. 8,835,113, at (54) (filed Sept. 16, 2014). The '673 patent and the '113 patent
6 share a common specification, and the inventions disclosed in the two patents are both
7 related to "aggregation sensor useful for the detection and analysis of aggregants in a
8 sample, and methods, articles and compositions relating to such a sensor." '673 Patent at
9 1:26-28; '113 Patent at 1:32-34.

10 In explaining the background of the invention, the specification for the '673 patent
11 provides:

12 Methods for the detection of biomolecules such as nucleic acids are highly
13 significant not only in identifying specific targets, but also in understanding
14 their basic function. . . .

15 Conjugated polymers have proven useful as light gathering molecules in a
16 variety of settings. Conjugated polymers soluble in polar media have proven
17 particularly useful. Water-soluble conjugated polymers such as cationic
18 conjugated polymers (CCPs) have been used in bioassays to improve
19 detection sensitivity and provide new routes of selectivity in analyzing
20 biomolecules.

21 There is a continuing need in the art for methods of detecting and analyzing
22 particular biomolecules in a sample, and for compositions and articles of
23 manufacture useful in such methods. There is a need in the art for novel CCPs,
24 for methods of making and using them, and for compositions and articles of
25 manufacture comprising such compounds.

26 '673 Patent at 1:39-61.

27 Claim 1 of the '673 patent claims:

28 1. An aggregation sensor soluble in a polar medium comprising:

(a) a conjugated polymer comprising

a plurality of first optically active units forming a conjugated

1 system, having a first absorption wavelength at which the first
2 optically active units absorbs light to form an excited state, and
3 a plurality of solubilizing functionalities; and

4 (b) one or more second optically active units that can receive energy
5 from the excited state of the first optically active unit;

6 said aggregation sensor comprising at least three first optically active
7 units per second optically active unit;

8 wherein the second optically active unit is grafted to the conjugated
9 polymer.

10 '673 Patent at 37:46-60.

11 Claim 1 of the '113 patent claims:

12 1. A method of assaying a sample for an aggregant, the method comprising:

13 (a) combining the sample with an aggregation sensor comprising

14 (i) a polymer comprising a plurality of first optically active units
15 forming a conjugated system, having a first absorption
16 wavelength at which the first optically active units absorb light
17 to form an excited state that can emit light of a first emission
18 wavelength, and a plurality of solubilizing functionalities; and

19 (ii) one or more second optically active units that can receive
20 energy from the excited state of the first optically active unit;

21 wherein said aggregation sensor comprises at least three first
22 optically active units per second optically active unit and the
23 second optically active unit is grafted to the conjugated system;

24 (b) contacting the sample with light of the first absorption wavelength;
25 and

26 (c) detecting the optical properties of the aggregation sensor to assay
27 the sample for the aggregant.

28 '113 Patent at 37:36-57.

1 **Discussion**

2 **I. Legal Standards**

3 **A. Legal Standards for a Motion for Summary Judgment**

4 Summary judgment is appropriate under Rule 56 of the Federal Rules of Civil
5 Procedure if the moving party demonstrates that there is no genuine issue of material fact
6 and that it is entitled to judgment as a matter of law. Fed. R. Civ. P. 56(a); Celotex Corp.
7 v. Catrett, 477 U.S. 317, 322 (1986). A fact is material when, under the governing
8 substantive law, it could affect the outcome of the case. Anderson v. Liberty Lobby, Inc.,
9 477 U.S. 242, 248 (1986); Fortune Dynamic, Inc. v. Victoria’s Secret Stores Brand Mgmt.,
10 Inc., 618 F.3d 1025, 1031 (9th Cir. 2010). “A genuine issue of material fact exists when
11 the evidence is such that a reasonable jury could return a verdict for the nonmoving party.”
12 Fortune Dynamic, 618 F.3d at 1031 (internal quotation marks and citations omitted);
13 accord Anderson, 477 U.S. at 248. “Disputes over irrelevant or unnecessary facts will not
14 preclude a grant of summary judgment.” T.W. Elec. Serv., Inc. v. Pac. Elec. Contractors
15 Ass’n, 809 F.2d 626, 630 (9th Cir. 1987).

16 A party seeking summary judgment always bears the initial burden of establishing
17 the absence of a genuine issue of material fact. Celotex, 477 U.S. at 323. The moving
18 party can satisfy this burden in two ways: (1) by presenting evidence that negates an
19 essential element of the nonmoving party’s case; or (2) by demonstrating that the
20 nonmoving party failed to establish an essential element of the nonmoving party’s case that
21 the nonmoving party bears the burden of proving at trial. Id. at 322-23; Jones v. Williams,
22 791 F.3d 1023, 1030 (9th Cir. 2015). Once the moving party establishes the absence of a
23 genuine issue of material fact, the burden shifts to the nonmoving party to “set forth, by
24 affidavit or as otherwise provided in Rule 56, ‘specific facts showing that there is a genuine
25 issue for trial.’” T.W. Elec. Serv., 809 F.2d at 630 (quoting former Fed. R. Civ. P. 56(e));
26 accord Horphag Research Ltd. v. Garcia, 475 F.3d 1029, 1035 (9th Cir. 2007). To carry
27 this burden, the non-moving party “may not rest upon mere allegation or denials of his
28 pleadings.” Anderson, 477 U.S. at 256; see also Behrens v. Pelletier, 516 U.S. 299, 309

1 (1996) (“On summary judgment, . . . the plaintiff can no longer rest on the pleadings.”).
2 Rather, the nonmoving party “must present affirmative evidence . . . from which a jury
3 might return a verdict in his favor.” Anderson, 477 U.S. at 256.

4 When ruling on a summary judgment motion, the court must view the facts and draw
5 all reasonable inferences in the light most favorable to the non-moving party. Scott v.
6 Harris, 550 U.S. 372, 378 (2007). The court should not weigh the evidence or make
7 credibility determinations. See Anderson, 477 U.S. at 255. “The evidence of the non-
8 movant is to be believed.” Id. Further, the Court may consider other materials in the record
9 not cited to by the parties, but it is not required to do so. See Fed. R. Civ. P. 56(c)(3);
10 Simmons v. Navajo Cnty., 609 F.3d 1011, 1017 (9th Cir. 2010).

11 B. Legal Standards for Patent Infringement

12 A patent infringement analysis proceeds in two steps. Markman v. Westview
13 Instruments, Inc., 52 F.3d 967, 976 (Fed. Cir. 1995). In the first step, the court construes
14 the asserted claims as a matter of law. See id. In the second step, the factfinder compares
15 the claimed invention to the accused device. Id. “A determination of infringement,
16 whether literal or under the doctrine of equivalents, is a question of fact.” Allergan, Inc. v.
17 Sandoz Inc., 796 F.3d 1293, 1311 (Fed. Cir. 2015).

18 “The patentee bears the burden of proving infringement by a preponderance of the
19 evidence.” Creative Compounds, LLC v. Starmark Labs., 651 F.3d 1303, 1314 (Fed. Cir.
20 2011). “To prove literal infringement, the patentee must show that the accused device
21 contains every limitation in the asserted claims. If even one limitation is missing or not
22 met as claimed, there is no literal infringement.” Riles v. Shell Exploration & Prod. Co.,
23 298 F.3d 1302, 1308 (Fed. Cir. 2002). “Accordingly, a court may determine infringement
24 on summary judgment ‘when no reasonable jury could find that every limitation recited in
25 the properly construed claim either is or is not found in the accused device.’” Innovention
26 Toys, LLC v. MGA Entm’t, Inc., 637 F.3d 1314, 1319 (Fed. Cir. 2011).

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1 **II. Analysis**

2 Defendants argue that they are entitled to summary judgment of non-infringement
3 as to the '673 patent and the '113 patent because the accused products do not include
4 “second optically active units” or an “aggregation sensor” within the meaning of the '673
5 patent and the '113 patent. (Doc. No. 157 at 2-5.) In response, Plaintiffs argue that the
6 accused products include both of these claim limitations. (Doc. No. 172 at 10-16.)

7 A. “second optically active units”

8 Claim 1 of the '673 patent and claim 1 of the '113 patent, the only independent
9 claims in the two patents, each contain the limitation of “one or more second optically
10 active units,” and further provide that the “the second optically active unit is grafted to the
11 conjugated [polymer/system].¹ '673 Patent at 37:54; 37:59-60; '113 Patent at 37:46, 37:52-
12 53. In the claim construction order, the Court construed the term “second optically active
13 unit” as “unit(s) in a polymer chain that can receive energy from the excited state of the
14 first optically active unit.” (Doc. No. 138 at 29.) The Court also construed the term
15 “grafted to” as “attached to.” (Id.)

16 Defendants argue that the accused products lack second optically active units. (Doc.
17 No. 157 at 2.) In response, Plaintiffs argue that accused products include this claim
18 limitation. (Doc. No. 172 at 10-12.) Plaintiffs explain that the accused products share a
19 common base dye, which is a co-polymer that includes two repeat units: fluorenooxepine
20 units and fluorene units. (Id. at 5 (citing Doc. No. 172-1, Swager Decl. ¶¶ 6-8, 26-32).)
21 Plaintiffs argue that the fluorene units in the accused products constitute “second optically
22 active units” because they are repeat units in a polymer chain that can receive energy from
23 the excited state of the first optically active units, the fluorenooxepine units. (Id. at 10-11
24 (citing Doc. No. 172-1, Swager Decl. ¶¶ 28-32).) Plaintiffs have supported their
25 contentions with citations to evidence in the record, including a declaration from their
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27 ¹ Because claim 1 of the '673 patent and claim 1 of the '113 patent are the only independent claims
28 in those patents, and both claims include the “one or more second optically active units” claim limitation,
all of the other claims in the '673 patent and the '113 patent include that claim limitation.

1 infringement expert, Dr. Swager. This is sufficient to create a triable issue of fact as to
2 whether the accused products satisfy the “second optically active units” claim limitation.

3 Defendants argue that Plaintiffs’ infringement analysis is faulty as a matter of law.
4 (Doc. No. 181 at 4.) Defendants explain that when a claim lists elements separately, those
5 claim elements are distinct components of the patent invention. (Id. (citing Becton,
6 Dickinson & Co. v. Tyco Healthcare Grp., LP, 616 F.3d 1249, 1254 (Fed. Cir. 2010)
7 (“Where a claim lists elements separately, ‘the clear implication of the claim language’ is
8 that those elements are ‘distinct component[s]’ of the patented invention.”)).) Defendants
9 further argue that because the asserted claims of the ’673 patent and the ’113 patent recite
10 separate elements for the claimed invention, Plaintiffs must map those separate elements
11 onto distinct components of the accused products. (Id.) But that is what Plaintiffs and Dr.
12 Swager have done in their infringement analysis. The asserted claims list as separate
13 elements “a conjugated [polymer/system],” “a plurality of first optically active units,” and
14 “one or more second optically active units.” ’673 Patent at 37:47-54; ’113 Patent at 37:40-
15 46. In their infringement analysis, Plaintiffs and Dr. Swager map these elements onto
16 distinct components of the accused products with the co-polymer base dye constituting the
17 “conjugated [polymer/system],” the fluorenooxepine units constituting the “first optically
18 active units,” and the fluorene units constituting the “second optically active units.” (See
19 Doc. No. 172 at 5, 10-11; Doc. No. 172-1, Swager Decl. ¶¶ 6-8, 26-32.)

20 Defendants argue that the fluorene units cannot qualify as “second optically active
21 units” because they are not “attached to” the conjugated polymer as required by the Court’s
22 claim construction. (Doc. No. 181 at 4-6.) Plaintiffs’ infringement expert, Dr. Swager,
23 opines: “The second optically active unit(s) in the Super Bright co-polymers are part of,
24 and therefore are attached to the conjugated polymer containing the first optically active
25 units.” (Doc. No. 172-1, Swager Decl. ¶ 33.) Defendants argue that if the fluorene units
26 are part of the co-polymers, then they are not attached to the polymer. (Doc. No. 181 at 5-
27 6.) Whether the accused products satisfy the “second optically active units” and the
28 “grafted to” claim limitations is a question of fact. See Allergan, 796 F.3d at 1311.

1 Plaintiffs have presented the Court with expert testimony opining that the accused products
2 satisfy these two claim limitations because the fluorene units are attached to the co-
3 polymer. (Doc. No. 172-1, Swager Decl. ¶ 33.) This is sufficient to create a genuine issue
4 of fact, rendering summary judgment inappropriate. As a result, the Court denies
5 Defendants’ motion for summary judgment of non-infringement based on the “second
6 optically active units” claim limitation.²

7 B. “aggregation sensor”

8 Claim 1 of the ’673 patent and claim 1 of the ’113 patent, the only independent
9 claims in the two patents, each contain the claim limitation of an “aggregation sensor.”³
10 ’673 Patent at 37:46; ’113 Patent at 37:38. In the claim construction order, the Court
11 construed “aggregation sensor” as “a sensor for the detection and analysis of an
12 aggregant.” (Doc. No. 138 at 26.) The Court construed the term “aggregant” as “a material
13 capable of causing aggregation.” (*Id.* at 36-37.) In addition, the Court construed the term
14 “aggregation” as “a relative increase in the concentration of the second optically active
15 subunit(s) of an aggregation sensor within a particular volume, which may be a localized
16 region of a larger volume. The term encompasses any form of accumulation, compaction,
17 condensing, etc., that increases the ability to transfer energy from an excited first optically
18 active unit(s) to a second optically active unit, including without limitation alteration(s) of
19 the conformation of a single aggregation sensor, the bringing together of different
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21 ² In their opposition, Plaintiffs request that the Court find as established that the accused products
22 include “second optically active units” pursuant to Federal Rule of Civil Procedure 56(g). (Doc. No. 172
23 at 12.) The Court denies Plaintiffs’ request. Rule 56(g) provides: “If the court does not grant all the relief
24 requested by the motion, it may enter an order stating any material fact . . . that is not genuinely in dispute
25 and treating the fact as established in the case.” At this stage in the proceedings with discovery ongoing,
26 Plaintiffs have failed to establish that it is undisputed that the accused products include “second optically
27 active units.” In addition, the Court notes that Plaintiffs did not cross-move for summary judgment, and
28 Rule 56(g) is written with permissive language.

³ Because claim 1 of the ’673 patent and claim 1 of the ’113 patent are the only independent claims
in those patents, and both claims include the “aggregation sensor” claim limitation, all of the other claims
in the ’673 patent and the ’113 patent include that claim limitation.

1 aggregation sensors, or both.”⁴ (Id. at 26.)

2 Defendants argue that Plaintiffs have failed to present an infringement theory as to
3 how the accused products satisfy the “aggregation sensor” claim limitation. (Doc. No. 157
4 at 5.) In response, Plaintiffs argue that the accused products include this claim limitation.
5 (Doc. No. 172 at 12-16.) Plaintiffs explain that the accused products are “aggregation
6 sensors” because the products are intended for the detection and analysis of aggregants,
7 namely cells and their antigens. (Id. at 12 (citing Doc. No. 172-1, Swager Decl. ¶¶ 14, 20,
8 Ex. 13).) Plaintiffs further explain that cells and their antigens constitute “aggregants”
9 within the meaning of the Court’s claim construction because cells and their antigens are
10 capable of increasing the concentration of the dye molecules in the accused products, and
11 thus their optically active units including the second optically active units, within a
12 localized region around the cell. (Id. at 13 (citing Doc. No. 172-1, Swager Decl. ¶¶ 37-38,
13 43).) Plaintiffs also contend that cells and their antigens have the capability of increasing
14 the ability to transfer energy from an excited first optically active unit to a second optically
15 active unit. (Id. at 15 (citing Doc. No. 172-1, Swager Decl. ¶¶ 42-44).) Plaintiffs have
16 supported these contentions with citations to evidence in the record, including a declaration
17 from their infringement expert, Dr. Swager. This is sufficient to create a triable issue of
18 fact as to whether the accused products satisfy the “aggregation sensor” claim limitation.

19 Defendants argue that Dr. Swager’s opinions as to this claim limitation should be
20 rejected because his analysis is based on scientific literature rather than on testing of the
21 accused products. (Doc. No. 181 at 8-10.) But in deciding a motion for summary
22 judgment, the court must view the facts and draw all reasonable inferences in the light most
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25 ⁴ The Court rejects Plaintiffs’ argument that the Court’s claim construction for the term
26 “aggregation” does not require an increased ability to transfer energy. (Doc. No. 172 at 14-15.) The
27 Court’s claim construction for the term “aggregation,” which incorporated the express definition for this
28 term set forth in the ’673 patent and ’113 patent’s specifications, provides: “The term encompasses any
form of accumulation, compaction, condensing, etc., that increases the ability to transfer energy from an
excited first optically active unit(s) to a second optically active unit.” (Doc. No. 138 at 26.)

1 favorable to the non-moving party, here, Plaintiffs. Scott, 550 U.S. 372, 378 (2007). And
2 “[t]he evidence of the non-movant is to be believed.” Anderson, 477 U.S. at 255. As such,
3 the Court must believe the opinions of Dr. Swager and view them in the light most
4 favorable to Plaintiffs. When examined in that light, Dr. Swager’s opinions are sufficient
5 to create a triable issue of fact as to this claim limitation. Defendants’ criticisms of Dr.
6 Swager’s opinions might serve as a basis for cross-examination of his testimony, but they
7 are insufficient to establish entitlement to summary judgment on this issue. Defendants
8 have failed to provide the Court with any authority holding that an infringement expert
9 must specifically test an accused product in order to formulate an opinion of infringement.⁵
10 As a result, the Court denies Defendants’ motion for summary judgment of non-
11 infringement based on the “aggregation sensor” claim limitation.⁶

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18 ⁵ Defendants’ reliance on Novartis Corp. v. Ben Venue Labs., Inc., 271 F.3d 1043, 1051 (Fed. Cir.
19 2001), is unpersuasive. In Novartis, the Federal Circuit determined that the opinions of the plaintiff’s
20 infringement expert were insufficient to create a triable issue of fact, and the Federal Circuit affirmed the
21 district court’s grant of summary judgment of non-infringement. See id. at 1054-55. But the Federal
22 Circuit did not do so because the plaintiff’s infringement expert failed to engage in testing of the accused
23 product. Rather, the Federal Circuit in Novartis explained that the plaintiff’s evidence was insufficient
24 because the infringement expert based the relevant infringement opinion on a computer model, but the
25 record was “devoid of any indication” of the basis for the expert’s computer model. Id. at 1050. As such,
26 the Federal Circuit determined that the expert’s opinions lacked a proper factual foundation. See id. at
27 1050-55.

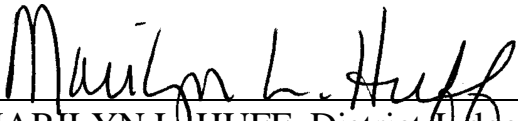
28 ⁶ In their opposition, Plaintiffs request that the Court find as established that the accused products
include an “aggregation sensor” pursuant to Federal Rule of Civil Procedure 56(g). (Doc. No. 172 at 16.)
The Court denies Plaintiffs’ request. Rule 56(g) provides: “If the court does not grant all the relief
requested by the motion, it may enter an order stating any material fact . . . that is not genuinely in dispute
and treating the fact as established in the case.” At this stage in the proceedings with discovery ongoing,
Plaintiffs have failed to establish that it is undisputed that the accused products include an “aggregation
sensor.” In addition, the Court notes that Plaintiffs did not cross-move for summary judgment, and Rule
56(g) is written with permissive language.

1 Conclusion

2 For the reasons above, the Court denies Defendants' motion for summary judgment
3 of non-infringement of the '673 patent and the '113 patent.

4 **IT IS SO ORDERED.**

5 DATED: May 14, 2018

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8 MARILYN L. HUFF, District Judge
9 UNITED STATES DISTRICT COURT
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