

United States District Court
Northern District of California

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UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA

ILLUMINA, INC., et al.,
Plaintiffs,

v.

BGI GENOMICS CO., LTD, et al.,
Defendants.

**ORDER GRANTING MOTION FOR
SUMMARY JUDGMENT AND
GRANTING IN PART AND DENYING IN
PART MOTION TO STRIKE OPINIONS
OF DR. JOSEPH PUGLISI**

Case No. [19-cv-03770-WHO](#)
Re: Dkt. Nos. 376, 377, 378, 379, 386, 387,
399, 412

Case No. 20-cv-01465-WHO
Re: Dkt. Nos. 406, 407, 421, 433, 448

Plaintiffs Illumina Inc. and Illumina Cambridge Ltd. (collectively, “Illumina”) move for summary judgment on defendants BGI Genomics Co., Ltd., BGI Americas Corp., MGI Tech Co., Ltd., MGI Americas, Inc., and Complete Genomics, Inc.’s (collectively, “BGI”) counterclaims for infringement under its U.S. Patent No. 9,944,984 (“’984 Patent”). Illumina also moves to strike portions of BGI’s infringement expert, Dr. Puglisi’s report. For the reasons explained below, Illumina’s motion to strike portions of the Puglisi Report is GRANTED in part and DENIED in part. Illumina’s motion for summary judgment related to (1) the noninfringement of the ’984 Patent; (2) BGI’s doctrine of equivalents theory under the ’984 Patent; (3) BGI’s “inequitable conduct” defense; and (4) BGI’s other uncontested defenses is GRANTED.

BACKGROUND

I. PROCEDURAL BACKGROUND

Illumina filed the complaint in this matter on June 27, 2019.¹ Dkt. No. 1. It alleges that BGI

¹ This matter (“*Illumina I*”) is related to *Illumina Inc., et al., v. BGI Genomics Co., Ltd., et al.*, Case No. 20-cv-1465 (N.D. Cal.) (“*Illumina II*”), in which Illumina alleges that BGI infringes different

1 infringes U.S. Patent No. 9,410,200 (the “’200 Patent”) and 7,566,537 (the “’537 Patent”) (“Asserted
2 Patents”) by selling its sequencers and related reagents. *Id.* ¶¶ 2, 33–44. Illumina asserts that BGI’s
3 sequencers infringe claim 1 of the ’537 Patent and claim 1 of the ’200 Patent. *Id.* ¶¶ 35, 37, 41. BGI
4 filed counterclaims, alleging that Illumina’s DNA sequencing systems (“Accused Products”) infringe
5 claims 1–3 and 5 of its ’984 Patent. Dkt. No. 94 (“First Amended Answer” or “FAA”) ¶ 10. On June
6 26, 2020, I entered a claim construction order (“Claim Construction Order”) on terms in Illumina’s
7 ’537 and ’200 Patents as well as BGI’s ’984 Patent. Dkt. No. 190 (“Order”).

8 Illumina emailed BGI on June 30, 2020, and asked it to drop its infringement contentions
9 in light of the Claim Construction Order. Dkt. No. 379-6 at 7. On July 16, 2020, BGI responded
10 that its infringement contentions under the ’984 Patent were sufficient. *Id.* After the email
11 exchange, Illumina did not respond and BGI did not amend its infringement contentions. Dkt. No.
12 379 (“MTS Mot.”) at 15. Illumina also informed BGI that its infringement contentions were
13 deficient in its October 13, 2020, and December 7, 2020, interrogatory responses but responded to
14 them. *See* Dkt. No. 387-6 at 8; Dkt. No. 387-8 at 6.

15 Fact discovery closed on March 26, 2021 and expert discovery closed on May 28, 2021.
16 *Illumina II*, Dkt. No. 249 at 2. On June 16, 2021, Illumina filed a motion for summary judgment on
17 BGI’s counterclaims. Dkt. No. 377 (“Mot.”); *see also Illumina II*, Dkt. No. 407. On the same day,
18 Illumina also filed a motion to strike the expert opinions of BGI’s technical expert, Dr. Joseph Puglisi.
19 Dkt. No. 379.

20 **II. PATENTS**

21 Further background of the ’984 Patent is discussed in the Claim Construction Order. Order
22 at 15–16. The ’984 Patent involves an “array,” or mechanism for analyzing multiple DNA
23 fragments, that aims to increase the accuracy and efficiency of sequencing and thereby lower the
24 cost. ’984 Patent at 3:44-53; 8:4-40. Target DNA is copied and modified prior to introduction to
25 the array so that it will bind with the capture oligonucleotides on the array. *See, e.g., id.* at
26

27 patents by making, selling, and using a different set of products. Further background in this matter is
28 discussed in *Illumina Inc., et al., v. BGI Genomics Co., Ltd., et al.*, Case No. 19-cv-3770, Dkt. No.
185. (N.D. Cal.).

6:17-30. It is then introduced to the array and binds to the capture oligonucleotides, and the target DNA can be sequenced by measuring signals or labels on the array. *Id.* at 3:44–4:23, 17:30-18:33. The target DNA fragments are first amplified so that multiple copies of the same fragment are present in one large macromolecule (as opposed to one single DNA fragment). *Id.* at 11:7-11. Amplification is generally understood to allow for stronger signal detection. *Id.* at 2:36-40. After the DNA fragment circles are formed, they are bound together into larger molecules, called “concatemers,” containing multiple copies of the same circular DNA fragments, usually in a process called rolling circle replication (“RCR”). *Id.* 11:45-58. Because there will be multiple copies of the same DNA fragment present at a particular binding site, the detection and sequencing of that fragment will be improved.

LEGAL STANDARD

I. SUMMARY JUDGMENT

A party is entitled to summary judgment where it “shows that there is no genuine dispute as to any material fact and [it] is entitled to judgment as a matter of law.” FED. R. CIV. P. 56(a). A dispute is genuine if it could reasonably be resolved in favor of the nonmoving party. *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 248 (1986). A fact is material where it could affect the outcome of the case. *Id.*

The moving party has the initial burden of informing the court of the basis for its motion and identifying those portions of the record that demonstrate the absence of a genuine dispute of material fact. *See Celotex Corp. v. Catrett*, 477 U.S. 317, 323–24 (1986). Once the movant has made this showing, the burden shifts to the nonmoving party to identify specific evidence showing that a material factual issue remains for trial. *Id.* The nonmoving party may not rest on mere allegations or denials from its pleadings but must “cit[e] to particular parts of materials in the record” demonstrating the presence of a material factual dispute. FED. R. CIV. P. 56(c)(1)(A); *see also Liberty Lobby*, 477 U.S. at 248. The nonmoving party need not show that the issue will be conclusively resolved in its favor. *Id.* at 248–49. All that is required is the identification of sufficient evidence to create a genuine dispute of material fact, thereby “requir[ing] a jury or judge to resolve the parties' differing versions of the truth at trial.” *Id.* (internal quotation marks

1 omitted). If the nonmoving party cannot produce such evidence, the movant “is entitled
2 to . . . judgment as a matter of law because the nonmoving party has failed to make a sufficient
3 showing on an essential element of her case.” *Celotex*, 477 U.S. at 323.

4 On summary judgment, the court draws all reasonable factual inferences in favor of the
5 nonmoving party. *Liberty Lobby*, 477 U.S. at 255. “Credibility determinations, the weighing of
6 the evidence, and the drawing of legitimate inferences from the facts are jury functions, not those
7 of a judge.” *Id.* However, conclusory and speculative testimony does not raise a genuine factual
8 dispute and is insufficient to defeat summary judgment. *See Thornhill Publ'g Co., Inc. v. GTE*
9 *Corp.*, 594 F.2d 730, 738–39 (9th Cir. 1979).

10 **II. MOTION TO STRIKE**

11 Patent Local Rule 3 “requires patent disclosures early in a case and streamlines discovery
12 by replacing the series of interrogatories that parties would likely have propounded without it.”
13 *ASUS Computer Int'l v. Round Rock Research, LLC*, No. 12-CV-02099-JST, 2014 WL 1463609,
14 at *1 (N.D. Cal. Apr. 11, 2014) (internal quotation marks and modifications omitted). Patent
15 Local Rule (“Patent L.R.”) 3-1 requires that a party claiming patent infringement serve a
16 “Disclosure of Asserted Claims and Infringement Contentions” that includes “[e]ach claim of each
17 patent in suit that is allegedly infringed by each opposing party, including for each claim the
18 applicable statutory subsections of 35 U.S.C. § 271 asserted.” Patent L.R. 3-1(a). This requires “a
19 limitation-by-limitation analysis, not a boilerplate reservation.” *Rambus Inc. v. Hynix*
20 *Semiconductor Inc.*, No. 05-CV-00334-RMW, 2008 WL 5411564, at *3 (N.D. Cal. Dec. 29,
21 2008).

22 Given the purpose of the Patent Local Rules, “a party may not use an expert report to
23 introduce new infringement theories, new infringing instrumentalities, new invalidity theories, or
24 new prior art references not disclosed in the parties' infringement contentions or invalidity
25 contentions.” *Verinata Health, Inc. v. Sequenom, Inc.*, No. 12-CV-00865-SI, 2014 WL 4100638,
26 at *3 (N.D. Cal. Aug. 20, 2014) (internal quotation marks omitted). In determining whether to
27 strike some or all of an expert report for failure to comply with the patent local rules, courts in this
28 district have asked, “[W]ill striking the report result in not just a trial, but an overall litigation, that

1 is more fair, or less?” *Apple Inc. v. Samsung Electronics Co.*, No. 11-CV-01846-PSG, 2012 WL
2 2499929, at *1 (N.D. Cal. June 27, 2012).

3 DISCUSSION

4 I. MOTION TO STRIKE OPINIONS OF DR. JOSEPH PUGLISI

5 Illumina moves to strike portions of the opening infringement report of BGI’s technical
6 expert, Dr. Joseph Puglisi (“Puglisi Report”) because BGI allegedly proffered new theories, which
7 it had not disclosed before. MTS Mot. at 1, 18 (moving to strike section VII.A.6 and ¶¶ 165–68,
8 170–71, 176, and 178–79). The claim limitation at issue is the requirement that “more than 50%
9 of the DNA binding regions in the array have multiple copies of one single DNA of said more
10 than 10^5 different DNAs.” ’984 Patent 75:26-28.

11 Some background is necessary to understand this dispute. According to Illumina, BGI’s
12 infringement theory “was based on the erroneous belief that all that is required by this limitation is
13 that 50% of the binding regions comprise multiple copies of a DNA molecule, regardless of
14 whether there are other molecules or other sequences in the same binding region.” MTS Mot. at 7.
15 Illumina asserts that BGI’s sole infringement theory was that Illumina’s “finished clusters, which
16 are generated by clonally amplifying template DNA until the cluster has ~1000 copies, satisfy the
17 limitation because they include multiple copies of a DNA sequence.” *Id.* at 10. In my Claim
18 Construction Order, however, I construed the claim limitation to require that “more than 50% of
19 the DNA binding regions in the array are occupied by a single DNA molecule comprising multiple
20 copies of only one” DNA sequence. Claim Construction Order at 17.

21 In light of the Order, Illumina emailed BGI on June 30, 2020, and asked it to drop its
22 infringement contentions because BGI “has no basis . . . to contend that more than 50% of the
23 nanowells in Illumina’s accused products are either (a) ‘occupied by a single DNA molecule’ or
24 (b) comprise ‘multiple copies of only one of the more than 100,000 genomic DNA sequences’ as
25 required by the Court’s Order.” Dkt. No. 379-6 at 7. On July 16, 2020, BGI responded that its
26 infringement claims under the ’984 Patent “continue to be well founded even after the Court’s
27 claim construction” in part because as BGI “pointed out in its complaint and its infringement
28 contentions, the cluster generation process . . . begins with a single target template.” *Id.* at 2. BGI

1 further explained,

2 “(A) This single template is formed by a single fragment of DNA that
3 is bound in the nanowell. Polymerase then converts the single
4 stranded portion of that fragment into double stranded DNA. That
5 double stranded molecule contains two copies for the same DNA
6 sequence. This molecule satisfies the elements [Illumina contends]
7 are absent. (B) Additionally, after the first double stranded molecule
8 containing multiple copies of the same DNA is denatured, and the
9 remaining strand goes through bridge amplification, the resulting
10 double stranded molecule also satisfies the claim elements [Illumina
11 contends] are missing.”

12 *Id.* After the email exchange, Illumina did not respond and BGI did not amend its infringement
13 contentions. MTS Mot. at 15. Illumina also informed BGI that its infringement contentions were
14 deficient but responded to them in its October 13, 2020, and December 7, 2020, interrogatory
15 responses. Dkt. No. 401 (“MTS Reply”) at 2; Dkt. No. 387-6 at 8 (referring to the July 16, 2020,
16 email and asserting that “CGI argued a new infringement theory that is both wrong in substance
17 and unsupported by CGI’s infringement contentions”); Dkt. No. 387-8 at 6 (same).

18 In considering Illumina’s motion to strike, I look at two issues: disclosure and fairness. I
19 conclude that BGI failed to properly disclose the three allegedly “new” theories found in the
20 Puglisi Report: (1) that the intermediate structures, as opposed to the final clusters, such as “a
21 double-stranded DNA fragment is a ‘single DNA molecule comprising multiple copies of only
22 one’ genomic DNA sequence that occupies a binding region as required by claim limitation 1(g)”
23 (“Double-Stranded DNA theory”); (2) “that the number of nanowells that pass filter shows that
24 greater than 50% of the nanowells meet the requirements of [the] claim limitation” (“Pass Filter
25 theory”); and (3) that claim 1 is infringed under DOE. *Id.* at 12. However, because Illumina
26 waited more than a year until after fact discovery closed to challenge the first two, I will not strike
27 them. The DOE theory is different—it was first disclosed in the Puglisi Report, and it will be
28 struck.

25 **A. Disclosure**

26 BGI argues that its infringement contentions fully comply with the disclosure requirements
27 under Patent L.R. 3-1 and that Illumina was put on notice about what was accused. Dkt. No. 389
28 (“MTS Opp.”) at 4, 11. I disagree.

1. Double-Stranded DNA Theory

1 First, BGI argues that it did not solely disclose that Illumina’s “finished clusters” infringed,
2 but that it also asserted the Double-Stranded DNA theory accusing Illumina’s cluster generation
3 process “based on the formation of infringing DNA molecules during the process of exclusion
4 amplification.” MTS Opp. at 13. It points to its Patent L.R. 3-1 Disclosures, where it stated that
5 the “‘DNA array’ claimed by the ’984 Patent is generated *during the use of, and/or present in,*
6 each of the Accused Illumina Systems.” Dkt. No. 389-2 (“BGI’s Patent L.R. 3-1 Disclosures”) at
7 2 (emphasis added); *see also* Dkt. No. 54 (“Counterclaims”) ¶¶ 50–52.

8 BGI also asserts that if it had not been accusing the intermediate structures, and only the
9 final clusters, then it would not have included contentions regarding the process for cluster
10 formation in its Patent L.R. 3-1 Disclosures. MTS Opp. at 13–14. For example, BGI’s
11 infringement analysis described the steps of Illumina’s ExAmp process for cluster generation in
12 detail, including the formation of the exact double-stranded DNA molecules accused of
13 infringement. *See, e.g.*, BGI’s Patent L.R. 3-1 Disclosures, Ex. A (“’984 Claim Chart”) at 4, 45
14 (“By enabling simultaneous seeding (landing of the DNA strand in the nanowell) and
15 amplification, exclusion amplification promotes monoclonal cluster generation within the
16 nanowells.”); *id.* at 69 (“After strand capture, the complementary strand is generated using
17 polymerase, thereby resulting in an immobilized template strand.”); *id.* at 70 (“Following bridge
18 formation, the complementary strand is generated by a polymerase, resulting in a second
19 nucleotide template strand.”). As a result, it argues that the “theories” in the Puglisi Report, which
20 Illumina asserts should have been cited in BGI’s contentions, are merely additional details and are
21 proper because they do not constitute a new theory of infringement but rather elaborate on the
22 previously disclosed theory. *See Finjan, Inc. v. Blue Coat Sys., Inc.*, No. 13-CV-03999-BLF,
23 2015 WL 3640694, at *2 (N.D. Cal. June 11, 2015) (“[T]he Patent Local Rules do not require
24 perfect clarity, only reasonable notice that is ‘as specific as possible’ given the information of
25 which a plaintiff is aware.”).

26 Illumina contends, correctly, that none of BGI’s statements provide notice that BGI “was
27 accusing a particular ‘intermediate structure’ (i.e., the double-stranded DNA)” of infringing the
28

1 claim limitation. MTS Reply at 5. While BGI claims that it discusses the cluster generation
 2 process in its contentions only because it was accusing the double-stranded DNA of infringement,
 3 Illumina points out that BGI could also discuss the process to support its original theory, that each
 4 of the “~1000 copies” has the same sequence—a theory which fails in light of the Claim
 5 Construction Order. *Id.* at 4. Similarly, Illumina asserts that BGI contended that “the ‘DNA
 6 array’ claimed by the ’984 Patent is generated during the use of, and/or present, in each of the
 7 Accused Illumina Systems” to show that infringement occurs by “making” the claimed DNA
 8 arrays and not to accuse transient, intermediate structures “that exist only momentarily and are not
 9 even found in the finished array.” *Id.*

10 BGI’s Double-Stranded DNA theory was not explicitly disclosed under the Patent Local
 11 Rules and cannot be implicitly disclosed. *See Thought, Inc. v. Oracle Corp.*, No.
 12 12-CV-05601-WHO, 2016 WL 3230696, at *6 (N.D. Cal. June 13, 2016), *aff’d*, 698 Fed. Appx.
 13 1028 (Fed. Cir. 2017) (unpublished) (rejecting an argument that an infringement theory was
 14 “implicitly” disclosed because the “purpose of requiring parties to disclose the basis for their
 15 contentions is to make them explicit and streamline patent litigation.”); *see also DCG Sys. v.*
 16 *Checkpoint Techs., LLC*, No. C 11-03792 PSG, 2012 WL 1309161, at *2 (N.D. Cal. Apr. 16,
 17 2012) (a patentee must “disclose what in each accused instrumentality it contends practices each
 18 and every limitation of each asserted claim to the extent appropriate information is reasonably
 19 available to it.”); *Finjan, Inc. v. Proofpoint, Inc.*, No. 13-CV-05808-HSG, 2015 WL 1517920, at
 20 *7 (N.D. Cal. Apr. 2, 2015) (“if [plaintiff] believes that the first and second functions are
 21 contained within the obfuscated scripts, it was obligated to say so explicitly in its infringement
 22 contentions. Neither the Court nor the Defendants should be required to guess which aspects of
 23 the accused products allegedly infringe each claim element.”).

24 2. Pass Filter Theory

25 Second, BGI asserts that the “pass filter” data from Illumina’s sequencing is evidence in
 26 support of infringement under the Double-Stranded DNA theory and not a new theory. MTS Opp.
 27 at 16; *see Blue Coat*, 2015 WL 3640694, at *2 (“[t]he dispositive inquiry in a motion to strike is []
 28 whether the allegedly undisclosed ‘theory’ is in fact a new theory . . . or whether the ‘theory’ is

1 instead the identification of additional evidentiary proof showing that the accused element did in
2 fact practice the limitation.”). Though it does not dispute that it does not discuss the Pass Filter
3 theory in its infringement contentions, it argues that the “passing filter statistics from Illumina’s
4 sequencing runs is evidence to show that 50% threshold of the disputed element in the asserted
5 claims is met.” MTS Opp. at 17; *see also* Dkt. No. 387-12 (“Puglisi Rep.”) ¶¶ 129–34. For
6 example, Puglisi explains that “the intermediate DNA molecules that infringe the ‘more than 50%’
7 element are necessarily formed in the nanowells on Illumina’s accused flow cells that ‘pass
8 filter.’” MTS Opp. at 16; Puglisi Rep. ¶ 134.

9 Illumina responds that the Pass Filter theory is a new theory because prior to the Claim
10 Construction Order, “whether nanowells ‘pass filter’ was irrelevant to BGI’s original infringement
11 theory,” which was based on the belief that the claim limitation could be satisfied “regardless of
12 whether there were multiple sequences or multiple molecules in the same nanowell.” Mot. at 16.
13 Furthermore, because the “only theory of infringement to which BGI links the ‘pass filter’ data” is
14 the Double-Stranded DNA theory, the Pass Filter theory is also unsupported in BGI’s
15 infringement contentions. MTS Reply at 9. For those reasons, I agree with Illumina that BGI’s
16 Pass Filter theory was not properly disclosed in its infringement contentions.

17 3. Doctrine of Equivalents

18 Finally, BGI argues that contrary to Illumina’s assertion, it preserved its arguments under
19 DOE. MTS Opp. at 17–19. Illumina points out that the only reference to DOE in BGI’s
20 infringement contentions is a general boilerplate statement that “[t]o the extent that any limitation
21 of any asserted claim is not literally present in the Accused Illumina Systems, any such limitations
22 are present under the DOE.” Claim Chart at 1; MTS Mot. at 17. Courts in this district have
23 rejected such boilerplate language. *See, e.g., ASUS*, 2014 WL 1463609, at *3 (granting motion to
24 strike portions of expert reports opining on DOE where the DOE theory was placeholder language:
25 “to the extent that any claim element is found not to be literally embodied in the Accused
26 Instrumentalities, Round Rock contends that the Accused Instrumentalities embody such claim
27 elements under the doctrine of equivalents.”) (collecting cases); *OptimumPath, LLC v. Belkin Int’l,*
28 *Inc.*, No. 09-CV-01398 CW, 2011 WL 1399257, at *8 (N.D. Cal. Apr. 12, 2011), *aff’d*, 466 F.

1 App'x 904 (Fed. Cir. 2012) (noting that “judges of this court have rejected plaintiffs’ attempts to
2 assert claims under the doctrine of equivalents with blanket statements.”).

3 BGI contends that Puglisi’s opinions on the DOE are in response to Illumina’s arguments
4 on noninfringement in Illumina’s interrogatory response. MTS Opp. at 18. Specifically, Illumina
5 identified another mechanism for the ExAmp process, where “the result of cluster generation is
6 multiple different single-stranded DNA molecules that each have at most one copy of a particular
7 sequence.” MTS Mot. at 7. In these “polyclonal nanowells,” “a single sequence can be detected
8 by filtering out the sequencing data from non-dominant clusters and using only the sequencing
9 data from the dominant cluster.” *Id.* This is contrary to Illumina’s other explanation of its flow
10 wells—that the cluster generation results in “monoclonal” clusters. MTS Opp. at 18.
11 Consequently, BGI asserts that Puglisi should be permitted to testify regarding infringement under
12 the DOE in response to Illumina’s competing explanations.

13 The two cases on which BGI relies are distinguishable. The courts in *Finjan, Inc. v.*
14 *Symantec Corp.*, No. 14-CV-02998-HSG (JSC), 2017 WL 4025219, at *4 (N.D. Cal. Sept. 13, 2017)
15 and *Accord Facebook, Inc. v. BlackBerry Ltd.*, No. 18-CV-05434-JSW (JSC), 2019 WL 8013872, at
16 *9 (N.D. Cal. Sept. 17, 2019) found good cause for the patentee to amend its DOE theories where
17 the defendant had provided new information regarding its noninfringement arguments. Here, the
18 question is not whether BGI has “good cause” to amend its DOE theories but whether it
19 adequately disclosed its DOE theories in the first place. Because BGI’s DOE theory is merely
20 boilerplate language, it should be rejected. *See Blue Coat*, 2015 WL 3640694, at *5 (finding that
21 the plaintiff’s “boilerplate and generic” DOE disclosures did not satisfy plaintiff’s “obligation to
22 provide a limitation-by-limitation analysis of its theory of infringement” and “[h]ad Defendant
23 earlier moved to strike those embryonic disclosures, they would likely have been stricken as
24 violative of the Patent Local Rules.”).

25 Furthermore, Illumina points out that it served the interrogatory response—that BGI refers
26 to as the “previously undisclosed mechanism for exclusion amplification”—on October 13, 2020,
27 five months before fact discovery closed. Dkt. No. 387-6 at 7–8. BGI had ample time to respond
28 during fact discovery and to seek leave to amend its DOE contentions. It cannot justify adding

1 new theories to its boilerplate DOE arguments in the Puglisi Report as a response to Illumina’s
2 allegedly new noninfringement arguments that were served seven months earlier. *See Dynetix*
3 *Design Sols., Inc. v. Synopsys, Inc.*, No. 11-CV5973-PSG, 2013 WL 4537838, at *1 (N.D. Cal. Aug.
4 22, 2013) (“By failing to give Synopsys adequate notice of these theories during fact discovery,
5 Dynetix severely prejudiced Synopsys’ ability to refute any DOE theories.”). “In sum, while
6 equivalent theories can serve as ‘Plan B’ to literal infringement theories, if our local rules are to have
7 any teeth, they must be adequately disclosed and supplemented along the way, should new evidence
8 arise in discovery.” *Id.*

9 **B. Fairness**

10 Although I have determined that all three theories should have been disclosed, that does
11 not establish that I should strike them from the Puglisi Report. In deciding whether to strike some
12 or all of an expert report for failure to comply with the Patent Local Rules, I have to consider
13 whether striking the expert report will result in a fairer litigation. *Apple*, 2012 WL 2499929, at *1.
14 Illumina argues that it suffered prejudice from the lack of disclosure because it “never had the
15 opportunity to review and evaluate BGI’s actual infringement theories during fact discovery;
16 instead, it had to guess about what infringement theory BGI might pursue until BGI served expert
17 reports.” MTS Reply at 14. BGI contends that Illumina’s motion to strike Puglisi’s report a year
18 after fact discovery closed and a few weeks after expert discovery closed is untimely, although
19 Illumina says that BGI was aware that Illumina believed its infringement contentions to be new
20 theories and that BGI was obliged to seek amendment for its infringement contentions. In short,
21 the parties dispute whether Illumina should have compelled BGI to amend its infringement
22 contentions or whether BGI should have amended its infringement contentions after receiving
23 notice from Illumina about the alleged deficiencies.

24 Two cases from this District are applicable. The first is *Blue Coat*, on which both parties
25 rely. There, the court found that the plaintiff’s DOE disclosures were boilerplate and generic, like
26 BGI’s here. *Blue Coat*, 2015 WL 3640694, at *5. Had the defendant moved earlier to strike the
27 DOE disclosures, the court acknowledged that it likely would have struck the disclosures as
28 violative of the Patent Local Rules. *Id.* But the defendant did not move to strike and the court

1 suspected that it may not have because the plaintiff would then “have had the opportunity to seek
2 leave to re-assert the theory with proper factually-based contentions.” *Id.* As a result, the court
3 could not “overlook the timing” of the defendants’ motion, which came “after the close of
4 discovery,” similar to Illumina’s motion. *Id.* The defendant explained that because the plaintiff
5 did not supplement its infringement contentions even after it received its confidential information,
6 it understood that the plaintiff would not pursue a theory of infringement under DOE. *Id.* But the
7 court rejected this explanation and held that the defendant should have provided some notice of
8 the deficiencies in the plaintiff’s disclosures so that the plaintiff “would be on notice of the
9 deficiency and would fail to supplement at its own risk. Instead, Defendant played the
10 (apocryphal) ostrich, burying its head in the sand until it was safe to raise the issue.” *Id.*

11 The second case is *Verinata Health*, where the court found that the defendant should have
12 expressly stated in its infringement contentions what obviousness combinations it was asserting,
13 even though it was clear from the claim charts that the prior art reference was part of the obvious
14 combination. *Verinata Health*, 2014 WL 4100638, at *6. The court, however, held that “if the
15 claim charts caused [the plaintiff] to suffer any confusion as to what particular obviousness
16 combinations were being asserted, then the proper recourse would have been for [the plaintiff] to
17 compel [the defendant] to amend its invalidity contentions, not for [the plaintiff] to wait until
18 expert discovery and then move to strike the expert report.” *Id.*

19 Illumina contends that it had repeatedly told BGI that it believed BGI’s infringement
20 theories were “new” and therefore BGI “failed to supplement [its disclosures] at its own risk.” *See*
21 *Blue Coat*, 2015 WL 3640694, at *5. *Blue Coat*, however, does not address the situation where
22 the moving party had provided notice about the allegedly inadequate infringement contentions but
23 the non-moving party had refused to acknowledge that its disclosures were insufficient. *Verinata*
24 *Health* is more analogous. If Illumina suffered any confusion concerning what infringement
25 contentions were being asserted, then “the proper recourse” would have been for Illumina to
26 compel BGI to amend its infringement contentions, not to wait until after expert discovery to
27 move to strike the Puglisi Report. *See Verinata Health*, 2014 WL 4100638, at *6. Illumina knew
28 of the Double-Stranded DNA theory in July 2020. Although the Pass Filter theory was not

1 disclosed in the July 2020 email, it is linked to the Double-Stranded DNA theory as “additional
2 evidentiary proof showing that the accused element did in fact practice the limitation,” *Blue Coat*
3 2015 WL 3640694, at *2.

4 Illumina’s motion to strike the Double-Stranded DNA theory and the Pass Filter theory
5 after the close of fact and expert discovery is untimely. Fact discovery closed on March 26, 2021
6 and expert discovery closed on May 28, 2021. *Illumina II*, Dkt. No. 249 at 2. Illumina did not file
7 the present motion until June 16, 2021. Although it asserted that BGI’s theories were allegedly
8 new in its interrogatory responses, it never sought supplemental briefing or clarification nor
9 moved to compel BGI to amend its contentions. *See* MTS Opp. at 8. It notified BGI that it
10 intended to move to strike the Puglisi Report in April 2021, but it did not move to strike then
11 either. Dkt. No. 389-10 (“Sawyer April 19, 2021 Email”); *see also* Dkt. No. 389-11 (“Tigchelaar
12 April 22, 2021 Email”) (BGI responding that its infringement contentions were sufficient and
13 pointing Illumina to the July 2020 email exchange). It waited a full year after the close of fact
14 discovery and a few weeks after the close of expert discovery to file its motion to strike, burying
15 its head in the sand until it was safe to raise the issue of the Double-Stranded DNA and Pass Filter
16 theories with the court. *See Blue Coat*, 2015 WL 3640694, at *5. I will not strike those theories
17 from the Puglisi Report.²

18 As for the DOE theories, BGI argues that the present case is analogous to *Blue Coat* and
19 that because Illumina did not object to the adequacy of BGI’s DOE contentions, Illumina’s motion
20 should be denied. MTS Opp. at 19. But as Illumina contends, it “did put BGI on notice that it had
21 set forth no viable doctrine of equivalents theory” in its June 30, 2020, email, which “applied to
22 the entire infringement theory set forth in BGI infringement contentions.” MTS Reply at 401.

23
24 ² Illumina contends that no showing of prejudice is required “because prejudice is inherent in the
25 assertion of a new theory after discovery has closed.” *Adobe Sys. Inc. v. Wowza Media Sys.*, No.
26 11-CV-02243-JST, 2014 WL 709865, at *15, n.7 (N.D. Cal. Feb. 23, 2014). But “the same does
27 not pertain to insufficiently supported but nevertheless previously disclosed theories.” *Blue Coat*,
28 2015 WL 3640694, at *6. Although BGI did not disclose its Double-Stranded DNA theory in its
original infringement contentions, it disclosed the theory to Illumina in the July 2020 email. As a
result, there is no prejudice to denying Illumina’s motion for the Double-Stranded DNA and Pass
Filter theories because Illumina had the full opportunity to depose Puglisi and respond to his
opinions through its expert Weinstock’s rebuttal report during expert discovery. *See* Dkt. No.
376-8 (“Weinstock Reb.”) ¶ 59.

1 Unlike with the Double-Stranded DNA theory, BGI did not respond that its DOE theories were
2 sufficient; Illumina was unaware of the DOE theories until the Puglisi Report. The DOE theories
3 are struck from Puglisi's report. Accordingly, Illumina's motion to strike is GRANTED in part
4 and DENIED in part.

5 **II. MOTION FOR SUMMARY JUDGMENT**

6 **A. Noninfringement of the '984 Patent**

7 Illumina moves for summary judgment on BGI's infringement claims against Illumina
8 under the '984 Patent. "Summary judgment of no literal infringement is proper when, construing
9 the facts in a manner most favorable to the nonmovant, no reasonable jury could find that the
10 accused system meets every limitation recited in the properly construed claims." *Catalina*
11 *Marketing Int'l, Inc. v. Coolsavings.com, Inc.*, 289 F.3d 801, 812 (Fed. Cir. 2002).

12 The only claim element at issue is the requirement that "more than 50% of the DNA
13 binding regions in the array have multiple copies of one single DNA of said more than 10⁵
14 different DNAs." '984 Patent 75:26-28; Dkt. No. 388 ("Opp.") at 3. Both parties agree that in my
15 Claim Construction Order I construed this element to require that "more than 50% of the DNA
16 binding regions in the array are occupied by a single DNA molecule comprising multiple copies of
17 only one" DNA sequence. Order at 17. BGI asserts that under this construction, this element has
18 two principal features: (1) the DNA binding region is occupied by a single DNA molecule having
19 multiple copies of only one DNA sequence; and (2) the DNA molecule having multiple copies is
20 found in more than 50% of the DNA binding regions. Opp. at 3.

21 Illumina argues that the evidence shows that no reasonable jury would find that Illumina
22 infringes either of these elements, both of which are independent reasons that preclude
23 infringement as a matter of law. Mot. at 6. BGI asserts that there is ample evidence for a jury to
24 conclude that Illumina infringed the '984 Patent and at a minimum, that there are genuine disputes
25 of multiple facts. Opp. at 3.

26 **1. Illumina's Two Different Mechanisms For its Accused Products**

27 As a preliminary matter, BGI contends that Illumina has two distinct mechanisms for how
28 its Accused Products work and that there are factual disputes that are not appropriate to resolve at

1 the summary judgment stage. Opp. at 4. Under the first mechanism (the one that BGI emphasizes
2 and the one portrayed in Illumina’s public materials), during Illumina’s “exclusion amplification”
3 (“ExAmp”) process, individual DNA fragments are bound to the patterned flow cell and
4 amplified. Opp. at 4. During cluster generation, the ExAmp process involves a rapid
5 amplification as soon as the first template DNA seeds a particular nanowell. *Id.* Rapid
6 amplification of this single template DNA means that all of the oligonucleotides are quickly
7 saturated, thereby excluding other template DNAs from binding and amplifying in the same
8 nanowell. *Id.* BGI’s expert, Puglisi, explains that this exclusion process ensures that the number
9 of wells with “purely monoclonal” clusters generated from a single template DNA is maximized.
10 Opp. at 4 (citing Puglisi Rep. ¶ 156).

11 Under the second mechanism (the one asserted in Illumina’s motion for summary
12 judgment), clusters of single-stranded DNA (“ssDNA”) molecules are generated in the nanowells
13 through *in situ* amplification of template DNA molecules that bind to oligonucleotide primers
14 attached to the surface of each nanowell.³ Mot. at 5. The process of *in situ* amplification includes
15 both: (1) “seeding” or the attachment of the ssDNA templates to the oligonucleotide primers on
16 the surface of the cell; and (2) “cluster generation” or the repeated process of generating a strand
17 complementary to the DNA template strand to create a double-stranded DNA (“dsDNA”) and
18 denaturing it to allow for the now two separate ssDNAs to then be further copied. *Id.* Once all of
19 the DNA is denatured and left single-stranded, the result is a “cluster” of ssDNA, which consists
20 of copies of any DNA template strands that were “seeded” in the nanowell and their
21 complementary strands. *Id.* This allows for sequencing by synthesis to be performed on the DNA
22 fragments within the nanowells. *Id.*

23 Most of the nanowells will contain several different sequences because multiple template
24 DNA strands were “seeded” during the initial step. Mot. at 5. This occurs because a single
25 dsDNA only binds to one of the many oligonucleotide primers in the nanowell and does not
26 exclude other template ssDNA strands from attaching to other oligonucleotide primers. *Id.* But

27 _____
28 ³ This is the noninfringement argument in Illumina’s October 13, 2020, interrogatory response that
BGI alleged was “new.” MTS Opp. at 18.

1 according to BGI's expert, Puglisi, the results are "effectively monoclonal" clusters. Puglisi Rep.
2 ¶ 129. "Clusters that are 'effectively monoclonal' may have a mixture of DNA template
3 sequences, but the amount of the minor DNA sequences is sufficiently low that it does not
4 interfere with the detection and analysis of the dominant sequence." Puglisi Rep. ¶ 129.

5 Next, the original template DNA strands or their complementary strands that were created
6 as part of the amplification process are cleaved and washed away. Mot. at 5. This is done because
7 the template DNA and complementary copies have different sequences and would produce
8 interfering signals during the sequencing detection. *Id.* An algorithm is used to interpret the
9 mixed signals received from each nanowell, and determine whether there is a sufficiently
10 dominant signal among the different sequences from which a sequence can be determined. *Id.* If
11 there is a sufficiently dominant signal determined from the nanowell after the algorithm processes
12 the data, the nanowell is determined to "pass filter" and the data is used to determine the sequence
13 of the dominant signal in the cluster. *Id.*

14 2. BGI's Infringement Arguments Under Both Mechanisms

15 Under the first mechanism, BGI contends that Illumina's Accused Products infringe its
16 '984 Patent in two scenarios: (1) after the initial replication step; and (2) after replication through
17 bridge amplification. Opp. at 5. After the initial replication step, the cluster generation process
18 begins when a template DNA molecule is introduced into the nanowell and hybridizes to an
19 oligonucleotide present on the surface. *Id.* Polymerase copies the original template DNA to form
20 a dsDNA molecule that comprises two copies of one template sequence. *Id.* After the initial
21 replication step, the nanowell is occupied by a single DNA molecule comprising two copies of the
22 DNA template sequence and thereby infringes the '984 Patent. *Id.*; '984 Patent 75:26–27 (claim
23 limitation requires that "more than 50% of the DNA binding regions in the array are occupied by a
24 single DNA molecule comprising multiple copies of only one single DNA."). After replication
25 through bridge amplification, a double stranded structure is formed, which is a single DNA
26 molecule comprising two copies of the DNA template sequence. *Id.* As a result, a high
27 percentage of nanowells are occupied by clusters originating from a single template. *Id.*

28 Under the second mechanism, BGI contends that the amplification progresses through the

1 same intermediate DNA molecules discussed above that have multiple copies of one DNA. Opp.
 2 at 7. Rapid amplification of the first template DNA “out of the gate” means that copies of the first
 3 DNA will rapidly bind to and saturate the oligonucleotides in the nanowell, thereby excluding
 4 other DNA templates from amplifying in the same well. *Id.* During this process, the cluster
 5 generation takes advantage of the “saturation/exclusion (single occupancy) principle” of the ’984
 6 Patent, i.e., the rapid saturation of all of the oligonucleotide binding sites in a particular DNA
 7 binding region ensuring that the DNA binding region will be occupied by a single DNA molecule.
 8 *Id.*; see ’984 Patent at 16:27-29.

9 **3. Whether Illumina’s Accused Products Infringe the Following Claim**
 10 **Element: “The DNA Binding Region is Occupied by a Single DNA**
 11 **Molecule Having Multiple Copies of One DNA Sequence”**

12 The first dispute is whether the double-stranded DNA (“dsDNA”) in Illumina’s Accused
 13 Products contains two different sequences or one single sequence. BGI only accuses the dsDNA
 14 attached to the DNA binding region as infringing the “multiple copies of one single DNA”
 15 limitation. Dkt. No. 377-4 (“Puglisi Tr.”) at 162:17-21. The Claim Construction Order explains
 16 that the ’984 Patent requires only one DNA sequence under the claim limitation at issue, “more
 17 than 50% of the DNA binding regions in the array have multiple copies of one single DNA”:

18 “The language ‘one *single* DNA’ indicates that one, and only one,
 19 DNA sequence is present in each binding region. Were BGI’s
 20 interpretation correct that additional, different DNAs could also be
 21 present, the inventor could have written ‘one DNA’ or ‘at least one
 22 DNA’ of the 100,000 or more different DNAs. The use of the term
 23 ‘one single’ is clear: only one DNA sequence is present.”

24 Order at 18 (emphasis in original).

25 Illumina asserts that the Accused dsDNA contains two different sequences, i.e., a template
 26 sequence and its complementary sequence. Mot. at 6. For example, because adenine (“A”)
 27 always pairs with thymine (“T”) and guanine (“G”) always pairs with cytosine (“C”), a template
 28 sequence of A-G-G-T would have a complementary sequence T-C-C-A. According to Illumina,
 “Whether one sequence could be generated or determined from its complementary sequence is
 irrelevant. They are still different sequences.” Mot. at 7. It also explains that the Accused
 dsDNA are only present during the intermediate steps before cluster generation is completed and

1 are not sequenced in the Accused Flow Cells because the dsDNA contain different sequences.
 2 Mot. at 8. Otherwise, the presence of both strands of dsDNA, i.e., the different sequences, would
 3 produce conflicting signals during sequencing. *Id.*

4 BGI contends that the question of whether dsDNA comprises of a single DNA sequence or
 5 different DNA sequences is a genuine issue of material fact. Opp. at 8. According to BGI, a
 6 person of ordinary skill in the art (“POSITA”) would understand that a dsDNA molecule includes
 7 two complementary copies of a single DNA sequence and the claim element referring to “multiple
 8 copies of one single DNA” encompasses such complementary copies. *Id.*; see Puglisi Rep.
 9 ¶¶ 172–74. But BGI’s infringement expert, Puglisi admitted during his deposition that the two
 10 strands of dsDNA are different sequences:

11 “Q: Do you see the image on the left of the double-stranded DNA?”

12 A: Yes I do.

13 Q: Are those two sequences the same or different?

14 A: They’re complementary to one another.

15 Q: So would you say they are the same or different?

16 A: They are different sequences, but are complements of one another
 through the rules of Watson-Crick base pair.

17 Q: So you agree with the text above the figure that says the
 composition of the bases are different, correct?

18 A: In the two strands they are different.”

19 Puglisi Tr. at 9:20–10:7.

20 Accordingly, even if I drew all reasonable inferences in BGI’s favor, there is no genuine
 21 dispute of fact that the dsDNA comprises of two different sequences. Due to the presence of the
 22 second strand in the dsDNA with a different, albeit complementary, sequence, Illumina’s Accused
 23 Products cannot infringe this limitation in the ’984 Patent. Whether Illumina’s Accused Products
 24 create a purely monoclonal cluster or an effectively monoclonal cluster under the first or second
 25 mechanisms is also irrelevant because both mechanisms have the dsDNA with two different
 26 sequences. See Dkt. No. 400 (“Reply”) at 6. Because all of BGI’s infringement theories rely on a
 27 flawed opinion that the Accused dsDNA contain multiple copies of one single DNA sequence,
 28 there is no evidence that Illumina’s Accused Products infringe the ’984 Patent.⁴ Mot. at 6; Dkt.

⁴ I will not address the disputes about the “occupied” requirement in the first element or about the second element. Even if there were genuine disputes of fact, it would not change the noninfringement conclusion because Illumina’s Accused Products cannot satisfy the “one DNA

1 No. 387-12 Puglisi Rep. ¶¶ 119–28. Illumina’s motion for summary judgment on the
2 noninfringement of the ’984 Patent is GRANTED.

3 **B. Doctrine of Equivalents**

4 As established above, BGI has not preserved its DOE theories in its infringement
5 contentions and therefore there can be no infringement under DOE. *See supra* Part I.A.3. Even if
6 BGI had sufficiently disclosed its DOE theories, the DOE analysis is flawed because it fails to
7 compare the accused features to the claim limitations.⁵ *See Warner-Jenkinson Co. v. Hilton Davis*
8 *Chem. Co.*, 520 U.S. 17, 21 (1997) (DOE requires showing “‘equivalence’ between the elements of the
9 accused product or process and the claimed elements of the patented invention.”). “If an asserted
10 claim does not literally read on an accused product, infringement may still occur under the
11 doctrine of equivalents if there is not a substantial difference between the limitations of the claim
12 and the accused product.” *Bayer AG v. Elan Pharm. Research Corp.*, 212 F.3d 1241, 1250 (Fed.
13 Cir. 2000). “Insubstantiality may be determined by whether the accused device ‘performs
14 substantially the same function in substantially the same way to obtain the same result’ as the
15 claim limitation.” *Catalina Marketing*, 289 F.3d at 813. “Such evidence must be presented on a
16 limitation-by-limitation basis. Generalized testimony as to the overall similarity between the
17 claims and the accused infringer’s product or process will not suffice.” *Texas Instruments Inc. v.*
18 *Cypress Semiconductor Corp.*, 90 F.3d 1558, 1567 (Fed. Cir. 1996).

19 Illumina asserts that BGI’s DOE analysis is untied to any claim element. Mot. at 14. In
20 the DOE analysis, Puglisi addresses Illumina’s contention that “effectively monoclonal” clusters
21 under the second mechanism do not infringe the “more than 50%” element of the asserted claims.
22 Opp. at 16; Puglisi Rep. ¶¶ 150, 165–68. He opines that “effectively monoclonal clusters are
23 insubstantially different from purely monoclonal clusters for purposes of DNA sequencing with
24 the claimed patterned flow cells” but the patent does not mention or encompass clusters whether

25 _____
26 sequence” requirement in the first element.

27 ⁵ Because I conclude that the DOE theories have not been sufficiently disclosed and are flawed, I
28 will not address the question of whether the DOE claim is barred as a matter of law by prosecution
history estoppel.

1 “purely monoclonal” or “effectively monoclonal.” *Id.*; see Puglisi Rep. ¶ 167. The Claim
2 Construction Order rejected BGI’s construction that “would contemplate clusters of the
3 macromolecules per binding site,” which would “diminish[] a key benefit of the high-density
4 array.” Claim Construction Order at 21.

5 In addition, the DOE analysis does not provide a limitation-by-limitation basis for the
6 alleged insubstantiality between the Accused Products and the claim limitation. The Puglisi
7 Report does not specifically address how “clusters” containing multiple molecules are equivalent
8 to a single molecule or the equivalency to the “occupied” limitation. Mot. at 14; Dkt. No. 407 at
9 32; see Puglisi Rep. ¶¶ 150, 165–68. Moreover, BGI’s literal infringement theory is based on the
10 transient “intermediate DNA structures” that are “formed during cluster generation,” and not the
11 clusters themselves, but BGI does not have a DOE theory on these intermediate structures. *See*
12 Opp. at 5–6; Reply at 7. Accordingly, BGI’s DOE theories fail and there can be no infringement
13 of the ’984 Patent under DOE.⁶

14 C. Inequitable Conduct

15 The parties contest whether two of Illumina’s inventors of the ’444 and ’973 patents, Dr.
16 Xiaohai Liu and Xiaolin Wu, deliberately concealed a reference (the “Kovács” reference) from the
17 Patent and Trademark Office (“PTO”) during the prosecution of the ’444 and ’973 Patents. “To
18 prevail on the defense of inequitable conduct, the accused infringer must prove that the applicant
19 misrepresented or omitted material information with the specific intent to deceive the PTO.”
20 *Therasense, Inc. v. Becton, Dickinson & Co.*, 649 F.3d 1276, 1287 (Fed. Cir. 2011). In a case
21 involving nondisclosure of information, like the one here, “the accused infringer must prove by
22 clear and convincing evidence that the applicant knew of the reference, knew that it was material,
23 and made a deliberate decision to withhold it.” *Id.* at 1290. The evidence of intent “must be the
24 single most reasonable inference able to be drawn from the evidence.” *Id.* “[W]hen there are multiple
25 reasonable inferences that may be drawn, intent to deceive cannot be found . . .” *Id.*

26 _____
27 ⁶ I will not address the royalty base dispute about whether there is evidence of infringement of
28 certain Accused Products included in BGI’s royalty base for damages because I conclude that
there can be no infringement under the ’984 Patent.

1 BGI alleges that Illumina intentionally withheld or failed to disclose a reference to a paper by
2 Terez Kovacs and Laslo Otvos titled *Simple Synthesis of 5-Vinyl and 5-Ethynyl- 2'*
3 *Deoxyuridine-5'-Triphosphates*, and published in *Tetrahedron Letters*, Vol. 29, pp 4525-4528, 1988
4 (“Kovacs”). See Dkt. No. 233-7 (“Kovács”). It states that Kovács discloses a methodology for
5 converting nucleosides to nucleotides that is very similar to the method that Liu and Wu were using to
6 create modified nucleotides. FAA ¶ 337. It claims that Liu and Wu copied the specific methodology
7 used in Kovács but did not disclose Kovács as relevant prior art. *Id.*

8 Illumina answers that BGI’s “inequitable conduct” defense fails as a matter of law because
9 there is no evidence that the inventors had specific intent to deceive the PTO. Mot. at 2–3. For
10 the reasons below, even if I drew all inferences in BGI’s favor, I cannot reasonably conclude that
11 the inventors had specific intent to deceive the PTO and therefore BGI’s inequitable conduct
12 defense fails.

13 **1. Whether the '984 Inventors Knew About the Kovács Reference**

14 Notwithstanding Drs. Wu and Liu’s declarations that they did not know about the Kovács
15 reference, BGI contends that Dr. Sarah Lee, a colleague of the inventors, cited Kovács in a
16 notebook as the methodology that she and Drs. Liu and Wu used for phosphorylation. Opp. at 20.
17 Because these three worked on the same phosphorylation methodology, “worked shoulder-to
18 shoulder at the lab bench,” and “talked every day about their work,” BGI argues that it is not the
19 “most reasonable to believe the inventors knew nothing about Kovács.” *Id.* But as Illumina
20 emphasizes, there are no citations to Kovács in any of the inventors’ lab notebooks. Mot. at 17.
21 Instead, the inventors have testified that they do not remember having ever seen the Kovács
22 reference; BGI’s experts admitted that there was no evidence that the inventors were aware of the
23 Kovács reference. See Dkt. No. 377-8 (“Wu Decl.”) ¶ 5; Dkt. No. 377-9 (“Liu Decl.”) ¶ 5; 1465 Dkt.
24 239-6 (“Wu Tr.”) at 287:14-20; Dkt. No. 377-11 (“Metzker Tr.”) at 245:19–246:4.

25 BGI contests Illumina’s defense that its inventors developed their phosphorylation method
26 from references other than Kovács. Opp. at 21. Its expert, Dr. Patrick Hrdlicka, compared the
27 chemical synthesis steps that Kovács teaches to phosphorylate nucleosides with what the inventors
28 used and disclosed in their patents and concluded that the inventors must have known about

1 Kovács. *See* Dkt. No. 386-46 (“Hrdlicka Rep.”) ¶¶ 208–39. According to BGI, “At the very least,
2 there is a dispute between the experts as to whether the similarities between Kovács and what the
3 inventors did and disclosed establishes that they knew about and used Kovács as a guide for their
4 work” rendering summary judgment inappropriate. *Opp.* at 22. But as Illumina correctly notes,
5 raising a factual dispute is not enough to foreclose the other reasonable inferences and prove that
6 intentional deceit is the single most reasonable inference. *Reply* at 12.

7 For example, Illumina asserts that another reasonable inference is that Lee could have
8 simply communicated “a common proton sponge protocol (what BGI calls the Kovács
9 methodology) to Drs. Wu and Liu without communicating where the proton sponge protocol was
10 published.” *Reply* at 10; *Mot.* at 17–18. BGI contends that this speculation is implausible
11 because there “is no reason Dr. Lee would have concealed the copy of Kovacs she was referencing
12 from Drs. Wu and Liu, who were working right next to her.” *Opp.* at 21. Illumina responds that
13 at Lee’s previous job, Lee had performed extensive work on phosphorylation protocols similar to
14 the protocol in Kovács. Dkt. No. 377-15 (“Romesberg Rep.”) ¶ 355. Based on her prior
15 experience and publications, Lee could have explained the phosphorylation protocol to her
16 colleagues without needing to reference or share any specific literature. *Id.* Illumina argues that
17 this inference is more reasonable than BGI’s “speculation that the inventors would have seen all
18 literature cited in Dr. Lee’s lab notebook just because they were working in the same laboratory.”
19 *Reply* at 10.

20 2. Whether the Inventors Thought the Kovács Reference Was Material

21 In addition, Illumina asserts that because there is no evidence that any inventor had ever
22 seen Kovács, BGI’s theory that the inventors believed that the reference was material to the
23 claimed invention is “even more far-fetched.” *Mot.* at 19. Even if the inventors had seen Kovács,
24 Illumina argues that there is no evidence to show that the inventors would have thought it was
25 material to the claims because (1) the fields of technology were different; (2) BGI itself did not
26 recognize the materiality of the Kovács reference; and (3) Kovács was merely cumulative of other
27 prior art. *Mot.* at 19–20. BGI contends that Kovács is material, as evidenced by the fact that Lee
28 cited to it in her lab notebook and that Kovács is more relevant than the other prior art references,

1 which Illumina did disclose. Opp. at 22–23. Illumina, however, maintains that Kovács “has
2 nothing to do with sequencing or the azido blocking group.” Reply at 11.

3 3. Whether the Inventors Had Specific Intent to Deceive the PTO

4 Even if the inventors knew about Kovács and believed it was material, “[d]espite extensive
5 discovery that involved over 50 hours of inventor depositions and combing through over 300 lab
6 notebooks, BGI has no evidence from which a reasonable fact finder could conclude that the inventors
7 deliberately withheld Kovacs with a specific intent to deceive the PTO.” Mot. at 20. BGI’s experts
8 admitted this. Metzker Tr. at 414:6-14 (“I have no knowledge of the [sic] intentionability of any of
9 the inventors in this case. I don’t know what their intentions are. I’m not saying they had any malice
10 intentions”); *id.* at 417:1-14 (“I don’t have any knowledge of what they purposefully did or not
11 purposefully did in the laboratory . . . whether they attempted to hide or not hide purposefully. I
12 wouldn’t know that”); Dkt. No. 377-12 (“Hrdlicka Tr.”) at 14:6–15:10 (“I have not formulated any
13 opinions or conclusions regarding whether or not the inventors had malicious intent in withholding
14 information from the patent office . . . I cannot speculate to what was going on in the mind of . . .
15 inventors”).

16 But “because direct evidence of deceptive intent is rare, a district court may infer intent from
17 indirect and circumstantial evidence, provided that such intent is the single reasonable inference.” *Am.*
18 *Calcar, Inc. v. Am. Honda Motor Co.*, 768 F.3d 1185, 1190–91 (Fed. Cir. 2014). BGI contends that a
19 possible motive for withholding knowledge of the Kovács reference could have been to ensure that
20 they could still claim to be inventors and therefore this motive creates a reasonable inference that
21 the inventors did have a specific intent to deceive the PTO by withholding Kovács. Reply at 23.
22 According to BGI, Illumina’s witnesses are not credible, which is a “crucial” factor in finding
23 specific intent to deceive. *See* Opp. at 20; *see Poller v. Columbia Broad. Sys., Inc.*, 368 U.S. 464,
24 473 (1962) (“[S]ummary judgement should be used sparingly where motive and intent play
25 leading roles” to allow credibility of witnesses to be examined on cross examination.). For
26 example, Drs. Wu and Liu, as well as the six other inventors, which Illumina hired as consultants,
27 testified that Dr. Wu came up with the idea to use the 3’-O azidomethyl block. Dkt. No. 386-38
28 (“Romesberg Reb.”) ¶¶ 266–69. But the one inventor who Illumina did not hire as a consultant,

1 Dr. Milton, testified that he was the one who came up with the idea. Dkt. No. 386-40 (“Milton
2 Tr.”) at 27:24–28:1.

3 BGI also asserts that Illumina’s reasons for not disclosing Kovács are “not credible and
4 part of the scheme to conceal its copying Zavgorodny,” a prior art reference which BGI had
5 accused Illumina of concealing until the patent examiner found the reference on his own. Opp. at
6 24; *Illumina II*, Dkt. No. 241-4 at 6. BGI emphasizes that Illumina has argued that Zavgorodny is
7 irrelevant to its invention. But when pressed, Dr. Liu testified that he found Zavgorodny “very
8 interesting because it had done what the Illumina inventors had done.” Opp. at 24; Dkt. No. 241-4
9 at 6. Illumina and its inventors also claim that they did not know about Zavgorodny before they
10 filed their patent applications but an email shows otherwise. *See* Dkt. No. 386-45. Because
11 Illumina inventors had a motive to claim that they did not know about Kovács—in order to obtain
12 patent protection—BGI argues that “there is more than enough evidence, given the contradictory
13 facts Illumina relies on, to draw the reasonable inference that the Illumina inventors knew about
14 Kovács, knew it was material, and withheld it from the patent office with a specific intent to
15 deceive.” Opp. at 25.

16 As Illumina points out, nothing about the Zavgorodny reference was concealed; it was
17 fully disclosed and considered by the PTO. Reply at 13. And Milton’s testimony that he came up
18 with the idea to use a 3’-O azidomethyl blocking group, while it may (or may not) undermine the
19 credibility of Illumina’s witnesses, disproves BGI’s theory that the inventors copied the invention
20 from Zavgorodny. *Id.* Milton and the other inventors all testified that none of the inventors had
21 seen the Zavgorodny references before. Milton Tr. at 39:6–40:5; 30:22–31:2; 31:10-22; 34:4-7;
22 45:5-15; Romesberg Reb. ¶ 291. Given this record, drawing all reasonable inferences in BGI’s
23 favor, I cannot reasonably conclude that the single most reasonable inference for the failure to
24 disclose the Kovács reference to the PTO was to intentionally deceive the PTO.⁷ Illumina’s
25

26 ⁷ Because I reject BGI’s “inequitable conduct” defense, I will not address Illumina’s request to
27 strike portions of BGI’s expert reports that opine on the inventors’ states of mind. Mot. at 22; *see*,
28 *e.g.*, Dkt. No. 377-14 (“Metzker Rep.”) ¶ 273 (opining that the inventors claimed to have not
known anything about [Kovacs], to gain some advantage in the patent prosecution context.”).

1 motion for summary judgment on BGI's inequitable conduct defense is GRANTED.

2 **D. BGI's Other Defenses**

3 Finally, Illumina moves for summary judgment that (1) the Accused StandardMPS
4 products infringe all Asserted Claims of all Asserted Patents; (2) the Accused CoolMPS products
5 infringe the Asserted Claims of the '973 and '444 Patents;⁸ (3) the Asserted Claims are not
6 anticipated; and (4) the '444 Patent is not invalid for lack of written description or enablement.
7 Mot. at 23–25. The first two issues are not rebutted by BGI's expert opinions and BGI's counsel
8 confirmed that its experts did not serve reports on these issues. Mot. at 24. In addition, BGI's
9 expert does not assert that any Asserted Claim is anticipated or that the '444 Patent is invalid. *Id.*
10 at 24–25. BGI does not contend that there is a genuine issue of material fact. BGI only asserts
11 that Illumina failed to show there were no disputed issues of fact and that these issues are best
12 addressed during the preparation of pre-trial submissions. Opp. at 25. I disagree and GRANT
13 summary judgment in favor of Illumina on these four uncontested defenses.

14 **III. MOTIONS TO SEAL**

15 The parties have filed ten motions to seal. *See* 1465 Dkt. Nos. 406, 421, 433, 448; 3770
16 Dkt. Nos. 376, 378, 386, 387, 399, 412. A party seeking to seal court records must overcome a
17 strong presumption in favor of the public's right to access those records. *See Ctr. for Auto Safety*
18 *v. Chrysler Grp., LLC*, 809 F.3d 1092, 1096 (9th Cir. 2016), *cert. denied sub nom. FCA U.S. LLC*
19 *v. Ctr. for Auto Safety*, 137 S. Ct. 38 (2016). Here, the "compelling reasons" standard applies.
20 *See id.* at 1101. The Ninth Circuit has explained that examples of "compelling reasons" include
21 "the use of records to gratify private spite, promote public scandal, circulate libelous statements,
22 or release trade secrets." *Kamakana v. City & Cty. of Honolulu*, 447 F.3d 1172, 1179 (9th Cir.
23 2006). Other examples include "sources of business information that might harm a litigant's
24 competitive standing." *Ctr. for Auto Safety*, 809 F.3d at 1097. For the reasons explained in the
25 table below, the following motions are GRANTED: 3770 Dkt. Nos. 376, 378, 399, 412 and 1465
26 Dkt. Nos. 406, 433, 448. The following motions are GRANTED in part and DENIED in part:

27 _____
28 ⁸ In a separate order, I rejected BGI's argument that the '973 Patent was invalid. *See Illumina II*,
Dkt. No. 469 at 5–9.

1 3770 Dkt. Nos. 386, 387 and 1465 Dkt. No. 421. The clerk shall UNSEAL 3770 Dkt. Nos.
 2 386-20, 386-22, 386-24, 386-26, 386-28, 386-30, 386-36, 386-44, 387-4, 387-6, 387-8, 387-10
 3 and 1465 Dkt. Nos. 421-20, 421-22, 421-24, 421-26, 421-28, 421-30, 421-36, 421-44.

Document	Portions to Be Filed Under Seal	Designating Party	Ruling
3770 Dkt. No. 376 / 1465 Dkt. No. 406 – GRANTED			
Illumina’s Motion for Summary Judgment	2:13, 10:7	Illumina	GRANTED (Discusses Illumina’s proprietary product information and trade secrets, which if made public could cause harm to Illumina. Dkt. No. 376-1 ¶ 6.)
Exhibit 1 to the Declaration of Andrew Gesior in Support of Illumina’s Motion for Summary Judgment (2021-04-12 Opening Expert Report of Joseph Puglisi Ph.D.)	¶¶ 127-128, 146, 165-167	Illumina	GRANTED (Discusses Illumina’s proprietary product information and trade secrets, which if made public could cause harm to Illumina. Dkt. No. 376-1 ¶ 6.)
Exhibit 2 to the Declaration of Andrew Gesior in Support of Illumina’s Motion for Summary Judgment (2021-05-10 George Weinstock’s Rebuttal Report re Noninfringement of U.S. Patent No. 9,944,984)	¶¶ 37-41, 43-58, 59 n.7, 60-63	Illumina	GRANTED (Discusses Illumina’s proprietary product information and trade secrets, which if made public could cause harm to Illumina. Dkt. No. 376-1 ¶ 6.)
Exhibit 5 to the Declaration of Andrew Gesior in Support of Illumina’s Motion for Summary Judgment (2021-01-22 Deposition Transcript of Sergio Peisajovic)	111:9-15, 111:21-22, 112:13-14	Illumina	GRANTED (Discusses Illumina’s proprietary product information and trade secrets, which if made public could cause harm to Illumina. Dkt. No. 376-1 ¶ 6.)
Exhibit 16 to the Declaration of Andrew Gesior in Support of Illumina’s Motion for	¶¶ 63-66, 84-85, 93, 97, 99, 110-111, 116-117, 149-150, 154, 175, 183,	BGI	GRANTED (Discusses BGI’s trade secrets and confidential information regarding its products, chemical reagents, and R&D, which if

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Summary Judgment (2021-04-12 Expert Report of Floyd Romesberg Ph.D. re Infringement)	186-187, 196, 204, 207-208, 234, 263, 266, 269, 272, 275, 278, 305, 318, 347, 363, 393, 407, 423, 427, 432, 440, 447, 457, 460-461, 464, and 469-470, and n.10, n.13, and n.15 (highlighted in yellow)		made public could harm its competitive standing. 3770 Dkt. No. 383 ¶ 4.)
Exhibit 17 to the Declaration of Andrew Gesior in Support of Illumina's Motion for Summary Judgment (2021-05-10 Rebuttal Expert Report of Michael Metzker Ph.D. re Noninfringement)	¶ 10 (highlighted in yellow)	BGI	GRANTED (Discusses BGI's trade secrets and confidential information regarding its products, chemical reagents, and R&D, which if made public could harm its competitive standing. 3770 Dkt. No. 383 ¶ 4.)
Exhibit 18 to the Declaration of Andrew Gesior in Support of Illumina's Motion for Summary Judgment (2021-04-12 Opening Expert Report of James Kearl)	¶ 95	Illumina	GRANTED (Discusses Illumina's confidential, non-public financial information, such as sales and revenue data, which if made public could cause harm to Illumina. Dkt. No. 376-1 ¶ 7.)
3770 Dkt. No. 386 / 1465 Dkt. No. 421 – GRANTED IN PART AND DENIED IN PART			
Defendants' Opposition to Illumina's Motion for Summary Judgment	<ul style="list-style-type: none"> • Portions of p. 4 • Portions of p. 25 	Illumina	GRANTED (Discusses Illumina's proprietary product information and trade secrets, which if made public could harm Illumina. 3770 Dkt. No. 396 ¶ 8.)
Ex. 2 - April 12, 2021 Expert Report of Joseph D. Puglisi, Ph.D.	<ul style="list-style-type: none"> • Portions of ¶ 66 • Portions of ¶¶ 70-71 • Portions of ¶ 74 • Portions of ¶ 76 • Portions of ¶ 80 • Portions of ¶ 83 • Portions of ¶¶ 104-109 • Portions of ¶¶ 127-128 • Portions of ¶ 152 • Portions of ¶¶ 159-160 • Portions of ¶¶ 165-167 	Illumina	GRANTED (Discusses Illumina's confidential, non-public information regarding its third-party licensing agreements as well as its proprietary product information and trade secrets. 3770 Dkt. No. 396 ¶¶ 7-8.)

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	<ul style="list-style-type: none"> • Portions of ¶ 171 • Portions of ¶¶ 184-187 		
Ex. 3 - Ex. 3 to Puglisi Report (Claim Chart)	<ul style="list-style-type: none"> • Portions of p. 4 • Portions of p. 6-11 • Portions of p. 18-21 • Portion of p. 27 • Portions of p. 29-32 	Illumina	GRANTED (Discusses Illumina's proprietary product information and trade secrets, which if made public could harm Illumina. 3770 Dkt. No. 396 ¶ 8.)
Ex. 4 - Excerpts from the May 28, 2021 deposition transcript of George M. Weinstock, Ph.D.	<ul style="list-style-type: none"> • p. 7:22 • p. 66:16-24 • p. 67:4-9; 12-14; 16-23; 25 • p. 68:19-21; 23-25 • p. 69:1-3; 5-6 • p. 83:24-35 • p. 84:1-13; 15-25 • p. 85:1-14 • p. 97:10-11; 13-25 • p. 98:1-7; 9-11; 13-16; 18-20; 25 • p. 101:2-5; 7-25 • p. 102:2-5; 7-9; 11-17; 22-23 • p. 103:13 	Illumina	GRANTED (Discusses Illumina's proprietary product information and trade secrets and contains the home addresses of third-party witnesses. 3770 Dkt. No. 396 ¶¶ 8-9.)
Ex. 6 - Excerpts from the January 22, 2021 deposition transcript of Sergio Peisajovich, Ph.D.	<ul style="list-style-type: none"> • p. 145: 1-7; 9-11; 18-21;25 • p. 146: 1-2; 5-8; 10-19; 21-22; 24-25 • p. 153: 1-4; 8-12; 14-20; 22-25 • 174:12-16 	Illumina	GRANTED (Discusses Illumina's proprietary product information and trade secrets, which if made public could harm Illumina. 3770 Dkt. No. 396 ¶ 8.)
Ex. 7 - Excerpts from the March 18, 2021 deposition transcript of Peter McInerney, Ph.D.	<ul style="list-style-type: none"> • p. 9: 1-2 • p. 95:2-16; 24-25 • p. 96:1-6 	Illumina	GRANTED (Discusses Illumina's proprietary product information and trade secrets and contains the home addresses of third-party witnesses. 3770 Dkt. No. 396 ¶¶ 8-9.)
Ex. 12 - Excerpts from the May 25, 2021 deposition transcript of Joseph D. Puglisi, Ph.D.	<ul style="list-style-type: none"> • p. 6:20 • p. 171:9-16 • p. 186:6-9; 15-17 • p. 187:4-7 	Illumina	GRANTED (Discusses Illumina's proprietary product information and trade secrets and contains the home addresses of third-party witnesses. 3770 Dkt. No. 396 ¶¶ 8-9.)
Ex. 14 - Excerpts from the April 12, 2021 Expert Report	<ul style="list-style-type: none"> • Portions of ¶¶ 54-62 • Portions of 	Illumina	GRANTED (Discusses Illumina's confidential, non-public financial

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of James R. Kearl, Ph.D.	<ul style="list-style-type: none"> • ¶¶ 64-65 • Portions of ¶ 85 • Portions of ¶ 95 • Portions of fn. 128 • Portions of fn. 135 		information regarding its sales, revenue data, IP portfolio, and business development. Also discusses its proprietary product information and trade secrets. 3770 Dkt. No. 396 ¶¶ 7–8.)
Ex. 15 - Excerpts from the May 10, 2021 Rebuttal Expert Report of George M. Weinstock, Ph.D.	N/A	Illumina	DENIED – The court shall unseal 3770 Dkt. No. 386-20 and 1465 Dkt. No. 421-20. (Illumina does not seek to seal this document. 3770 Dkt. No. 396.)
Ex. 18 - Excerpts of the document produced bearing beginning Bates numbers ILMNBGI0207713	N/A	Illumina	DENIED – The court shall unseal 3770 Dkt. No. 386-22 and 1465 Dkt. No. 421-22. (Illumina does not seek to seal this document. 3770 Dkt. No. 396.)
Ex. 19 - Excerpts of the document produced bearing beginning Bates numbers ILMNBGI_NDCAL000 3471	N/A	Illumina	DENIED – The court shall unseal 3770 Dkt. No. 386-24 and 1465 Dkt. No. 421-24. (Illumina does not seek to seal this document. 3770 Dkt. No. 396.)
Ex. 20 - Excerpts of the document produced bearing beginning Bates numbers ILMNBGI0203644	N/A	Illumina	DENIED – The court shall unseal 3770 Dkt. No. 386-26 and 1465 Dkt. No. 421-26. (Illumina does not seek to seal this document. 3770 Dkt. No. 396.)
Ex. 21 - Excerpts of the document produced bearing beginning Bates numbers ILMNBGI0203857	N/A	Illumina	DENIED – The court shall unseal 3770 Dkt. No. 386-28 and 1465 Dkt. No. 421-28. (Illumina does not seek to seal this document. 3770 Dkt. No. 396.)
Ex. 22 - Excerpts from the January 7, 2021 deposition transcript of Joseph Samuel Brennan, Ph.D.	N/A	Illumina	DENIED – The court shall unseal 3770 Dkt. No. 386-30 and 1465 Dkt. No. 421-30. (Illumina does not seek to seal this document. 3770 Dkt. No. 396.)
Ex. 23 Excerpts from the April 12, 2021 Opening Expert Report of Michael L. Metzker, Ph.D.	<ul style="list-style-type: none"> • Portions of ¶ 247 • Portions of ¶ 263 	Illumina	GRANTED (Discusses Illumina’s proprietary product information and trade secrets, which if made public could harm Illumina. 3770 Dkt. No. 396 ¶ 8.)
Ex. 26 - Excerpts of the document	<ul style="list-style-type: none"> • Portions of p. 1979/ILMNBGI0 	Illumina	GRANTED (Discusses Illumina’s proprietary

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produced bearing beginning Bates numbers ILMNBGI0213690	<ul style="list-style-type: none"> 213692 • Portions of p. 1981-1984/ILMNBGI0213694-697 		product information and trade secrets, which if made public could harm Illumina. 3770 Dkt. No. 396 ¶ 8.)
Ex. 29 - Excerpts from the May 24, 2021 deposition transcript of Floyd Romesberg, Ph.D.	N/A	Illumina	DENIED – The court shall unseal 3770 Dkt. No. 386-36 and 1465 Dkt. No. 421-36. (Illumina does not seek to seal this document. 3770 Dkt. No. 396.)
Ex. 30 - Excerpts from the May 10, 2021 Expert Rebuttal Report of Floyd Romesberg, Ph.D. on Validity	N/A	Illumina	DENIED – The court shall unseal 3770 Dkt. No. 386-38 and 1465 Dkt. No. 421-38. (Illumina does not seek to seal this document. 3770 Dkt. No. 396.)
Ex. 31 - Excerpts from the January 15, 2021 deposition transcript of John Milton, Ph.D.	p. 8:3-4	Illumina	GRANTED (Contains the home addresses of third-party witnesses. 3770 Dkt. No. 396 ¶ 9.)
Ex. 32 - Exhibit 0075 from the December 8, 2020 deposition of Shankar Balasubramanian, Ph.D.	Entire document	Illumina	GRANTED (Discusses Illumina’s non-public working draft regarding its strategic publication of information related to its technology, which if made public could harm Illumina. 3770 Dkt. No. 396 ¶ 8.)
Ex. 33 - Excerpts from the August 20, 2020 deposition transcript of Xiaohai Liu, Ph.D.	N/A	Illumina	DENIED – The court shall unseal 3770 Dkt. No. 386-44 and 1465 Dkt. No. 421-44. (Illumina does not seek to seal this document. 3770 Dkt. No. 396.)
Ex. 34 - Excerpts from the April 12, 2021 Opening Expert Report of Professor Patrick J. Hrdlicka	<ul style="list-style-type: none"> • Portions of ¶¶ 176-179 • Portions of fn. 43 	Illumina	GRANTED (Discusses Illumina’s proprietary product information and trade secrets, which if made public could harm Illumina. 3770 Dkt. No. 396 ¶ 8.)
Ex. 35 - Document produced bearing Bates numbers ILMNBGI1110437-52	Portions of p. ILMNBGI1110437	Illumina	GRANTED (Discusses Illumina’s proprietary product information and trade secrets, which if made public could harm Illumina. 3770 Dkt. No. 396 ¶ 8.)
Ex. 36 - Excerpts from the January 14, 2021 deposition transcript of Harold P. Swerdlow, Ph.D.	<ul style="list-style-type: none"> • Portions of p. 212:9-10: 14 • Portions of p. 212:25-213:5 • Portions of p. 213:9-10 	Illumina	GRANTED (Discusses Illumina’s confidential, non-public financial information regarding its sales, revenue data, IP portfolio, and business development. 3770 Dkt.

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			No. 396 ¶ 7.)
3770 Dkt. No. 399 / 1465 Dkt. No. 433 – GRANTED			
Illumina’s Reply in Support of Illumina’s Motion for Summary Judgment	Portions of page 5 and 15	Illumina	GRANTED (Discusses Illumina’s confidential proprietary product information and trade secrets, which if made public could cause harm to Illumina. 3770 Dkt. No. 399-1 ¶ 4.)
Exhibit 22 to the Supplemental Declaration of Andrew Gesior in Support of Illumina’s Reply in Support of Illumina’s Motion for Summary Judgment (excerpts of the Expert Report of Floyd Romesberg, Ph. D. on Validity served on May 10, 2021)	Portions of ¶¶ 327-328 p. 127, fn. 12	Illumina	GRANTED (Discusses Illumina’s confidential proprietary product information and trade secrets, which if made public could cause harm to Illumina. 3770 Dkt. No. 399-1 ¶ 4.)
3770 Dkt. No. 412 / 1465 Dkt. No. 448 – GRANTED			
BGI’s Prowse Presentation	Green highlighted portions	Defendants	GRANTED (Discusses BGI’s trade secrets and confidential business information regarding its ongoing R&D activities and expenditures that if made public would harm BGI. 1465 Dkt. No. 448; Dkt. No. 412).
BGI’s Opposition Presentation	Green highlighted portions of slide 12–13, 35	Illumina	GRANTED (Discusses Illumina’s proprietary product information and trade secrets. 3770 Dkt. No. 415; 1465 Dkt. No. 452.)
3770 Dkt. No. 378 – GRANTED			
Exhibit 2 to the Declaration of Audra Sawyer in Support of Illumina’s Motion to Strike Expert Report of Dr. Joseph Puglisi and Preclude Defendants From Relying On New Infringement Theories (2021-05-10 George Weinstock’s Rebuttal Report re Noninfringement of U.S. Patent No. 9,944,984)	¶¶ 37-41, 43, 47, 50-58, 59 n.7, 60-63	Illumina	GRANTED (Discusses confidential, non-public information such as Illumina’s proprietary product information and trade secrets. Dkt. No. 378.)

1	Exhibit 4 to the	¶¶ 127-128, 146, 165-167, 171	Illumina	GRANTED (Discusses confidential, non-public information such as Illumina's proprietary product information and trade secrets. Dkt. No. 378.)
2	Declaration of Audra			
3	Sawyer in Support of			
4	Illumina's Motion to			
5	Strike Expert Report of			
6	Dr. Joseph Puglisi and			
7	Preclude Defendants			
8	From Relying On New			
9	Infringement Theories			
10	(2021-04-12 Opening			
11	Expert Report of Joseph			
12	Puglisi Ph.D.)			
13	Exhibit 6 to the	Entire document	Illumina	GRANTED (Discusses confidential, non-public information such as Illumina's proprietary product information and trade secrets. Dkt. No. 378.)
14	Declaration of Audra			
15	Sawyer in Support of			
16	Illumina's Motion to			
17	Strike Expert Report of			
18	Dr. Joseph Puglisi and			
19	Preclude Defendants			
20	From Relying On New			
21	Infringement Theories			
22	(excerpt of Illumina			
23	Powerpoint presentation			
24	entitled "ExAmp			
25	Clustering")			
26	3770 Dkt. No. 387 – GRANTED IN PART AND DENIED IN PART			
27	BGI's Opposition to	N/A	Illumina	DENIED – The clerk shall UNSEAL Dkt. No. 387-4. (Illumina does not request this document to be sealed. Dkt. No. 395.)
28	Illumina's Motion to			
29	Strike Puglisi's Expert			
30	Opinion			
31	Ex. 5 – Excerpts from	N/A	Illumina	DENIED – The clerk shall UNSEAL Dkt. No. 387-6. (Illumina does not request this document to be sealed. Dkt. No. 395.)
32	Illumina's			
33	October 13, 2020			
34	Responses and			
35	Objections to			
36	Defendants' Second			
37	Set of Interrogatories			
38	(Nos. 7-16)			
39	Ex. 6 - Excerpts from	N/A	Illumina	DENIED – The clerk shall UNSEAL Dkt. No. 387-8. (Illumina does not request this document to be sealed. Dkt. No. 395.)
40	Illumina's			
41	December 7, 2020			
42	Supplemental			
43	Responses and			
44	Objections to			
45	Defendants' Second Set			
46	of			
47	Interrogatories			

United States District Court
Northern District of California

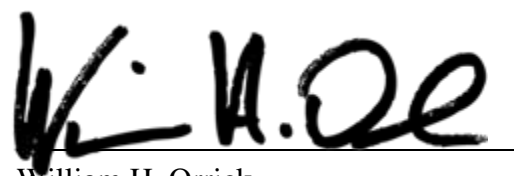
<p>1 Ex. 7 - Excerpts from 2 Illumina's 3 March 26, 2021 Second 4 Supplemental Responses 5 and 6 Objections to 7 Defendants' Second 8 Set of Interrogatories</p>	<p>N/A</p>	<p>Illumina</p>	<p>DENIED – The clerk shall UNSEAL Dkt. No. 387-10. (Illumina does not request this document to be sealed. Dkt. No. 395.)</p>
<p>6 Ex. 8 - April 12, 2021 7 Expert Report of Dr. 8 Joseph D. Puglisi</p>	<ul style="list-style-type: none"> • Portions of ¶ 66 • Portions of ¶¶ 70-71 • Portions of ¶ 74 • Portions of ¶ 76 • Portions of ¶ 80 • Portions of ¶ 83 • Portions of ¶¶ 104-109 • Portions of ¶¶ 127-128 • Portions of ¶ 152 • Portions of ¶¶ 159-160 • Portions of ¶¶ 165-167 • Portions of ¶ 171 • Portions of ¶¶ 184-187 	<p>Illumina</p>	<p>GRANTED (Discusses Illumina's confidential, non-public information related to its third- party licensing agreements, trade- secrets, and proprietary information, which if made public could cause harm to Illumina. Dkt. No. 395.)</p>
<p>16 Ex. 12 - Excerpts from 17 the May 25, 18 2021 deposition transcript 19 of Dr. 20 Joseph D. Puglisi</p>	<p>Portions of p. 6:20</p>	<p>Illumina</p>	<p>GRANTED (Proposed redacted language concerns the home address of a third-party witness. Dkt. No. 395.)</p>

CONCLUSION

For the reasons explained above, Illumina's motion to strike portions of the Puglisi Report is GRANTED in part and DENIED in part. Illumina's motion for summary judgment is GRANTED.

IT IS SO ORDERED.

Dated: September 9, 2021



William H. Orrick
United States District Judge