IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

PACIFIC BIOSCIENCES OF CALIFORNIA, INC.,	:	
Plaintiff,	:	
v.	:	C.A. No. 17-1353-LPS
OXFORD NANOPORE TECHNOLOGIES, INC.,	:	
Defendant.	:	

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MEMORANDUM OPINION

March 22, 2018
Wilmington, Delaware

STARK, U.S. District Judge:

Plaintiff Pacific Biosciences of California, Inc. ("PacBio") filed suit against Defendant Oxford Nanopore Technologies, Inc. ("Oxford") on September 25, 2017. In response to a motion to dismiss filed by Oxford, PacBio filed its First Amended Complaint (D.I. 13) ("Complaint") on November 30, 2017. The Complaint alleges that Oxford infringes U.S. Patent Nos. 9,678,056 and 9,738,929 (the "'929 patent"). On December 14, 2017, Oxford moved to dismiss the Complaint's claim for infringement of the '929 patent for failure to state a claim, pursuant to Federal Rule of Civil Procedure 12(b)(6), based on Oxford's contention that the claims of this patent are not directed to patent-eligible subject matter under 35 U.S.C. § 101. (D.I. 19) Oxford's motion is fully briefed and the Court heard oral argument on February 27, 2018. (*See* D.I. 45 ("Tr."))

For the reasons stated below, the Court will deny Oxford's motion to dismiss.[1]

I. BACKGROUND

DNA is made up of two complementary strands of nucleotides whereby a nucleotide on one strand is paired up with a nucleotide on the other strand. Since a certain type of nucleotide will always pair up with only one type of nucleotide (e.g., adenine only with thymine, and

[1]In a related case (which has since been transferred to the undersigned Judge and consolidated with the instant case), the Honorable Richard G. Andrews of this Court denied Oxford's motion to dismiss a different patent being asserted against it by PacBio. (*See* C.A. No. 17-275 D.I. 23) Observing that a "technological understanding can be significant" when analyzing step two of the *Alice/Mayo* test (described further below), particularly when at least one party wishes the Court to consider expert declarations, deposition testimony, and other patents, applications, and publications, Judge Andrews stated: "Under the circumstances of this case, and considering the technology of the patent being asserted, I do not think patent-ineligibility is something that I can fairly decide on a motion to dismiss." (*Id.* at 2) The situation now pending in this matter is different – for reasons including that it involves a different patent as well as a substantially amended Complaint.

cytosine only with guanine), once one member of a pair of nucleotides is identified, the other in the pair may be identified as well. (*See* D.I. 20 at 2; Tr. at 4)

Nanopore sequencing is a method of identifying a sequence of nucleotides on a portion of DNA. The method generally involves putting the DNA through a small hole (or nanopore) while passing an electric current through the nanopore and – because each type of nucleotide reacts in a particular way to an ionic current – determining the nucleotide sequence by watching how each nucleotide reacts to the electric current. (*See* Compl. at 7; D.I. 24 at 4-5; Tr. at 31)

The '929 patent generally relates to a nanopore DNA sequencing process that engages in redundant sequencing (i.e., analyzing both strands of DNA rather than just one strand) to determine a nucleotide sequence of interest. By checking both strands of DNA, the '929 patent implements a method of checking the sequencing information for accuracy because a nucleotide sequence on one strand must have a specific complementary nucleotide sequence on the other strand. Since errors in the nanopore sequencing process are not uncommon, if the results from the two strands do not properly pair up, then it is known that there was an error in the sequencing process. Alternatively, if the results do pair up, then there is a greater level of confidence in the results. (*See* Compl. at 8-9, 16-17; D.I. 24 at 4-6; Tr. at 33, 35, 58)

PacBio alleges that Oxford infringes claims 1-2, 6-8, and 10-11 of the '929 patent. Independent claim 1 is representative of the asserted claims and reads:

> A method of determining a nucleotide sequence of a region of interest in a polynucleotide, the method comprising:
>
> introducing a polynucleotide comprising a region of interest to a sequence analysis system comprising a nanopore in a membrane, wherein the polynucleotide comprises a double-stranded portion comprising complementary strands of the region of interest;

applying a voltage across the membrane;

monitoring variations in ionic current through the nanopore of the sequence analysis system during enzyme chaperone-regulated passage of the polynucleotide through the nanopore;

analyzing the monitored variations in ionic current to obtain nucleotide sequence information for the polynucleotide, wherein the nucleotide sequence information comprises redundant sequence information for the region of interest, wherein the redundant sequence information comprises the nucleotide sequence of the complementary strands; and

determining a consensus sequence for the region of interest based on the redundant sequence information.

('929 patent, cl. 1) Claims 2, 6-8, and 10-11 are dependent on independent claim 1.

Oxford moves to dismiss PacBio's patent infringement claims as to each of the asserted claims of the '929 patent on the grounds that they claim ineligible subject matter. (D.I. 19)

II. RECENT § 101 DECISIONS

The parties completed briefing on the motion on January 17, 2018. (D.I. 20, 24, 25) The Court of Appeals has subsequently issued multiple opinions considering challenges to patentability pursuant to § 101.

On February 12, 2018, PacBio submitted a Notice of Subsequent Authority (D.I. 31), advising the Court of the Federal Circuit's February 8 decision in *Berkheimer v. HP Inc.*, 881 F.3d 1360, 1369 (Fed. Cir. 2018) (affirming grant of motion for judgment on pleadings while stating, "Whether something is well-understood, routine, and conventional to a skilled artisan at the time of the patent is a factual determination"). On February 22, 2018, PacBio submitted a second Notice of Subsequent Authority (D.I. 36), advising the Court of the Federal Circuit's February 14 decision in *Aatrix Software, Inc. v. Green Shades Software, Inc.*, 882 F.3d 1121,

1127 (Fed. Cir. 2018) (reversing grant of 12(b)(6) motion for ineligible subject matter, explaining that complaint "suppl[ying] numerous allegations related to the inventive concepts present in the claimed . . . technology," including "describ[ing] the development of the patented invention, including the problems present in the prior art," and "present[ing] specific allegations directed to improvements and problems solved by the [] patented inventions," could survive such motion) (internal quotation marks omitted).

The Court is also aware of other recent § 101 opinions. *See, e.g.*, *Intellectual Ventures I LLC v. Symantec Corp.*, 2018 WL 1324863 (Fed. Cir. Mar. 15, 2018) (affirming this Court's grant of summary judgment of invalidity due to lack of patentable subject matter); *Exergen Corp. v. Kaz USA, Inc.*, 2018 WL 1193529, at *4 (Fed. Cir. Mar. 8, 2018) ("The district court's conclusion that these claim elements were not well-understood, routine, and conventional is a question of fact to which we must give clear error deference. Like indefiniteness, enablement, or obviousness, whether a claim is directed to patentable subject matter is a question of law based on underlying facts. . . . [N]ot every § 101 determination contains disputes over the underlying facts.") (internal citations omitted); *Automated Tracking Sols., LLC v. Coca-Cola Co.*, 2018 WL 935455 (Fed. Cir. Feb. 16, 2018) (affirming grant of judgment on pleadings that asserted patent claims were ineligible); *Zuili v. Google LLC*, 2018 WL 798666 (Fed. Cir. Feb. 9, 2018) (affirming PTAB decision that claims were directed to patent-ineligible subject matter); *Move, Inc. v. Real Estate Alliance Ltd.*, 2018 WL 656377 (Fed. Cir. Feb. 1, 2018) (affirming grant of summary judgment finding patent invalid for claiming ineligible subject matter); *Core Wireless Licensing S.A.R.L. v. LG Electronics., Inc.*, 880 F.3d 1356 (Fed. Cir. 2018) (affirming denial of summary judgment that claims are directed to patent ineligible subject matter); *Finjan, Inc. v.*

Blue Coat Systems, Inc., 879 F.3d 1299 (Fed. Cir. 2018) (affirming district court's conclusion following bench trial that patent claims were directed to patent-eligible subject matter).

Even though the parties have not provided their specific analyses of all of these recent decisions, the Court has considered each of them in reaching its decision here.

III. LEGAL STANDARDS

A. Rule 12(b)(6) Motion to Dismiss

Evaluating a motion to dismiss under Federal Rule of Civil Procedure 12(b)(6) requires the Court to accept as true all material allegations of the complaint. *See Spruill v. Gillis*, 372 F.3d 218, 223 (3d Cir. 2004). "The issue is not whether a plaintiff will ultimately prevail but whether the claimant is entitled to offer evidence to support the claims." *In re Burlington Coat Factory Sec. Litig.*, 114 F.3d 1410, 1420 (3d Cir. 1997) (internal quotation marks omitted). Thus, the Court may grant such a motion to dismiss only if, after "accepting all well-pleaded allegations in the complaint as true, and viewing them in the light most favorable to plaintiff, plaintiff is not entitled to relief." *Maio v. Aetna, Inc.*, 221 F.3d 472, 481-82 (3d Cir. 2000) (internal quotation marks omitted).

A well-pleaded complaint must contain more than mere labels and conclusions. *See Ashcroft v. Iqbal*, 556 U.S. 662, 678 (2009); *Bell Atl. Corp. v. Twombly*, 550 U.S. 544, 555 (2007). A plaintiff must plead facts sufficient to show that a claim has substantive plausibility. *See Johnson v. City of Shelby*, 135 S. Ct. 346, 347 (2014). A complaint may not be dismissed, however, for imperfect statements of the legal theory supporting the claim asserted. *See id.* at 346.

"To survive a motion to dismiss, a civil plaintiff must allege facts that 'raise a right to

relief above the speculative level on the assumption that the allegations in the complaint are true (even if doubtful in fact).'" *Victaulic Co. v. Tieman*, 499 F.3d 227, 234 (3d Cir. 2007) (quoting *Twombly*, 550 U.S. at 555). A claim is facially plausible "when the plaintiff pleads factual content that allows the court to draw the reasonable inference that the defendant is liable for the misconduct alleged." *Iqbal*, 556 U.S. at 678. At bottom, "[t]he complaint must state enough facts to raise a reasonable expectation that discovery will reveal evidence of [each] necessary element" of a plaintiff's claim. *Wilkerson v. New Media Tech. Charter Sch. Inc.*, 522 F.3d 315, 321 (3d Cir. 2008) (internal quotation marks omitted).

The Court is not obligated to accept as true "bald assertions," *Morse v. Lower Merion Sch. Dist.*, 132 F.3d 902, 906 (3d Cir. 1997) (internal quotation marks omitted), "unsupported conclusions and unwarranted inferences," *Schuylkill Energy Res., Inc. v. Pa. Power & Light Co.*, 113 F.3d 405, 417 (3d Cir. 1997), or allegations that are "self-evidently false," *Nami v. Fauver*, 82 F.3d 63, 69 (3d Cir. 1996).

B. Patentable Subject Matter

Under 35 U.S.C. § 101, "[w]hoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title." There are three exceptions to § 101's broad patent-eligibility principles: "laws of nature, physical phenomena, and abstract ideas." *Diamond v. Chakrabarty*, 447 U.S. 303, 309 (1980). "Whether a claim recites patent eligible subject matter is a question of law which may contain disputes over underlying facts." *Berkheimer*, 881 F.3d at 1368.

In *Mayo Collaborative Services v. Prometheus Laboratories, Inc.*, 132 S. Ct. 1289 (2012),

the Supreme Court set out a two-step "framework for distinguishing patents that claim laws of nature, natural phenomena, and abstract ideas from those that claim patent-eligible applications of those concepts." *Alice Corp. Pty. Ltd. v. CLS Bank Int'l*, 134 S. Ct. 2347, 2355 (2014). First, courts must determine if the claims at issue are directed to a patent-ineligible concept ("step one"). *See id.* If so, the next step is to look for an "'inventive concept' – i.e., an element or combination of elements that is sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the [ineligible concept] itself" ("step two"). *Id.* The two steps are "plainly related" and "involve overlapping scrutiny of the content of the claims." *Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1353 (Fed. Cir. 2016).

At step one, "the claims are considered in their entirety to ascertain whether their character ***as a whole*** is directed to excluded subject matter." *Internet Patents Corp. v. Active Network, Inc.*, 790 F.3d 1343, 1346 (Fed. Cir. 2015) (emphasis added); *see also Affinity Labs of Texas, LLC v. DIRECTV, LLC*, 838 F.3d 1253, 1257 (Fed. Cir. 2016) ("*Affinity Labs I*") (stating first step "calls upon us to look at the 'focus of the claimed advance over the prior art' to determine if the claim's 'character as a whole' is directed to excluded subject matter").

In conducting the step one analysis, courts should not "oversimplif[y]" key inventive concepts or "downplay" an invention's benefits. *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1337-38 (Fed. Cir. 2016); *see also McRO, Inc. v. Bandai Namco Games Am. Inc.*, 837 F.3d 1299, 1313 (Fed. Cir. 2016) ("[C]ourts 'must be careful to avoid oversimplifying the claims' by looking at them generally and failing to account for the specific requirements of the claims.") (quoting *In re TLI Commc'ns LLC Patent Litig.*, 823 F.3d 607, 611 (Fed. Cir. 2016)).

At step two, courts must "look to both the claim as a whole and the individual claim

elements to determine whether the claims contain an element or combination of elements that is sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the ineligible concept itself." *McRo*, 837 F.3d at 1312 (internal brackets and quotation marks omitted). The "standard" step two inquiry includes consideration of whether claim elements "simply recite 'well-understood, routine, conventional activit[ies].'" *Bascom Glob. Internet Servs., Inc. v. AT&T Mobility LLC*, 827 F.3d 1341, 1350 (Fed. Cir. 2016) (quoting *Alice*, 134 S. Ct. at 2359). "Simply appending conventional steps, specified at a high level of generality, [is] not ***enough*** to supply an inventive concept." *Alice*, 134 S. Ct. at 2357 (internal quotation marks omitted; emphasis in original).

However, "[t]he inventive concept inquiry requires more than recognizing that each claim element, by itself, was known in the art." *Bascom*, 827 F.3d at 1350. In *Bascom*, the Federal Circuit held that "the limitations of the claims, taken individually, recite generic computer, network and Internet components, none of which is inventive by itself," but nonetheless determined that an ***ordered combination*** of these limitations was patent-eligible under step two. *Id.* at 1349.

The Federal Circuit recently elaborated on the step two standard, stating that "[t]he question of whether a claim element or combination of elements is well-understood, routine and conventional to a skilled artisan in the relevant field is a question of fact. Any fact, such as this one, that is pertinent to the invalidity conclusion must be proven by clear and convincing evidence." *Berkheimer*, 881 F.3d at 1368; *see also Aatrix*, 882 F.3d at 1128 ("While the ultimate determination of eligibility under § 101 is a question of law, like many legal questions, there can be subsidiary fact questions which must be resolved en route to the ultimate legal

determination."); *Automated Tracking*, 2018 WL 935455, at *5 ("We have held that 'whether a claim element or combination of elements is well-understood, routine and conventional to a skilled artisan in the relevant field is a question of fact.'") (quoting *Berkheimer*, 881 F.3d at 1368).

"Whether a particular technology is well-understood, routine, and conventional goes beyond what was simply known in the prior art. The mere fact that something is disclosed in a piece of prior art, for example, does not mean it was well-understood, routine, and conventional." *Berkheimer*, 881 F.3d at 1369; *see also Exergen*, 2018 WL 1193529, at *4 ("Something is not well-understood, routine, and conventional merely because it is disclosed in a prior art reference. There are many obscure references that nonetheless qualify as prior art.").

As part of the step two "inventive concept" inquiry, the Federal Circuit has looked to the claims as well as the specification. *See Affinity Labs of Texas, LLC v. Amazon.com Inc.*, 838 F.3d 1266, 1271 (Fed. Cir. 2016) ("*Affinity Labs II*") ("[N]either the claim nor the specification reveals any concrete way of employing a customized user interface."). Still, it is not enough just to disclose the improvement in the specification; instead, the Court's task becomes to "analyze the asserted claims and determine whether they ***capture these improvements***." *Berkheimer*, 881 F.3d at 1369 (emphasis added). In other words, "[t]o save a patent at step two, an inventive concept must be ***evident in the claims***." *RecogniCorp, LLC v. Nintendo Co., Ltd.*, 855 F.3d 1322, 1327 (Fed. Cir. 2017) (emphasis added); *see also Alice*, 134 S. Ct. at 2357 ("[W]e must examine the ***elements of the claim*** to determine whether it contains an 'inventive concept.'") (emphasis added); *Synopsys, Inc. v. Mentor Graphics Corp.*, 839 F.3d 1138, 1149 (Fed. Cir. 2016) ("The § 101 inquiry must focus on the language of the Asserted Claims themselves.").

At both steps one and two, it is often useful for the Court to compare the claims at issue with claims that have been considered in the now considerably large body of decisions applying § 101. *See Amdocs (Israel) Ltd. v. Openet Telecom, Inc.*, 841 F.3d 1288, 1294 (Fed. Cir. 2016).

Finally, as a procedural matter, the Federal Circuit has observed frequently that § 101 disputes may be amenable to resolution on motions for judgment on the pleadings, motions to dismiss, or summary judgment. *See, e.g.*, *Berkheimer*, 881 F.3d at 1368 ("Whether a claim recites patent eligible subject matter is a question of law which may contain disputes over underlying facts. Patent eligibility has in many cases been ***resolved on motions to dismiss or summary judgment. Nothing in this decision should be viewed as casting doubt on the propriety of those cases.*** When there is no genuine issue of material fact regarding whether the claim element or claimed combination is well-understood, routine, conventional to a skilled artisan in the relevant field, this issue can be decided on summary judgment as a matter of law.") (emphasis added); *buySAFE, Inc. v. Google, Inc.*, 765 F.3d 1350, 1351-52 (Fed. Cir. 2014) (affirming grant of Rule 12(c) motion for judgment on pleadings for lack of patentable subject matter).

IV. DISCUSSION

Oxford asks the Court to dismiss PacBio's claims for infringement of the '929 patent because, in Oxford's view, the '929 patent is directed to patent-ineligible subject matter. In particular, Oxford contends that the claims are directed to an abstract idea and a law of nature and lack an inventive concept. The Court disagrees.

A. Step One

At step one of the *Alice/Mayo* test, the question is whether the asserted claims are directed

to a patent-ineligible concept. "[A]ll inventions at some level embody, use, reflect, rest upon, or apply laws of nature, natural phenomena, or abstract ideas." *Mayo*, 132 S. Ct. at 1293. Thus, "an invention is not rendered ineligible for patent simply because it involves" a patent-ineligible concept. *Alice*, 134 S. Ct. at 2354. "Indeed, to preclude the patenting of an invention simply because it touches on something natural would 'eviscerate patent law.'" *Rapid Litig. Mgmt. Ltd. v. CellzDirect, Inc.*, 827 F.3d 1042, 1050 (Fed Cir. 2016) (quoting *Mayo*, 132 S. Ct. at 1293). "At step one, therefore, it is not enough to merely identify a patent-ineligible concept underlying the claim; we must determine whether that patent-ineligible concept is what the claim is 'directed to.'" *Id.*

Oxford argues that the asserted claims "are simply directed to the abstract mental process of 'comparing' two gene sequences" and "the naturally occurring correlation between complementary DNA strands." (D.I. 20 at 2-3) Oxford contends that the asserted claims do not satisfy the step one test because their "focus" is on "determining [a] consensus sequence by comparing the two complementary strands." (Tr. at 15) PacBio responds that Oxford is focused only on the last element of a multi-limitation claim and that "the claim as a whole is directed to a concrete technique for improved nanopore sequencing that increases accuracy through the use of novel nucleic acid templates." (D.I. 24 at 1-2) The Court agrees with PacBio.

The asserted claims provide "a novel method of manipulating polynucleotides to create sequencing templates that can be used to generate redundant sequencing information and improve nanopore sequencing." (D.I. 24 at 12) (citing Compl. at 16-19) The method requires introducing the polynucleotide to a system comprising a nanopore in a membrane, whereby a voltage is applied across the membrane, the variations in current are monitored, and the

information from one strand is analyzed against the information from the complementary strand for improved accuracy. (*See* '929 patent, cl. 1) Oxford's contention that the claims are merely directed to the abstract idea of comparing and the natural phenomenon of complementarity of nucleotides ignores almost all of the content of the claim, including most of its limitations.

The cases Oxford relies on for support do not persuade the Court to conclude otherwise. In *Association for Molecular Pathology v. Myriad Genetics, Inc.*, 569 U.S. 576, 590 (2013), the patents claimed the discovery of the location of certain genes; it was undisputed that the invention covered nothing more than the location of nucleotides that existed in nature and that the inventor did not create or alter any genetic information. The Supreme Court noted that had the inventor "created an innovative method of manipulating genes, . . . it could possibly have sought a method patent." *Id.* at 595. Here, the asserted claims do provide a method of nanopore sequencing and do more than simply claim a natural relationship between complementary nucleotides.

In *In re BRCA1- and BRCA2-Based Hereditary Cancer Test Patient Litigation*, 774 F.3d 755, 763 (Fed. Cir. 2014), the claimed method simply compared BRCA sequences and determined the natural existence of alternations, but nothing more. *See also Genetic Techs. Ltd. v. Merial L.L.C.*, 818 F.3d 1369, 1375-76 (Fed. Cir. 2016) (finding discovered correlation was "a consequence of the naturally occurring linkages in the DNA sequence," so claims failed "to identify novel detection techniques"). The asserted claims of the '929 patent, by contrast, when considered as a whole, are directed to much more than the natural correlation between the complementary strands of DNA.

The precedential decision that considered a patent most similar to the patent-in-suit is the

Federal Circuit's decision in *Rapid Litigation*, 827 F.3d 1042. In that case, the inventors discovered that hepatocytes (a type of liver cell) are able to survive multiple freeze-thaw cycles and not just one such cycle. *See id.* at 1045. But the inventors did not attempt to patent this discovery. Instead, "the inventors developed [and patented] an ***improved*** process of preserving hepatocytes." *Id.* (emphasis added). In analyzing this patent at step one, the Federal Circuit concluded that "the claims [we]re simply not directed to the ability of hepatocytes to survive multiple freeze-thaw cycles" but, rather, were "directed to a new and useful laboratory technique for preserving hepatocytes;" that is, the claims were directed to a method that used the inventors' discovery to achieve "a better way of preserving hepatocytes." *Id.* at 1048. Although the claims described the process by noting "the natural ability of the subject matter to ***undergo*** the process," this fact "does not make the claim 'directed to' that natural ability." *Id.* at 1049. *See also Diamond v. Diehr*, 450 U.S. 175, 187 (1981) (upholding as patentable claims that had well-known mathematical equation as one element, as claims as a whole were directed to novel method of using that formula); *Thales Visionix Inc. v. United States*, 850 F.3d 1343, 1348 (Fed.. Cir. 2017) ("In terms of the modern day *Alice* test, the *Diehr* claims were directed to an ***improvement*** in the rubber curing process, not a mathematical formula.") (emphasis added). Similarly, here, while the asserted claims note the natural correlation between complementary strands of DNA, the claimed process as a whole is directed not to that correlation but to an improved method of nanopore sequencing.

Although the analysis is focused on the claims, the Court's understanding of the claims – and its conclusion at step one – is also informed and confirmed by the specification. *See, e.g.*, '929 patent at col. 37:10-13 ("[T]he present invention is generally directed to nucleic acid

sequences that employ improved template sequences to improve the accuracy of sequencing processes."). The references incorporated into the '929 patent make clear that there was a substantial need for improvement in the accuracy of the results from nanopore sequencing. (*See, e.g.*, D.I. 10-1 Ex. H (2006 JACS article) at 65) ("[T]he sequencing concept has not worked so far because under an electrical potential DNA moves through the pore too rapidly for the identification of individual bases.")

The Court's conclusion finds still further support in the plausible allegations contained in PacBio's Complaint. (*See, e.g.*, Compl. at 16-20) At this stage of the proceedings, the Court finds no basis to reject the well-pled allegations of the Complaint or to accept Oxford's contrary view that PacBio did nothing more than apply a law of nature to "other people's work." (Tr. at 13, 15)

In sum, the claimed method takes advantage of a natural phenomenon to create a new and useful method, but, as a whole, it is not focused on or directed to that natural phenomenon. Nor is it directed to an abstract concept.

B. Step Two

As Oxford has not met its burden at step one, it is not necessary to reach step two. However, the Court will briefly address it anyway.

As detailed above, at step two the Court evaluates whether the claim captures an inventive concept beyond what was well-understood, routine, and conventional in the relevant field at the time of the invention. With respect to the '929 patent, the relevant time is around 2008-2009, when the patent applications to which the '929 patent claims priority were filed. Oxford argues that the claim elements, both independently and as an ordered combination, contain no inventive

concept, because they are each disclosed in eight prior art references cited in the '929 patent's specification, which together provide "a timeline of the development of sequencing with a nanopore" between 1995 and 2006. (Tr. at 6, 18-19) PacBio responds that "[t]he record, including cited references, is very clear that nanopore sequencing [wa]s emerging in 2009." (*Id.* at 32; *see also, e.g.*, D.I. 10-1 Ex. H (2006 JACS article) at 65 ("[T]he sequencing concept has not worked so far because under an electrical potential DNA moves through the pore too rapidly for the identification of individual bases"); D.I. 10-1 Ex. B (2000 Tibtech article) at 150 (noting there are "still major hurdles to be overcome" in nanopore sequencing))[2] At this stage of the proceedings, on the record the Court may properly consider, the Court cannot say that Oxford has shown by clear and convincing evidence that the claims do not capture an inventive concept.

Furthermore, PacBio alleges in its Complaint that Oxford "has asserted in parallel litigation proceedings that nanopore sequencing was not known in the 2008-2009 timeframe and/or that nanopore sequencing was not enabled to the skilled artisan." (Compl. at 7 ("Oxford has asserted in the International Trade Commission that 'nanopore sequencing was not known in 2008 and is a later-developed technology.' Likewise, Oxford has asserted that in the 2008-2009 timeframe 'nanopore sequencing was not considered a viable single molecule sequencing approach.'") (quoting Oxford filings; internal citations omitted); *id.* at 18 ("Oxford has acknowledged [in prosecuting its own patent applications] that the double-stranded polynucleotide structures used in claims 1, 6-8 and 10-11 and the use of such structures to generate redundant sequence information and consensus sequences represent inventive concepts

[2]Both parties agree that the Court may consider and rely on the publications incorporated by reference in the patent's specification on this motion. (*See* Tr. at 47, 51)

that improved upon nanopore-based DNA sequencing techniques.")) The Court must take as true that Oxford made these statements (which Oxford does not deny). And these statements render it more difficult, if not impossible, for Oxford, at this early stage, to persuade the Court by clear and convincing evidence that the state of the pertinent art was such that the asserted claims must be found to be nothing more than well-understood, routine, and conventional.

Taking all reasonable inferences in PacBio's favor based on the well-pled factual allegations in the Complaint, *see MAZ Encryption Techs. LLC v. Blackberry Corp.*, 2016 WL 5661981, at *5 (D. Del. Sept. 29, 2016) ("[T]he Court must take the specification's statements about the purported invention to be true."), and viewing the statements in the specifications of the patent-in-suit similarly in PacBio's favor, the Court finds that Oxford has not met its burden at step two.[3]

V. CONCLUSION

For the foregoing reasons, the Court will deny Oxford's motion to dismiss. An order follows.

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[3]Oxford's contention that PacBio's allegations are tantamount to "attorney argument, legal conclusions, and irrelevant statements [that] cannot trump the '929 specification" (D.I. 25 at 7) (citing *MAZ Encryption*, 2016 WL 5661981, at *5; *Kaavo Inc. v. Cognizant Tech. Sols. Corp.*, 2016 WL 476730, at *10 (D. Del. Feb. 5, 2016)) is incorrect, as the Court must take as true the well-pled factual allegations in the Complaint. Oxford's insistence that PacBio has not placed Oxford's prior statements in the proper context – that they are statements "about nanopore sequencing universally as a process," and "the general state of nanopore sequencing," rather than statements "specifically applicable to the elements as claimed independently or in ordered combination" (Tr. at 30, 51) – is the type of factual dispute the Court cannot resolve on a motion to dismiss.

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

PACIFIC BIOSCIENCES OF CALIFORNIA, INC.,	:	
Plaintiff,	:	
v.	:	C.A. No. 17-1353-LPS
OXFORD NANOPORE TECHNOLOGIES, INC.,	:	
Defendant.	:	

ORDER

At Wilmington, this **22nd** day of **March, 2018**:

For the reasons set forth in the Memorandum Opinion issued this date, **IT IS HEREBY ORDERED** that Oxford Nanopore Technologies, Inc.'s motion to dismiss (D.I. 19) is **DENIED**.

UNITED STATES DISTRICT JUDGE