UNITED STATES DISTRICT COURT

SOUTHERN DISTRICT OF CALIFORNIA

THE SCRIPPS RESEARCH INSTITUTE, Plaintiff, v. ILLUMINA, INC., Defendant.	Case No.: 16-CV-661 JLS (BGS) **ORDER ON CLAIM CONSTRUCTION** (ECF Nos. 54, 55)

In March 2016, Plaintiff The Scripps Research Institute brought suit against Defendant Illuminia, Inc. alleging infringement of U.S. Patent No. 6,060,596 ("the '596 patent"), entitled "Encoded Combinatorial Chemical Libraries." Presently before the Court is claim construction. The Court held a claim construction hearing on January 30, 2018.

The '596 patent generally relates to a library of bifunctional molecules, each molecule having a chemical polymer and an identifier oligonucleotide sequence that defines the structure of the chemical polymer. *See* U.S. Patent No. 6,060,596 (filed May 9, 2000).) The libraries are used in the manufacture of DNA microarrays. (ECF No. 55,

at 5.)[1] Each DNA bead in a microarray contains many copies of specific DNA sequences (known as "probes," "oligonucleotides," or "oglios.") (*Id.* at 5–6.) These probes "can be used to bind to and detect a complementary DNA or RNA sample." (*Id.* at 6.) Scripps asserts claims 1, 3, 10, and 16, and the Parties dispute six terms within claim 1. Defendant filed a claim construction brief, ("Def. CC Brief," ECF No. 54), as did Plaintiff, ("Pl. CC Brief," ECF No. 55). Both Parties also filed a response, ("Def. Response," ECF No. 56; "Pl. Response," ECF No. 57).

LEGAL STANDARD

"A determination of infringement involves a two-step analysis. 'First, the claim must be properly construed to determine its scope and meaning. Second, the claim as properly construed must be compared to the accused device or process.'" *Omega Eng'g, Inc. v. Raytek Corp.*, 334 F.3d 1314, 1320 (Fed. Cir. 2003) (quoting *Carroll Touch, Inc. v. Electro Mech. Sys., Inc.*, 15 F.3d 1573, 1576 (Fed. Cir. 1993)).

The first step, commonly known as claim construction, is presently before the Court. Claim construction is a matter of law for the Court's determination. *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 388 (1996) ("[J]udges, not juries, are the better suited to find the acquired meaning of patent terms.").

Words of a claim are "generally given their ordinary and customary meaning." *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996). "[T]he ordinary and customary meaning of a claim term is the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention, i.e., as of the effective filing date of the patent application." *Phillips v. AWH Corp.*, 415 F.3d 1303, 1313 (Fed. Cir. 2005) (en banc). Because the inquiry into the meaning of claim terms is an objective one, "a court looks to those sources available to the public that show what a

[1] Pin citations to docketed material refer to the CM/ECF numbers electronically stamped at the top of each page.

person of skill in the art would have understood disputed claim language to mean." *Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1116 (Fed. Cir. 2004). "Those 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."[2] *Id.* (citing *Vitronics*, 90 F.3d at 1582–83).

Claim construction begins with an analysis of the words of the claims themselves. *See Scanner Techs. Corp. v. ICOS Vision Sys. Corp.*, 365 F.3d 1299, 1303 (Fed. Cir. 2004) (holding that claim construction "begins and ends" with a claim's actual words). "In some cases, the ordinary meaning of claim language as understood by a person of skill in the art may be readily apparent even to lay judges, and claim construction in such cases involves little more than the application of the widely accepted meaning of commonly understood words." *Phillips*, 415 F.3d at 1314. However, the meaning of a claim term as understood by ordinarily skilled artisans often is not immediately apparent. *Id.* In those situations, the court looks to "sources available to the public that show what a person of skill in the art would have understood disputed claim language to mean." *Id.* Or, when a patentee "chooses to be his own lexicographer and use terms in a manner other than their ordinary meaning," the court can use the patentee's meaning "as long as the special definition of the term is clearly stated in the patent specification or file history." *Vitronics*, 90 F.3d at 1582.

In examining the claims themselves, "the context in which a term is used can be highly instructive." *Phillips*, 415 F.3d at 1314. Moreover, "[o]ther claims of the patent in question, both asserted and unasserted can . . . be valuable sources of enlightenment as to the meaning of a claim term." *Id.* (citing *Vitronics*, 90 F.3d at 1582). "Because claim terms are normally used consistently throughout the patent, the usage of a term in one claim

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[2] The first three sources are considered "intrinsic evidence" of claim meaning. *See generally Phillips*, 415 F.3d at 1314–17.

can often illuminate the meaning of the same term in other claims." *Id.* Conversely, under the doctrine of claim differentiation, "'different words or phrases used in separate claims are presumed to indicate that the claims have different meanings and scope.'" *Andersen Corp. v. Fiber Composites, LLC*, 474 F.3d 1361, 1369 (Fed. Cir. 2007) (quoting *Karlin Tech., Inc. v. Surgical Dynamics, Inc.*, 177 F.3d 968, 971–72 (Fed. Cir. 1999)).

"Importantly, the person of ordinary skill in the art is deemed to read the claim term not only in the context of the particular claim in which the disputed term appears, but in the context of the entire patent, including the specification." *Phillips*, 415 F.3d at 1313. "The specification acts as a dictionary when it expressly defines terms used in the claims or when it defines them by implication." *Vitronics*, 90 F.3d at 1582. "In addition to providing contemporaneous technological context for defining claim terms, the patent applicant may also define a claim term in the specification 'in a manner inconsistent with its ordinary meaning.'" *Metabolite Labs., Inc. v. Lab. Corp. of Am.*, 370 F.3d 1354, 1360 (Fed. Cir. 2004). "Usually, [the specification] is dispositive; it is the single best guide to the meaning of a disputed term." *Vitronics*, 90 F.3d at 1582; *accord Phillips*, 415 F.3d at 1317 ("It is . . . entirely appropriate for a court, when conducting claim construction, to rely heavily on the written description for guidance as to the meaning of the claims.").

Patent claims should ordinarily be construed to encompass the preferred embodiments described in the specification, for "[a] claim construction that excludes a preferred embodiment . . . 'is rarely, if ever, correct.'" *SanDisk Corp. v. Memorex Prods., Inc.*, 415 F.3d 1278, 1285 (Fed. Cir. 2005) (quoting *Vitronics*, 90 F.3d at 1583). However, a court should not import limitations from the specification into the claims, *Phillips*, 415 F.3d at 1323 ("[A]lthough the specification often describes very specific embodiments of the invention, we have repeatedly warned against confining the claims to those embodiments."), absent a specific reference in the claims themselves, *Reinshaw PLC v. Marposs Societa' per Azioni*, 158 F.3d 1243, 1248 (Fed. Cir. 1998) ("[A] party wishing to use statements in the written description to confine or otherwise affect a patent's scope

must, at the very least, point to a term or terms in the claim with which to draw in those statements.").

The patent's prosecution history, if in evidence, may also shed light on claim construction. *Vitronics*, 90 F.3d at 1582. "This history contains the complete record of all proceedings before the Patent and Trademark Office [("PTO")], including any express representations made by the applicant regarding scope of the claims." *Id.* "Like the specification, the prosecution history provides evidence of how the PTO and the inventor understood the patent." *Phillips*, 415 F.3d at 1317. Although the prosecution history "often lacks the clarity of the specification," it is nevertheless useful to show "how the inventor understood the invention and whether the inventor limited the invention in the course of prosecution, making the claim scope narrower than it would otherwise be." *Id.*

"In most situations, an analysis of the intrinsic evidence alone will resolve any ambiguity in a disputed claim term. In such circumstances, it is improper to rely on extrinsic evidence." *Vitronics*, 90 F.3d at 1583. Thus, expert testimony on the proper construction of disputed claim terms "may only be relied upon if the patent documents, taken as a whole, are insufficient to enable the court to construe disputed claim terms." *Id.* at 1585.

However, *Vitronics* does not state a rule of admissibility, nor does it "prohibit courts from examining extrinsic evidence, even where the patent document is itself clear." *Pitney Bowes, Inc. v. Hewlett-Packard Co.*, 182 F.3d 1298, 1308 (Fed. Cir. 1999). As the Federal Circuit has made clear:

> [B]ecause extrinsic evidence can help educate the court regarding the field of the invention and can help the court determine what a person of ordinary skill in the art would understand claim terms to mean, it is permissible for the district court in its sound discretion to admit and use such evidence.

Phillips, 415 F.3d at 1319; *accord Key Pharms. v. Hercon Labs. Corp.*, 161 F.3d 709, 716 (Fed. Cir. 1998) ("[T]rial courts generally can hear expert testimony for background and education on the technology implicated by the presented claim construction issues, and

trial courts have broad discretion in this regard."). The court is not "barred from considering any particular sources or required to analyze sources in any specific sequence, as long as those sources are not used to contradict claim meaning that is unambiguous in light of the intrinsic evidence." *Phillips*, 415 F.3d at 1324; *see also Biagro W. Sales, Inc. v. Grow More, Inc.*, 423 F.3d 1296, 1302 (Fed. Cir. 2005) ("Extrinsic evidence, such as expert testimony, may be useful in claim construction, but it should be considered in the context of the intrinsic evidence.").

DISCUSSION

The Parties dispute the meaning of six claim terms or phrases in claim 1 of the '596 patent.

I. The '596 Patent

The '596 patent is titled "Encoded Combinatorial Chemical Libraries." Claim 1 of the patent is reproduced below:

> A bifunctional molecule according to the formula A–B–C, wherein A is a polymer comprising a linear series of chemical units represented by the formula $(X_n)_a$, wherein X is a single chemical unit in polymer A, B is a linker molecule operatively linked to A and C. and identifier oligonucleotide C is represented by the formula $(Z_n)_a$, wherein a unit identifier nucleotide sequence Z within oligonucleotide C identifies the chemical unit X at position n; and wherein n is a position identifier for both X in polymer A and Z in oligonucleotide C having the value of 1+i where i is an integer from 0 to 10, such that when n is 1, X or Z is located most proximal to the linker, and a is an integer from 4 to 50.

'596 patent, at 43:1–14.

The patent is directed to methods for creating encoded combinatorial chemical libraries made up of many bifunctional molecules. These molecules are made of both a chemical polymer and an identifier oligonucleotide sequence that defines the structure of the chemical polymer. '596 patent, abstract. The chemical polymer can be, for example, a series of amino acids, and the identifier oligonucleotide is a series of nucleotides (e.g., adenosine (A), guanine (G), cytosine (C), and thymine (T)). *Id.* at 4:44–55; 6:12–24. The

bifunctional molecules are built by starting with the linker, ("B") and adding chemical units (X) to one end and identifier nucleotide sequences (Z) to the other end. *Id.* at 10:18–25. For example: X_1–B–Z_1. *Id.* at 6:1. The series of chemical units (Xs) are called "polymer A" and the series of unit identifiers (Zs) are called "identifier oligonucleotide C." *Id.* at 4:31–36; 5:56–61. A and C are joined by "linker molecule B." *Id.* at 8:20–24. Thus, the formula is depicted as A–B–C. One can determine the structure of the first chemical unit (X_1) by reading the first unit identifier (Z_1). *Id.* at 2:66–3:1 ("The identity of the active molecule is determined by reading the genetic tag, i.e., the identifier oligonucleotide sequence."). "n" is a position identifier for both X and Z. *Id.* at 43:10–12. "n" has a value of 1+i where i is an integer from 0 to 10. *Id.* In the example above, X_1–B–Z_1, n = 1, meaning X and Z are located "most proximal to the linker [B]." *Id.* at 43:13. The term "a", the formulas "$(Z_n)_a$" and "$(X_n)_a$", and other terms are construed herein.

II. Disputed Terms

The Parties dispute in which order the Court should review the terms. (*See generally* "Joint Hearing Statement," ECF No. 50.) Because the dispute regarding the construction of "a" is intertwined with the construction of "$(Z_n)_a$" and "$(X_n)_a$", the Court evaluates these three terms together, and then proceeds with the remaining terms.

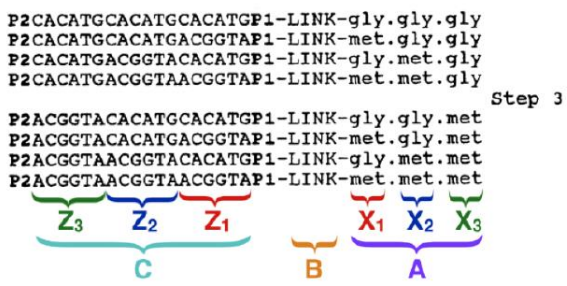
A. "a", "$(Z_n)_a$", and "$(X_n)_a$"

Plaintiff would construe "a" as: "the length of polymer A or identifier oligionucleotide C and is an integer from 4 to 50." ("Joint CC Worksheet," ECF No. 50-2, at 8–9.) Defendant would construe "a" as: "an integer from 4 to 50 that is further defined in the context of the formulas $(Z_n)_a$ and $(X_n)_a$." (*Id.*) These proposed constructions do not speak to the crux of the matter. The real dispute is the proper construction of "a" within the constructions of "$(Z_n)_a$" and "$(X_n)_a$." Defendant proposes "$(X_n)_a$" be construed as: "A representation of polymer A, where 'a' is the number of chemical units of X forming the polymer A." (*Id.* at 3–4 (emphasis added).) Similarly, Defendant proposes "$(Z_n)_a$" be construed as: "A representation of identifier oligonucleotide C, where 'a' is the number of

chemical unit identifiers in the oligonucleotide." (*Id.* at 7–8 (emphasis added).)

Generally, Defendant argues "a" is defined as the number of chemical units (X) and the number of corresponding unit identifiers (Z). Plaintiff argues "a" is not limited to the number of chemical units but refers to the length of polymer A and oligonucleotide C. Plaintiff would construe "$(X_n)_a$" as: "the formula that represents polymer A comprising a linear series of chemical units, where 'a' is the length of polymer A and is an integer from 4 to 50, 'X' and 'n' are defined by Claim 1 and require no further construction." (*Id.* at 3–4 (emphasis added).) Plaintiff would construe "$(Z_n)_a$" as: "the formula that represents identifier oligonucleotide C, where 'a' is the length of identifier oligonucleotide C and is an integer from 4 to 50, 'Z' and 'n' are defined by Claim 1 and require no further construction." (*Id.* at 7–8 (emphasis added).)

To sum up the arguments with an illustration, both Parties interpret Figure 2.



See '596 patent, fig. 2 (with additions, in color). Plaintiff argues "a" for oligonucleotide C in Figure 2 has a value of 18 which is the "total number of A, T, C, and G bases that comprise identifier oligonucleotide C." ("Metzker Decl.," ECF No. 55-2, ¶ 53.) Plaintiff argues "a" for polymer A in Figure 2 has a value of 3, "which is the length of the polymer of glycine and methionine residues." (*Id.*) Defendant argues "a" for oligonucleotide C in Figure 2 has a value of 3 "because there are 3 chemical unit identifiers in the oligonucleotide." ("Chelsky Decl.," ECF No. 54-18, ¶ 27.) Defendant agrees with

Plaintiff that "a" is 3 for polymer A. (*Id.* ¶ 37.)[3]

At the claim construction hearing, Plaintiff requested leave to present supplemental briefing and documents. In the supplemental briefs, the Parties again summarize their proposed construction: Plaintiff argues "a" is the length of polymer A and identifier oligonucleotide C. ("Pl. Supp. Br.," ECF No. 66, at 3.) Plaintiff argues "polymer A is determined by counting the number of monomers" and "the length of an oligonucleotide is measured in nucleotide bases." (*Id.*) Plaintiff does not propose these units of measurement be officially added to the claim construction for "a" but argues a person of ordinary skill in the art reading the patent would understand that length is measured in these units. (*Id.* at 5.)

Plaintiff submitted 37 C.F.R. § 1.823 as an exhibit to its brief. This regulation provides what shall be included in a sequence listing. The sequence listing, which sets "forth the nucleotide and/or amino acid sequence and associated information," shall include "length" in "an integer expressing the number of bases or amino acid residues." 37 C.F.R. § 1.823(b). Plaintiff argues this regulation, which governs "submission of sequence listings of oligonucleotides and polypeptides," "expressly required that the length be measured by the number of nucleotide bases or amino acid residues, respectively." (Pl. Supp. Br. 4.) Plaintiff argues one can read this federal regulation, which dictates how sequences must be described in a patent, to determine how to measure the length of a polypeptide of oligonucleotide. (*Id.* at 5.) Defendant argues this regulation is not relevant to interpreting the formula "$(X_n)_a$" because the patent's sequence listing relates to

[3] Defendant previously brought a motion to dismiss, which dealt with the term "a." As it does in the present claim construction, Defendant argued the patent defines "a" to be the number of chemical units in polymer A and the number of corresponding unit identifiers in identifier oligonucleotide C. (ECF No. 30-1, at 15.) The Court denied Defendant's motion to dismiss, finding it "cannot say at this stage that Defendant's construction is correct as a matter of law." (ECF No. 34, at 10.) The Court held that passages from the patent illustrate "a" *can be* defined by the number of chemical units, it does not specify it *must be* so defined. (*Id.*) The Court noted that the Parties would have another opportunity to contest the meaning of "a" at the claim construction phrase. (*Id.* at 13.)

oligonucleotide C, not polymer A. ("Def. Supp. Br.," ECF No. 67, at 7; *see* '596 patent, at 29.) As to the construction of "$(X_n)_a$", Defendant does not disagree that the patent describes "a" as "the length of the polymer A." '596 patent, at 4:39–42 ("[T]he length of the polymer can vary, defined by a."). But Defendant reaffirms its position that "length" is measured in chemical units. (Def. Supp. Br. 4 (citing '569 patent, at 9:9–11 (in V^a, "'a' is an exponent to V and represents the number of chemical units of X forming the polymer A, i.e., the length of polymer A.")).)

The Court agrees with Defendant's construction. Critically, Plaintiff cannot point to evidence or to any part of the patent that would allow "a" to be two different integers or measured by two different units for polymer A and oligonucleotide C. Instead, "a" is specifically defined as "an integer"—indicating it is the same for both "$(X_n)_a$" and "$(Z_n)_a$". *See* '596 patent, at 4:43–44 (for Polymer A, "'a' is an integer from 4 to 50"); *id.* at 5:63–65 (for oligonucleotide C, "'a' is an integer as described previously to connote the number of chemical unit identifiers in the oligonucleotide"). As Defendant points out, "when Scripps wanted to represent two different things (like chemical units (X) and chemical unit identifiers (Z)), it did so by using different variables for each of them in claim 1." (Def. Supp. Br. 10.) Had Plaintiff intended "a" to represent different values with different units of measurement for polymer A and for oligonucleotide C, it should have specified this, or used two different variables. Plaintiff's proposed construction leaves open the units of measurement, which will result in two different values for "a" due to the two different units of measurement indicated by Plaintiff in its briefing (monomers and nucleotide bases). (Pl. Supp. Br. 5 (stating "'a' need not have the same value in the case of polymer A and oligonucleotide C for a given bifunctional molecule.").) This is not supported by the patent language nor by 37 C.F.R. § 1.823(b). Plaintiff has not defined "a" with any form of clarity in the sequence listing or in the specification, thus the Court declines to construe "a" based on Plaintiff's proposed lexicography. And, 37 C.F.R. § 1.823(b), even read in connection

with the patent's sequence listing, does not provide that an integer can represent two different lengths with two different units of measurement.

The Court construes "a" as "an integer from 4 to 50 that is further defined in the context of the formulas $(Z_n)_a$ and $(X_n)_a$."[4] The Court construes "$(X_n)_a$" as "a representation of polymer A, where 'a' is the number of chemical units of X forming the polymer A." The Court construes "$(Z_n)_a$" as "a representation of identifier oligonucleotide C, where 'a' is the number of chemical unit identifiers in the oligonucleotide."

B. "B is a linker molecule operatively linked to A and C"

Plaintiff would construe this term as "single molecule B that performs the function of operatively linking a single polymer A to single identifier oligonucleotide C." (Joint CC Worksheet 4.) Defendant would construe this term as "linker molecule B (1) links to A and to C, (2) allows for alternative addition of nucleotides and amino acids to itself, and (3) is capable of coupling to and decoupling from a solid support without cleaving either the polypeptide or oligonucleotide from linker molecule B." (*Id.* at 4–5.) Alternatively, if the Court does not accept this, Defendant proposes "a molecule B that performs the function of operatively linking a chemical moiety A to an identifier oligonucleotide C." (*Id.* at 5.)

In February 2017, the Patent Trial and Appeal Board ("PTAB") construed the present term. *See* Illuminia, Inc. v. The Scripps Research Institute, No. IPR2016-01619 (P.T.A.B. Feb. 13, 2017) (hereinafter "Illuminia"). Defendant proposes the Court construe the term exactly as the PTAB construed it.

The Court agrees with the PTAB's construction. The decision is reasoned,

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[4] The Court notes that Plaintiff's proposed construction of "a" specifically (not in the context of the two formulas) is not technically incorrect. Plaintiff proposes "a" be construed as "the length of polymer A or identifier oligionucleotide C and is an integer from 4 to 50." (Joint CC Worksheet 8–9.) Defendant would construe "a" as: "an integer from 4 to 50 that is further defined in the context of the formulas $(Z_n)_a$ and $(X_n)_a$." (*Id.*) Both Parties agree "a" is "the length" of polymer A and oligonucleotide C, thus, both proposed constructions are correct. But, Defendant's construction for "a" as consistent with the constructions of $(Z_n)_a$ and $(X_n)_a$.

persuasive, and provides the Court with guidance on the construction of the term. (*See id.* at 9–17.) Further, the PTAB noted, because the '596 patent expired in 2012, its review of the patent "is similar to that of a district court's review." *Id.* at 9; *see In re Rambus, Inc.*, 694 F.3d 42, 46 (Fed. Cir. 2012) ("[T]he Board's review of the claims of an expired patent is similar to that of a district court's review." (citations omitted)). The PTAB applied the principles set forth in *Phillips*, 415 F.3d at 1312–13. Illuminia, at 10. The PTAB concluded the term "B is a linker molecule operatively linked to A and C" to mean "that linker molecule B (1) links to A and to C, (2) allows for alternative addition of nucleotides and amino acids to itself, and (3) is capable of coupling to and decoupling from a solid support without cleaving either the polypeptide or oligonucleotide from linker molecule B." Illuminia, at 17. In sum, the PTAB looked at the language of the claim language, the "disclosure in the specification" and the "narrowing statements" made by Plaintiff during prosecution. *Id.*; *see also id.* ("[T]he arguments made to distinguish the prior art constitute a clear and unequivocal disavowal of linker molecules that fail to allow for alternative addition (or synthesis) of an oligonucleotide and amino acid onto the linker molecule, while separately allowing for coupling and decoupling of the linker molecule from a solid support.").

The Court agrees and adopts the PTAB's construction as to this term. *See Evolutionary Intelligence, LLC v. Spring Nextel Corp.*, No. C-13-04513, 2014 WL 4802426, at *4 (N.D. Cal. Sept. 26, 2014) (stating PTAB decisions are not binding on the court but they may "inform" the court's ultimate reasoning). The term is construed as "linker molecule B (1) links to A and to C, (2) allows for alternative addition of nucleotides and amino acids to itself, and (3) is capable of coupling to and decoupling from a solid support without cleaving either the polypeptide or oligonucleotide from linker molecule B."

C. "bifunctional molecule"

Plaintiff would construe this term as "a single molecule of the formula A–B–C,

whereby one molecule of chemical moiety A and one molecule of identifier oligonucleotide C are operatively linked by one molecule of linker B." (Pl. CC Brief 18.) Defendant argues this preamble term is not limiting and "is merely a descriptive name to the set of limitations in the body of the claim." (Def. CC Brief 28.) If the Court determines the term is limiting, Defendant would construe the term as "a molecule that can be represented by the formula A–B–C, where A is a chemical moiety, B is a linker molecule operatively linked to A and C, and C is an identifier oligonucleotide comprising a sequence of nucleotides that identifies the structure of chemical moiety A." (*Id.*)

A preamble is an introductory phrase that may summarize the invention, its relation to the prior art, or its intended use or properties. *E. I. du Pont de Nemours & Co. v. Monsanto Co.*, 903 F. Supp. 680, 693 (D. Del. 1995) (quoting 8 Donald S. Chisum, Chisum on Patents § 8.06 (Matthew Bender ed. 3d ed.)), *aff'd*, 92 F.3d 1208 (Fed. Cir. 1996) (unpublished). A recurrent problem in construing patent claims is whether language in a claim is a limitation of the claim's scope or merely a non-limiting statement of intended use or effect. Chisum, § 8.06. "If the preamble adds no limitations to those in the body of the claim, the preamble is not itself a claim limitation and is irrelevant to proper construction of the claim." *IMS Tech., Inc. v. Haas Automation, Inc.*, 206 F.3d 1422, 1434 (Fed. Cir. 2000) (citing *Pitney Bowes*, 182 F.3d at 1305).

Whether to treat a preamble as a limitation is a determination "resolved only on review of the entirety of the patent to gain an understanding of what the inventors actually invented and intended to encompass by the claim." *Corning Glass Works v. Sumitomo Electric U.S.A., Inc.*, 868 F.2d 1251, 1257 (Fed. Cir. 1989); *see also Applied Materials, Inc. v. Advanced Semiconductor Materials Am., Inc.*, 98 F.3d 1563, 1572–73 (Fed. Cir. 1996) ("Whether a preamble stating the purpose and context of the invention constitutes a limitation of the claimed process is determined on the facts of each case in light of the overall form of the claim, and the invention as described in the specification and illuminated in the prosecution history.").

In general, a preamble limits the invention if it recites essential structure or steps, or if it is "necessary to give life, meaning, and vitality" to the claim. *Pitney Bowes*, 182 F.3d at 1305. Conversely, a preamble is not limiting "where a patentee defines a structurally complete invention in the claim body and uses the preamble only to state a purpose or intended use for the invention." *Rowe v. Dror*, 112 F.3d 473, 478 (Fed. Cir. 1997). "[A] preamble generally is not limiting when the claim body describes a structurally complete invention such that deletion of the preamble phrase does not affect the structure or steps of the claimed invention." *IMS Tech.*, 206 F.3d at 1434 (holding preamble phrase "control apparatus" does not limit claim scope where it merely gives a name to the structurally complete invention).

The Court finds the phrase "a bifunctional molecule" is not limiting. The remainder of the claim body (the description after "bifunctional molecule") describes a complete claim, beginning with the formula A–B–C and proceeding on to define each piece of the formula. The Court finds *IMS Technology* instructive; similarly, here, the phrase "does not limit claim scope" but only gives a name to a "structurally complete invention." 206 F.3d at 1434; *see also Weiland Sliding Doors & Windows, Inc. v. Panda Windows & Doors*, No. 10-CV-677-JLS (MDD), 2011 WL 3490481, at *3 (S.D. Cal. Aug. 10, 2011) (finding the preamble "names what is being claimed . . . but does little else. And simply naming the structure being claimed in the body is insufficient to render the preamble limiting"). Here, the phrase only "names what is being claimed" and is not necessary to give life, meaning, and validity to the claims.[5] Thus, the Court declines to construct this preamble phrase.

D. "identifier oligonucleotide C"

Plaintiff would construe this term as "a unique nucleotide sequence that is an unrelated combination by chance or otherwise during the manipulation of the bifunctional

[5] This finding is bolstered by the fact that Plaintiff's proposed construction of this phrase merely recites the remainder of the claim, thus it is unclear how the phrase could be limiting, as Plaintiff suggests.

molecule." (Joint CC Worksheet 5.) Defendant argues the term does not require construction because claim 1 already defines it, but if the Court chooses to construe the term, it should be construed as: "an oligonucleotide having a sequence represented by the formula $(Z_n)_a$." (*Id.* at 5–6.)

Plaintiff argues the dispute pertains to the word "identifier" in this phrase. (Pl. CC Brief 20.) Plaintiff argues for the oligonucleotide to be an "identifier," it must contain a unique sequence that is an unrelated combination by chance or otherwise. (*Id.*; see '596 patent, at 6:25–30 ("For the design of the code in the identifier oligonucleotide, it is essential to chose [sic] a coding representation such that no significant part of the oligonucleotide sequence can occur in another unrelated combination by chance or otherwise during the manipulations of a bifunctional molecule in the library.").) Plaintiff argues Defendant's definition attempts to erase the word "identifier."

Plaintiff argues the patent is directed to chemical libraries of bifunctional molecules that contain millions of unique samples, and each molecule contains a "genetic tag" that identifies the sample. To determine the identity of the molecule, one reads the genetic tag. This tag must contain a unique nucleotide sequence so that it may identify the single molecule. (Pl. CC Brief 20.) Otherwise, one decoding the tag would not know "which active chemical molecule was on the other end of the bifunctional molecule and the identifier oligonucleotide would not serve its purpose." (*Id.*) Plaintiff argues this description is "essential to the invention." (*Id.* at 21.) On the other hand, Plaintiff argues Defendant's proposed construction could cover any oligonucleotide sequence represented by $(Z_n)_a$. (*Id.* at 22.) This cannot be the case because "identifier oligonucleotide C must be unique to its polymer A because reading the identifier alone determines the identify of polymer A." (*Id.*)

Defendant argues claim 1 already specifies this term—as "represented by the formula $(Z_n)_a$." (Def. CC Brief 29.) Defendant does not disagree the oligonucleotide must be "unique," but finds no need to incorporate that limitation via claim construction. (Def.

Response 13.) Defendant also argues Plaintiff did not include the language "no specific part" in its proposed construction, thus changing the meaning of the sentence. (Def. CC Brief 29.)

"The appropriate starting point [in claim construction] is always with the language of the asserted claim itself." *Comark Commc'ns*, 156 F.3d at 1186. Claim terms are generally given their ordinary and customary meaning as understood by a person of ordinary skill in the art when read in the context of the specification and prosecution history. *Thorner v. Sony Computer Entm't Am. LLC*, 669 F.3d 1362, 1365 (Fed. Cir. 2012). "The specification acts as a dictionary when it expressly defines terms used in the claims or when it defines them by implication." *Vitronics*, 90 F.3d at 1582. "[A]ny special definition given to a word must be clearly defined in the specification." *Markman*, 517 U.S. at 989–90. An inventor may choose to be his own lexicographer if he defines the specific terms used to describe the invention "with reasonable clarity, deliberateness, and precision." *In re Paulsen*, 30 F.3d 1475, 1480 (Fed. Cir. 1994). "However, claims are not to be interpreted by adding limitations appearing only in the specification." *Id.* "Thus, although the specifications may well indicate that certain embodiments are preferred, particular embodiments appearing in a specification will not be read into the claims when the claim language is broader than such embodiments." *Id.*

The Court finds it would be inappropriate to read the specification into this element, as Plaintiff proposes. The claim language is broader than the language in the specification, and the Court finds no clear intent by Plaintiff to limit the claim term to "a unique nucleotide sequence that is an unrelated combination by chance or otherwise during the manipulation of the bifunctional molecule." The claim specification provides "identifiers oligonucleotide C is represented by the formula $(Z_n)_a$." The claim itself therefore shows the ordinary meaning of the term. Further, the Court finds that the specification does not "expressly" nor "clearly" define the term and it would be incorrect to read limitations from the specification into the claims. *See Teleflex, Inc. v. Ficosa N. Am. Corp.*, 299 F.3d 1313,

1325 (Fed. Cir. 2002) ("The patentee may demonstrate an intent to deviate from the ordinary and accustomed meaning of a claim term by including in the specification expressions of manifest exclusion or restriction, representing a clear disavowal of claim scope."); *Raytheon Co. v. Roper Corp*., 724 F.2d 951, 957 (Fed. Cir. 1983) ("That claims are interpreted in light of the specification does not mean that everything expressed in the specification must be read into all the claims."). Further, the Court finds the claim itself contains the proper construction. Thus, the Court construes the term as "an oligonucleotide having a sequence represented by the formula $(Z_n)_a$."

CONCLUSION

The terms in dispute are construed as follows:

Term	Construction
"a"	an integer from 4 to 50 that is further defined in the context of the formulas $(Z_n)_a$ and $(X_n)_a$
"$(X_n)_a$"	a representation of polymer A, where "a" is the number of chemical units of X forming the polymer A
"$(Z_n)_a$"	a representation of identifier oligonucleotide C, where "a" is the number of chemical unit identifiers in the oligonucleotide
"B is a linker molecule operatively linked to A and C"	linker molecule B (1) links to A and to C, (2) allows for alternative addition of nucleotides and amino acids to itself, and (3) is capable of coupling to and decoupling from a solid support without cleaving either the polypeptide or oligonucleotide from linker molecule B

"bifunctional molecule"	The Court declines to construct this preamble phrase.
"identifier oligonucleotide C"	an oligonucleotide having a sequence represented by the formula $(Z_n)_a$

IT IS SO ORDERED.

Dated: April 10, 2018

Janis L. Sammartino
Hon. Janis L. Sammartino
United States District Judge