

1 EDWARD R. REINES (Bar No. 135960)
 edward.reines@weil.com
 2 DEREK C. WALTER (Bar No. 246322)
 derek.walter@weil.com
 3 CHRISTOPHER S. LAVIN (Bar No. 301702)
 christopher.lavin@weil.com
 4 WEIL, GOTSHAL & MANGES LLP
 201 Redwood Shores Parkway
 5 Redwood Shores, CA 94065
 Telephone: (650) 802-3000
 6 Facsimile: (650) 802-3100

7 Attorneys for Plaintiffs
 8 ILLUMINA, INC. AND ILLUMINA CAMBRIDGE LTD.

9
 10 **UNITED STATES DISTRICT COURT**
NORTHERN DISTRICT OF CALIFORNIA

12 ILLUMINA, INC.
 13 ILLUMINA CAMBRIDGE LTD.,

14 Plaintiffs,

15 v.

16 BGI GENOMICS CO., LTD.,
 BGI AMERICAS CORP.,
 17 MGI TECH CO., LTD.,
 MGI AMERICAS, INC., and
 18 COMPLETE GENOMICS INC.,

19 Defendants.

Case No. 20-cv-1465

**COMPLAINT FOR PATENT
 INFRINGEMENT**

JURY TRIAL DEMANDED

1 Plaintiffs Illumina, Inc. and Illumina Cambridge Ltd. (collectively “Illumina” or “Plaintiffs”) for
2 their Complaint against defendants BGI Genomics Co., Ltd. (“BGI Ltd.”), BGI Americas Corp.
3 (“BGI Americas”), MGI Tech Co., Ltd. (“MGI Ltd.”), MGI Americas, Inc. (“MGI Americas”), and
4 Complete Genomics Inc. (“CGI”) (collectively “BGI” or “Defendants”), allege as follows:

5 INTRODUCTION

6 1. This case is about the latest attempt at brazen infringement of Illumina’s patented
7 DNA sequencing technology by BGI, which is headquartered in Shenzhen, China. Illumina is
8 internationally recognized as the leading supplier of patented DNA sequencing equipment. Its
9 sequencers have been widely recognized for their high quality and performance. Indeed, Illumina’s
10 sequencers have been the engine for the biotech revolution, including major advances in healthcare
11 for expectant mothers and cancer patients, among others. BGI has imitated Illumina’s sequencers.
12 It markets copies of those sequencing systems without authorization from Illumina and in violation
13 of its patent rights. BGI started its commercialization effort in China and other places outside the
14 reach of United States patent law. It is now importing its infringing sequencers into the United
15 States, using them in its San Jose, California facility, has announced a commercial launch, and is
16 threatening to sell them throughout the United States.

17 2. Specifically, Illumina brings this action to halt BGI’s infringement of U.S. Patent
18 Nos. 7,771,973 (the “’973 Patent”), 7,541,444 (the “’444 Patent”), and 10,480,025 (the “’025
19 Patent”). Exs. 1 (’973 Patent), 2 (’444 Patent) & 3 (’025 Patent).

20 3. Defendants have imported their infringing DNA sequencing systems into the United
21 States, and have installed and operated them at their San Jose, California facility. They have
22 provided notice to Illumina and announced publicly that they intend to make infringing sequencing
23 instruments and CoolMPS™ reagents commercially available in direct competition with Illumina
24 in the United States.

25 4. This District has familiarity with related patents as well as this dispute. Illumina has
26 previously filed suit against BGI asserting related patents in this District, and that case remains
27 pending. *Illumina, Inc. v. BGI Genomics Co.*, 19-cv-03770-WHO (N.D. Cal.) (Judge William H.
28

1 Orrick). Previously, this Court had enforced the related U.S. Patent No. 7,566,537 (the “’537
2 Patent”), issuing an injunction against earlier infringers in the face of a host of failed patent validity
3 challenges. *Illumina, Inc. v. Qiagen, NV*, 207 F. Supp.3d 1081 (N.D. Cal. 2016) (Judge William
4 Alsup).

5 5. CGI has previously filed IPRs on the related ’537 Patent, and CGI listed BGI Ltd.
6 and BGI Americas as real parties in interest, evidencing their involvement with the infringing
7 activities that are the subject of this suit. IPR2017-02172, Paper 1 (PTAB Oct. 5, 2017) and
8 IPR2017-02174, Paper 1 (PTAB Oct. 5, 2017). But CGI failed to identify MGI Ltd. and MGI
9 Americas as real parties in interest despite their involvement with the infringing products.

10 6. In addition to the familiarity this District has with related patents and the dispute,
11 Illumina brings this action in the Northern District of California because Defendants are heavily
12 present in this District and are infringing the ’973, ’444, and ’025 Patents at their San Jose,
13 California facility in this District.

14 7. As a result of BGI’s infringement, and given the threat of its growing infringement,
15 Illumina faces a substantial risk of irreparable harm if such infringement is not halted.

16 **PARTIES**

17 8. Plaintiff Illumina, Inc. is a Delaware corporation with its principal place of business
18 at 5200 Illumina Way, San Diego, California 92122.

19 9. Plaintiff Illumina Cambridge Ltd. is a foreign corporation with its principal place of
20 business at Chesterford Research Park, Little Chesterford, Saffron Walden, Essex CB10 1XL,
21 United Kingdom.

22 10. Plaintiff Illumina Cambridge Ltd., a wholly-owned subsidiary of Illumina, Inc., is
23 the owner by assignment of all right, title and interest in and to the ’973, ’444 and ’025 Patents.
24 Illumina Inc. is the exclusive licensee of the ’973, ’444 and ’025 Patents with the right to sue to
25 enforce their exclusive rights.

26 11. Defendant BGI Ltd. is a Chinese corporation that has its headquarters at Building
27 No.7, BGI Park, No.21 Hongan 3rd Street, Yantian District, Shenzhen 518083, China. BGI Ltd.
28

1 controls BGI Americas, MGI Ltd., MGI Americas, and CGI as though they were not separate legal
2 entities and represents publicly that it has facilities in San Francisco, San Jose, Los Angeles, and
3 San Diego. Among other things, it directs, funds, and manages the infringing activity set forth in
4 this Complaint.

5 12. Defendant BGI Americas has a principal place of business at 2904 Orchard Pkwy,
6 San Jose, California 95134. BGI Americas is, among other things, a sales and marketing arm of
7 BGI that is involved directly and indirectly with the infringing activity set forth in this Complaint.

8 13. Defendant MGI Ltd. is a Chinese corporation that has its headquarters at Building
9 No.11, Beishan Industrial Zone, Yantian District, Shenzhen 518083, China. MGI Ltd. is, among
10 other things, responsible for developing and distributing the infringing sequencing technology. It
11 represents publicly that it has facilities in San Jose, California. With BGI Ltd., it directs, funds and
12 manages the infringing activity set forth in this Complaint.

13 14. Defendant MGI Americas has a principal place of business at 2904 Orchard Pkwy,
14 San Jose, California 95134. MGI Americas is, among other things, a sales and marketing arm of
15 BGI that is involved directly and indirectly with the infringing activity set forth in this Complaint.

16 15. Defendant CGI has a principal place of business at 2904 Orchard Pkwy, San Jose,
17 California 95134. CGI is, among other things, a research and development entity supporting the
18 accused activity and is involved directly and indirectly with the infringing activity set forth in this
19 Complaint.

20 16. Each and all of the Defendants had and have actual or constructive knowledge of the
21 events, transactions, and occurrences alleged herein, and either knew or should have known of the
22 conduct of their co-defendants and cooperated in, benefited from and/or ratified such conduct.

23
24 **JURISDICTION AND VENUE**

25 17. This action arises under the Patent Laws of the United States of America, 35 U.S.C.
26 § *I et seq.* This Court has federal question jurisdiction under 28 U.S.C. §§ 1331 and 1338(a) because
27 this is a civil action arising under the Patent Act.
28

1 18. Venue is proper in this District under 28 U.S.C. §§ 1391(b) and 1400(b). Among
2 other things, each of the Defendants maintains and/or is responsible for the use of regular and
3 established physical places of business in this District. The facts establishing this are included
4 throughout this Complaint. As examples, BGI Americas, MGI Americas and CGI all have principal
5 places of business at the same address: 2904 Orchard Pkwy, San Jose, California 95134.

6 19. For the foreign Defendants, venue is proper under 28 U.S.C. § 1391(b) and (c), and
7 1400(b), because as foreign defendants they may be sued in any judicial district, including in this
8 District. This District is a convenient forum for resolution of the parties' disputes set forth herein
9 and Judges Alsup and Orrick of this District have experience with related patents. This foreign
10 defendant venue allegation applies to at least BGI Ltd. and MGI Ltd., whom both represent
11 themselves as foreign corporations.

12 20. This Court has personal jurisdiction over each of the Defendants via general and/or
13 specific jurisdiction. The Defendants have systematic and continuous contacts in California such
14 that they are essentially at home in California, as set forth throughout this Complaint. They have
15 minimum contacts in California sufficient to warrant the exercise of jurisdiction given their contacts
16 in relation to the infringing activity and otherwise, as set forth throughout this Complaint. Insofar
17 as the Defendants, including BGI Ltd. and MGI Ltd., deny that they are subject to personal
18 jurisdiction in any individual jurisdiction, the aggregation of their contacts throughout the United
19 States supports the exercise of personal jurisdiction over them.

20 21. Furthermore, the same listed Defendants in this suit are also currently Defendants in
21 a previously suit filed by Illumina asserting other related patents. *Illumina, Inc. v. BGI Genomics*
22 *Co.*, 19-cv-03770 (N.D. Cal.) (Judge William H. Orrick). At least BGI Americas, MGI Ltd., MGI
23 Americas, and CGI have not challenged this Court's jurisdiction or venue in that suit.

24 22. BGI Ltd. manages the infringing activity in California by controlling the Defendants
25 and, directly and indirectly, funding, developing, marketing, promoting and operating the infringing
26 sequencing systems:

a. BGI Ltd.’s website represents that it has multiple locations in California, including San Francisco, San Jose, Los Angeles, and San Diego. Ex. 50 (available at: <http://en.genomics.cn/en-global.html> (last accessed: February 25, 2020) (*red box showing U.S. locations in San Francisco, San Jose, Los Angeles, and San Diego added*)). It touts that it has both “representative offices” and “laboratories” in California.



b. BGI Ltd. promotes the infringing DNBSEQ products by directing its marketing efforts to California, including its press releases and other communications.

c. BGI Ltd.’s executives travel to California to manage and promote the infringing products. This includes BGI Ltd.’s presence at industry and trade shows, including SynBioBeta SF 2017 in San Francisco, California (Oct. 3-5, 2017); J.P. Morgan Healthcare Conference in San Francisco, California (Jan. 8-11, 2018); Plant & Animal Genome Conference (“PAG”) XXVI in San Diego, California (Jan. 13-17, 2018); American Society of Human Genetics 2018 in San Diego, California (Oct. 16-20, 2018); and PAG XXVII in San Diego, California (Jan. 12-16, 2019). Exs. 51, 7-11. For example, BGI Ltd.’s CEO, Ye Yin, traveled to the Northern District of California to promote the accused products at the J.P. Morgan Conference in January

1 2018. Ex. 7. Indeed, BGI Ltd.’s executives often travel to this District in connection
2 with the infringing activity.

3 d. In March 2019, BGI Ltd. entered into a \$50 million partnership with Natera, Inc.
4 (“Natera”), a company headquartered in San Carlos, CA, which permits Natera to
5 use the infringing DNA sequencing products for commercial purposes. Ex. 11.

6 23. Further, the following is an exemplary list of various employees associated with
7 “BGI Group”—an amorphous label used by BGI—that are involved with development and/or
8 marketing of the infringing technology:

9 a. Group VP and CEO of BGI Americas Region at BGI Group, Yongwei Zhang, resides
10 in Sunnyvale, CA. Ex. 12.

11 b. Director of Product Management, Ke Zhan, identifies BGI Ltd. as being located in
12 San Jose, California and that he works for this entity. Ex. 13.

13 c. BGI Group–Business Development Associate, Yuhan Zhang, resides in the San
14 Francisco Bay Area and worked in San Jose, California. Ex. 14. In this role, Ms.
15 Zhang “[i]dentified new business opportunities, reached out to potential partners and
16 managed existed relationship through email campaign, framed contracts and MoU.”
17 Further, she describes her responsibilities as having, “[o]rganized and supported
18 marketing events in North and South America to promote the brand and publicity.”
19 *Id.*

20 24. At a minimum this Court has jurisdiction over BGI Ltd. because Plaintiffs’ claims
21 arise under federal law, BGI Ltd. is not subject to general jurisdiction in any state’s courts of general
22 jurisdiction, and this exercise of jurisdiction comports with due process. With regard to due process,
23 BGI Ltd. has continuous and systematic contacts with California that gives rise to infringement,
24 including targeting the California market for its products as a whole, through at least advertising,
25 threatening to sell, providing service and support, and/or disseminating literature on Defendants’
26 sequencing products on its website. Also, its contacts with this forum in connection with the
27 infringing activity are sufficient to support the exercise of specific jurisdiction.
28

1 25. Defendant BGI Americas is present in California and commits acts of infringement
2 in California:

3 a. BGI Americas is present in this District with its “West Coast Innovation Center” in
4 San Jose, California where it conducts research. Ex. 15. It announced the expansion
5 of that facility at the ASMS Conference in San Jose, California in May 2019. Ex. 16.
6 This is evidence that BGI Americas is physically located in this District.

7 b. BGI Americas is involved in the research and development of BGI’s NGS
8 technologies at its San Jose, California facility. *Id.*

9 c. Several senior-level BGI Americas employees involved with product development,
10 sales and marketing of the infringing technology state they live in this District. For
11 example, BGI Americas’ Group VP, CEO of the Americas Region, Yongwei Zhang,
12 BGI Americas’ Director of Marketing, Johan Christiaanse, and BGI America’s
13 Regional Sales Manager, Rosanna Schroeder, reside in the San Francisco Bay Area.
14 Exs. 12, 17-18. This is evidence that BGI Americas is physically located in this
15 District and involved with the infringing technology in California.

16 d. On information and belief, BGI Americas offers a variety of biotechnology services
17 to customers in North and South America including services related to Defendants’
18 sequencing products, including arranging for sequencing services for North and
19 South American customers to be performed in laboratories outside the United States.
20 Ex. 38 at 2-3.

21 26. At a minimum this Court has jurisdiction over BGI Americas because Plaintiffs’
22 claims arise under federal law and this exercise of jurisdiction comports with due process. With
23 regard to due process, BGI Americas has continuous and systematic contacts with California,
24 including targeting the California market for its products, through at least advertising, threatening
25 to sell, providing service and support, and/or disseminating literature on Defendants’ sequencing
26 products on its website. Also, its contacts with this forum in connection with the infringing activity
27 are sufficient to support the exercise of specific jurisdiction.
28

1 27. Defendant MGI Ltd. is present in California and commits acts of infringement in
 2 California:

- 3 a. MGI Ltd. recently announced plans to make commercially available infringing
- 4 sequencing instruments and CoolMPS™ reagents in the United States. Ex. 39.
- 5 b. A map on MGI Ltd.’s website shows that it has a Silicon Valley, California facility
- 6 that is a “State-of-the-art technology research and development base.” Ex. 19
- 7 (available at: <https://en.mgitech.cn/page/gsjj.html> (last accessed: February 26, 2020)
- 8 (*red box showing U.S. location in Silicon Valley, California added*))



- 20 c. MGI Ltd. and MGI Americas claim to be the “leading manufacturer and developer
- 21 of BGI’s proprietary NGS instrumentation.” Ex. 20. NGS stands for “next generation
- 22 sequencing.” MGI states on its website: “As the leading manufacturer and developer
- 23 of BGI’s proprietary NGS instrumentation, the global MGI organization provides
- 24 comprehensive products and services for fully-automated, real-time, whole picture
- 25 and lifelong genetic analysis in life science research.” *Id.* This is evidence that MGI
- 26 Ltd. and MGI Americas are responsible for infringement of the ’973, ’444, and ’025
- 27 Patents.

- 1 d. MGI Ltd. through its President, Duncan Yu, appeared at the J.P. Morgan Healthcare
2 Conference in San Francisco, California on January 9, 2019 to promote its infringing
3 sequencers by announcing its price and promoting its intent to sell them in the United
4 States. Ex. 21. This is evidence that MGI Ltd. is responsible for the infringement of
5 the '973 Patent in this District.
- 6 e. On March 4, 2019 in San Jose, California, MGI Ltd. announced claimed
7 improvements to its sequencing technology and its plans to enter the United States
8 market. Exs. 22-23.
- 9 f. MGI Ltd. is involved in the research, development and marketing of the infringing
10 products. Exs. 20-23.
- 11 g. Senior-level MGI Ltd. employees involved with product development and marketing
12 of the infringing products are located in this District. For example, MGI Ltd.'s Chief
13 Science Officer, Rade Drmanac, Director of Business Development, Jia Sophie Liu,
14 and VP of Engineering, Paul Lundquist, state they reside in the San Francisco Bay
15 Area. Exs. 24-27.

16 28. At a minimum this Court has jurisdiction over MGI Ltd. because Plaintiffs' claims
17 arise under federal law, MGI Ltd. is not subject to general jurisdiction in any state's courts of general
18 jurisdiction, and this exercise of jurisdiction comports with due process. With regard to due process,
19 MGI Ltd. has continuous and systematic contacts with California, including targeting the California
20 market for its products as a whole, through at least advertising, threatening to sell, providing service
21 and support, and/or disseminating literature on Defendants' sequencing products on its website.
22 Also, its contacts with this forum in connection with the infringing activity are sufficient to support
23 the exercise of specific jurisdiction.

24 29. Defendant MGI Americas is present in California and commits acts of infringement
25 in California:
26
27
28

- 1 a. Counsel for Defendants have provided notice to Illumina that MGI Americas intends
2 to make infringing sequencing instruments and CoolMPS™ reagents commercially
3 available in the United States. Ex. 40.
- 4 b. Counsel for Defendants have also provided notice to Illumina that MGI Americas
5 intends to make infringing sequencing instruments and standardMPS reagents
6 available to key opinion leaders on a no cost trial basis in the United States. Ex. 40.
- 7 c. MGI Ltd. and MGI Americas claim to be the “leading manufacturer and developer
8 of BGI’s proprietary NGS instrumentation.” Ex. 20. NGS stands for “next generation
9 sequencing.” MGI states on its website: “As the leading manufacturer and developer
10 of BGI’s proprietary NGS instrumentation, the global MGI organization provides
11 comprehensive products and services for fully-automated, real-time, whole picture
12 and lifelong genetic analysis in life science research.” *Id.* This is evidence that MGI
13 Americas and MGI Ltd. are responsible for the infringement of the ’973, ’444, and
14 ’025.
- 15 d. MGI Americas is involved in the research, development and marketing of the
16 infringing products. *Id.*
- 17 e. MGI Americas’ field service engineer, Abigail Frank, states she “services NGS
18 instruments and lab automated workstations at Complete Genomics in San Jose, as
19 well as external customers throughout North and South America.” Ex. 28.
- 20 f. On information and belief, MGI Americas is responsible for sales and marketing of
21 sequencing instruments and related materials in North and South America. Ex. 38 at
22 3.

23 30. At a minimum this Court has jurisdiction over MGI Americas because Plaintiffs’
24 claims arise under federal law and this exercise of jurisdiction comports with due process. With
25 regard to due process, MGI Americas has continuous and systematic contacts with California,
26 including targeting the United States as a market for its products, through at least advertising,
27 threatening to sell, providing service and support, and/or disseminating literature on Defendants’
28

1 sequencing products on its website. Also, its contacts with this forum in connection with the
2 infringing activity are sufficient to support the exercise of specific jurisdiction.

3 31. Defendant CGI is present in California and commits acts of infringement in
4 California:

5 a. CGI is involved in the development, marketing and operation of the infringing
6 products in its San Jose, California facility. Ex. 29.

7 b. Several senior-level CGI employees involved with product development and
8 marketing state they live in this District. For example, CGI's Vice President of
9 Marketing, Suzanne Yakota, CGI's Director, Shifeng Li, and CGI's Chief Scientific
10 Officer, Rade Drmananc, state they reside in the San Francisco Bay Area. Exs. 24,
11 30-31.

12 c. CGI Fluidics Systems Engineer, Wei Wang, states she "[e]nsures the proper
13 installation qualification and operation qualification (IQ/OQ), and instrument
14 performance verification (IPV) of NGS systems, such as the BGISEQ-500 in an ISO
15 17025 accredited and customer-oriented environment." Ex. 32. Ms. Wang elaborates
16 she is "[r]esponsible for creating and compiling comprehensive nprocedural
17 documentation for NGS systems, for processes including IQ/OQ, IPV,
18 troubleshooting, repairs, replacement parts, calibrations, and maintenance." *Id.*

19 d. CGI further recently began seeking to hire at least a "Sr. Regional Sales
20 Manager/Director" and "Strategic Accounts Specialist/Manager/Director" based in
21 San Jose, California. Exs. 33-34. According to the job postings, the positions, *inter*
22 *alia*, would: (i) "provide a one touch-point for the global customers with the full MGI
23 product portfolio"; (ii) "[n]avigate orders through the customer purchasing process";
24 and (iii) be "responsible for leading regional sale activities for MGI's NGS
25 Sequencing instruments, reagents, software or solutions in the designated region."
26 *Id.*

1 32. At a minimum this Court has jurisdiction over CGI because Plaintiffs' claims arise
2 under federal law and this exercise of jurisdiction comports with due process. With regard to due
3 process, CGI has continuous and systematic contacts with California, including targeting the
4 California market for its products, through at least advertising, threatening to sell, providing service
5 and support, and/or disseminating literature on Defendants' sequencing products on its website.

6 33. Alternatively, this Court has general and/or specific jurisdiction over all Defendants
7 because they are alter-egos of one another and/or agents of each other because they have common
8 directors, officers, and executives and do not respect corporate formalities. It would be unjust to
9 treat them each as separate legal entities as they do not treat each other as such. This establishes
10 personal jurisdiction and mutual liability because the activity of each Defendant is imputed to the
11 other Defendants.

12 **INTRA-DISTRICT ASSIGNMENT**

13 34. Pursuant to Civil Local Rules 3-5(b) and 3-2(c), because this action is an intellectual
14 property action, it is properly assigned to any of the divisions in this District. However, because
15 Judge William H. Orrick is currently presiding over another case in which Illumina is asserting
16 related patents (*Illumina, Inc. v. BGI Genomics Co.*, 19-cv-03770 (N.D. Cal.) (Judge William H.
17 Orrick)), this case is properly assigned to his Court in the San Francisco Division.

18 **BACKGROUND**

19 **The DNBSEQ Systems Infringe the '973, '444 and '025 Patents**

20 35. On August 10, 2010, the United States Patent and Trademark Office duly and legally
21 issued the '973 Patent, entitled "Modified Nucleotides." The named inventors of the '973 Patent are
22 John Milton, Xioalin Wu, Mark Smith, Joseph Brennan, Colin Barnes, Xioahai Liu, and Silke
23 Ruediger. By operation of law and as a result of written assignment agreements, Illumina,
24 specifically plaintiff Illumina Cambridge Ltd., obtained the entire right, title, and interest to and in
25 the '973 Patent. The application leading to the '973 Patent was first published on December 31,
26 2009. The '973 Patent is attached hereto. Ex. 1.

27
28

1 36. On June 2, 2009, the United States Patent and Trademark Office duly and legally
2 issued the '444 Patent, entitled "Modified Nucleotides." The named inventors of the '444 Patent are
3 John Milton, Xioalin Wu, Mark Smith, Joseph Brennan, Colin Barnes, Xioahai Liu, and Silke
4 Ruediger. By operation of law and as a result of written assignment agreements, Illumina,
5 specifically plaintiff Illumina Cambridge Ltd., obtained the entire right, title, and interest to and in
6 the '444 Patent. The application leading to the '444 Patent was first published on July 19, 2007.
7 The '444 Patent is attached hereto. Ex. 2.

8 37. On November 19, 2019, the United States Patent and Trademark Office duly and
9 legally issued the '025 Patent, entitled "Labelled Nucleotides." The named inventors of the '025
10 Patent are Shankar Balasubramanian, Colin Lloyd Barnes, Xiaohai Liu, John Milton, Xiaolin Wu
11 and Harold Swerdlow. By operation of law and as a result of written assignment agreements,
12 Illumina, specifically plaintiff Illumina Cambridge Ltd., obtained the entire right, title, and interest
13 to and in the '025 Patent. The application leading to the '025 Patent was first published on January,
14 2017. The '025 Patent is attached hereto. Ex. 3.

15 38. The '973 and '444 Patents both claim priority to at least U.S. Patent Application No.
16 10/227,131 ("131 App"). '973 Patent at 1:6-15. Similarly, the '025 Patent claims priority to at
17 least the '131 App. '025 Patent at 1:6-24. Likewise, the '537 Patent, which CGI has previously
18 filed unsuccessful validity challenges against in the PTAB, is a divisional of the '131 App. Ex. 41
19 at 1:5-9. Defendants and Illumina have and continue to litigate numerous patents related to those
20 asserted here, both in the United States and in other jurisdictions. *See Illumina, Inc. v. BGI*
21 *Genomics Co.*, 19-cv-03770-WHO (N.D. Cal.) (Judge William H. Orrick) (discussed above). For
22 example, on March 29, 2019, Illumina sued another BGI subsidiary, Lativa MGI Tech, in German
23 Court, alleging infringement of the related European Patent EP1530578B1, which contains claims
24 that are substantially similar to those in the '444 patent. *Illumina v. Latvia MGI Tech SIA*, LG
25 Düsseldorf. On information and belief, Defendants monitor Illumina's patents, and are or should be
26 aware of the '973, '444, and '025 Patents at least by the date they were first published. At the very
27 least, Defendants are aware of Illumina's patented sequencing technology and its public
28

1 enforcement against infringers, including Defendants. Nevertheless, Defendants have copied that
2 technology.

3 39. Alternatively, Defendants were or should have been aware of the '973, '444, and
4 '025 Patents at least by October 5, 2017, when CGI filed IPR2017-02172 against the related '537
5 Patent.

6 40. Alternatively, on information and belief, Defendants were or should have been aware
7 of the '973, '444, and '025 Patents at least by December 28, 2018, when they directed and controlled
8 an opposition filed against the related European Patent No. EP3002289B1.

9 41. Alternatively, Defendants were or should have been aware of the '973, '444, and
10 '025 Patents at least by July 1, 2019, when they were served with the complaint alleging
11 infringement of the related '537 Patent, as discussed above.

12 42. In or around October 2015, BGI Ltd. launched the BGISEQ-500, a desktop
13 sequencing instrument. According to BGI Ltd., the BGISEQ-500 was “developed by it’s [sic]
14 Complete Genomics Subsidiary in Silicon Valley, California.” Ex. 7 at 2. In or around November
15 2016, BGI Ltd. launched the BGISEQ-50, a smaller version of the BGISEQ-500. In or around
16 October 2017, BGI launched two genetic sequencing instruments, the MGISEQ-200 and the
17 MGISEQ-2000, now rebranded as the DNBSEQ-G50 and the DNBSEQ-G400, respectively, as
18 upgrades to the BGISEQ-50 and BGISEQ-500. Ex. 42. In or around October 2018, MGI announced
19 a new model called the MGISEQ-T7, now rebranded as the DNBSEQ-T7. Ex. 42. The former
20 BGISEQ and MGISEQ devices, now known as DNBSEQ devices, are identified in MGI Ltd.’s
21 product brochures, on the “Sequencer” section of MGI Ltd.’s website, and the product user manuals,
22 which are all publically accessible on MGI Ltd.’s website. A copy of the previous MGISEQ-2000
23 product brochure, relevant pages of the website itself, and the user manual are attached. Exs. 35
24 (brochure), 36 (website), 37 (user manual). Current versions for the DNBSEQ-G400 of the same
25 are also attached. Exs. 43 (brochure), 44 (website), 45 (user manual).

26 43. Throughout this Complaint, the terms “DNBSEQ systems” or “DNBSEQ
27 sequencers” are used to refer to all the Defendants sequencers, both past and present, including
28

1 without limitation the MGISEQ-T7, MGISEQ-2000, MGISEQ-200, BGISEQ-500, BGISEQ-50,
2 DNBSEQ-T7, DNBSEQ-G400, DNBSEQ-G50, and DNBSEQ-G400 FAST sequencers.
3 Throughout this Complaint, the term “DNBSEQ Sample Preparation Systems” is used to refer to
4 all the Defendants automated sample preparation systems, both past and present, including without
5 limitation the MGISP-960, MGISP-100, MGIFLP-SL200, and MGIFLP-L200. On information and
6 belief, the MGISP-960 and MGISP-100 are both automated systems that prepare the DNA
7 Nanoballs (DNBs) for use on DNBSEQ sequencers. Exs. 46 and 47. On information and belief, the
8 MGIFLP-SL200 and MGIFLP-L200 are modular systems that include as at least one module a
9 DNBSEQ sequencer, and it should be understood that all allegations in this Complaint as to the
10 DNBSEQ sequencers apply to MGIFLP-SL200 and MGIFLP-L200 systems which contain those
11 DNBSEQ sequencers. Throughout this Complaint, the term “DNBSEQ reagent kits” is used to refer
12 to all the Defendants reagents and reagent kits which contain nucleotides with a 3'-O-azidomethyl
13 blocking group, both past and present, including without limitation both the “standardMPS” and
14 “CoolMPSTTM” sequencing reagents and reagent kits, and any additional reagents or reagent kits that
15 contain nucleotides with a 3'-O-azidomethyl blocking group. *See e.g.* Ex. 48 at 1 (listing, without
16 limitation, available CoolMPSTTM kits for DNBSEQ-G400RS) and Ex. 49 at 1 (listing, without
17 limitation, available standardMPS kits for DNBSEQ-G400RS). On information and belief, the
18 DNBSEQ reagent kits contain infringing nucleotides for use in the infringing sequencing method.

19 44. The DNBSEQ systems, DNBSEQ Sample Preparation Systems, DNBSEQ reagent
20 kits, and any related products and services are collectively referred to throughout this Complaint as
21 “DNBSEQ products.” For the avoidance of doubt, on information and belief, in this Complaint
22 Illumina accuses as infringing the '973, '444, and '025 Patents all Defendants' sequencers, sample
23 preparation systems, reagent kits, and any related products and services, past, present, and future,
24 which use, prepare samples for use with, contain, or practice methods using nucleotides with a 3'-
25 O-azidomethyl blocking group.

26 45. MGI, Ltd.'s Chief Scientific Officer, Rade Drmanac, stated that “the current
27 sequencing chemistry relies on stepwise sequencing-by-synthesis (SBS) where 3'-blocked
28

1 nucleotides are labeled with cleavable fluorescent dyes, which leave behind a molecular ‘scar’ after
2 they are removed. This chemistry is similar to that used by Illumina and others.” Ex. 22 at 3. He
3 goes on to explain that “MGI has now developed a chemistry that involves unlabeled 3'-blocked
4 nucleotides and uses four types of fluorescently labeled monoclonal antibodies for detection that
5 are each specific for one base.” Ex. 22 at 3. Although Defendants assert this new technology does
6 not use labeled nucleotides, on information and belief, it uses “unlabeled 3'-blocked nucleotides,”
7 which infringe the '973 and '444 Patents. Further, “[t]he fluorescent dyes to label the antibodies
8 are similar to those currently used to label the nucleotides, so no changes to the hardware of the
9 instruments are needed.” Ex. 22 at 4; *see also* Ex. 22 at 3 (“[T]he company's new CoolNGS [now
10 known as CoolMPS™] sequencing chemistry, which will be compatible with the MGISEQ-200
11 [now known as DNBSEQ-G50], MGISEQ-2000 [now known as DNBSEQ-G400], and MGISEQ-
12 T7 [now known as DNBSEQ-T7]...”).

13 46. On January 24, 2020, Counsel for Defendants provided notice to Illumina that “MGI
14 Americas intends to make its sequencers and reagent kits commercially available in the United
15 States after 60 days. The sequencing reagent kits that will be commercially available will not include
16 the labeled nucleotides that are presently accused [in *Illumina, Inc. v. BGI Genomics Co.*, 19-cv-
17 03770 (N.D. Cal.) (Judge William H. Orrick)].” Ex. 40.

18 47. Also on January 24, 2020, in the same communication, Counsel for Defendants
19 provided notice to Illumina that “MGI Americas may begin placing sequencers with [key opinion
20 leaders] on a no-cost trial basis and may provide sequencing reagent kits to [key opinion leaders]
21 on a no-cost basis (for their use with the sequencers or for sequencing performed by MGI Americas),
22 where such kits may include, but are not limited to, those with the labeled nucleotides that are
23 presently accused [in *Illumina, Inc. v. BGI Genomics Co.*, 19-cv-03770 (N.D. Cal.) (Judge William
24 H. Orrick)].” Ex. 40.

25 48. In or around February 21, 2020, MGI, Ltd. announced “commercial availability of
26 its sequencing instruments and reagent kits in the United States” based on MGI's “CoolMPS™
27 sequencing chemistry, starting in April of this year.” Ex. 39. MGI explained it “is planning to roll
28

1 out its G series DNBSEQ sequencers first in Q2 and then its T series DNBSEQ sequencers in Q3,
2 and it will take steps to launch” the “CoolMPS sequencing kits along with its family of library
3 preparation kits.” *Id.* The article also cites to a preprint publication “(bioRxiv, doi:
4 <https://doi.org/10.1101/2020.02.19.953307>)” in discussing the technical parameters of the
5 CoolMPS™ system. *Id.*

6 49. In or around February 20, 2020, Defendants published a preprint research article
7 entitled *CoolMPS™: Advanced massively parallel sequencing using antibodies specific to each*
8 *natural nucleobase* on the preprint server bioRxiv. Ex. 52. That article is cited in Ex. 39 announcing
9 the launch of the CoolMPS™ chemistry. On information and belief, that publication contains the
10 technical details and development of the CoolMPS™ chemistry that Defendants have provided
11 notice and announced publicly they intend to make commercially available in the United States.

12 50. To demonstrate how Defendants infringe at least claim 13 of the '973 Patent with
13 their DNBSEQ products, attached is a preliminary and exemplary claim chart. Ex. 4. This chart is
14 not intended to limit Plaintiffs' right to modify this chart or any other claim chart or allege that other
15 activities of Defendants infringe the identified claims or any other claims of the '973 Patent or any
16 other patents. This chart is hereby incorporated by reference in its entirety. Each claim element that
17 is mapped to DNBSEQ products and related reagents shall be considered an allegation within the
18 meaning of the Federal Rules of Civil Procedure and therefore a response to each allegation is
19 required.

20 51. Defendants have and continue to directly infringe pursuant to 35 U.S.C. § 271(a),
21 literally or under the doctrine of equivalents, at least claim 13 of the '973 Patent by using the
22 DNBSEQ sequencers and related reagents within the United States. Defendants have used the
23 DNBSEQ sequencers in the United States as part of their preparations to enter North American
24 markets, specifically in connection with research, development, testing, and/or promotional
25 activities related to the products. Defendants also use the DNBSEQ products and related reagents
26 in the United States whenever they install these types of sequencers at a United States facility. This
27 includes the BGI facilities in San Jose, California.

28

1 52. Defendants are inducing infringement as prohibited by 35 U.S.C. § 271(b). In
2 addition to inducing infringement by third parties, each Defendant is inducing infringement of the
3 other Defendants. The operation of Defendants' DNBSEQ products directly infringe at least claim
4 13 of the '973 Patent. Defendants actively induce infringement by promoting the infringing
5 products, encouraging their infringing use and threatening to sell them throughout the United States.
6 Defendants have provided Illumina notice and have announced publicly plans to sell infringing
7 products in the United States. Additionally, Defendants have recently began actively seeking to hire
8 sales personnel, including at least a Senior Regional Sales Manager/Director and Strategic Accounts
9 Specialist/Manger/Director, in the United States to promote and sell the infringing products
10 domestically. As a further example, Defendants distribute DNBSEQ promotional and marketing
11 materials and the DNBSEQ User Manuals in websites directed to the United States market.

12 53. Defendants are contributing to infringement pursuant to 35 U.S.C. § 271(c). Users
13 of the DNBSEQ products directly infringe at least claim 13 of the '973 Patent when they use these
14 systems. Defendants contribute to infringement by supplying in the United States products designed
15 for use in practicing claim 13 of the '973 Patent, including for example the DNBSEQ systems
16 themselves, DNBSEQ reagent kits, and DNBSEQ Sample Preparation Systems and by announcing
17 plans to sell those systems throughout the United States.

18 54. To demonstrate how Defendants infringe at least claim 3 of the '444 Patent with their
19 DNBSEQ products, attached is a preliminary and exemplary claim chart. Ex. 5. This chart is not
20 intended to limit Plaintiffs' right to modify this chart or any other claim chart or allege that other
21 activities of Defendants infringe the identified claims or any other claims of the '444 Patent or any
22 other patents. This chart is hereby incorporated by reference in its entirety. Each claim element that
23 is mapped to DNBSEQ products and related reagents shall be considered an allegation within the
24 meaning of the Federal Rules of Civil Procedure and therefore a response to each allegation is
25 required.

26 55. Defendants have and continue to directly infringe pursuant to 35 U.S.C. § 271(a),
27 literally or under the doctrine of equivalents, at least claim 3 of the '444 Patent by using the
28

1 DNBSEQ sequencers and related reagents within the United States. Defendants have used the
2 DNBSEQ sequencers in the United States as part of their preparations to enter North American
3 markets, specifically in connection with research, development, testing, and/or promotional
4 activities related to the products. Defendants also use the DNBSEQ products and related reagents
5 in the United States whenever they install these types of sequencers at a United States facility. This
6 includes the BGI facilities in San Jose, California.

7 56. Defendants are inducing infringement as prohibited by 35 U.S.C. § 271(b). In
8 addition to inducing infringement by third parties, each Defendant is inducing infringement of the
9 other Defendants. The operation of Defendants' DNBSEQ products directly infringe at least claim
10 3 of the '444 Patent. Defendants actively induce infringement by promoting the infringing products,
11 encouraging their infringing use and threatening to sell them throughout the United States.
12 Defendants have provided Illumina notice and have announced publicly plans to sell infringing
13 products in the United States. Additionally, Defendants have recently began actively seeking to hire
14 sales personnel, including at least a Senior Regional Sales Manager/Director and Strategic Accounts
15 Specialist/Manager/Director, in the United States to promote and sell the infringing products
16 domestically. As a further example, Defendants distribute DNBSEQ promotional and marketing
17 materials and the DNBSEQ User Manuals in websites directed to the United States market.

18 57. Defendants are contributing to infringement pursuant to 35 U.S.C. § 271(c). Users
19 of the DNBSEQ products directly infringe at least claim 3 of the '444 Patent when they use these
20 systems. Defendants contribute to infringement by supplying in the United States products designed
21 for use in using claim 3 of the '444 Patent, including for example the DNBSEQ systems themselves,
22 DNBSEQ reagent kits, and DNBSEQ Sample Preparation Systems and by announcing plans to sell
23 those systems throughout the United States.

24 58. On information and belief, Defendants have supplied in or from the United States the
25 DNBSEQ products and/or components thereof, which comprise all or a substantial portion of the
26 components of the claims of the '444 Patent, where such components are uncombined in whole or
27 in part, in such manner as to actively induce the combination of such components outside of the
28

1 United States in a manner that would infringe the patent if such combination occurred within the
2 United States, in violation of 35 USC § 271(f)(1). Alternatively, on information and belief,
3 Defendants have supplied in or from the United States components of the DNBSEQ products, which
4 products are especially made or especially adapted for use in practicing the claims of the '444 Patent
5 and are not staple articles or commodities of commerce suitable for substantial noninfringing use,
6 knowing that such component is so made or adapted and intending that such component will be
7 combined outside of the United States in a manner that would infringe the patent if such combination
8 occurred within the United States, in violation of 35 USC § 271(f)(2).

9 59. To demonstrate how Defendants infringe at least claim 1-8 of the '025 Patent with
10 their DNBSEQ products, attached is a preliminary and exemplary claim chart. Ex. 6. This chart is
11 not intended to limit Plaintiffs' right to modify this chart or any other claim chart or allege that other
12 activities of Defendants infringe the identified claims or any other claims of the '025 Patent or any
13 other patents. This chart is hereby incorporated by reference in its entirety. Each claim element that
14 is mapped to DNBSEQ products and related reagents shall be considered an allegation within the
15 meaning of the Federal Rules of Civil Procedure and therefore a response to each allegation is
16 required.

17 60. Defendants have and continue to directly infringe pursuant to 35 U.S.C. § 271(a),
18 literally or under the doctrine of equivalents, at least claim 1 of the '025 Patent by using the
19 DNBSEQ sequencers and related reagents within the United States. Defendants have used the
20 DNBSEQ sequencers in the United States as part of their preparations to enter North American
21 markets, specifically in connection with research, development, testing, and/or promotional
22 activities related to the products. Defendants also use the DNBSEQ products and related reagents
23 in the United States whenever they install these types of sequencers at a United States facility. This
24 includes the BGI facilities in San Jose, California.

25 61. Defendants are inducing infringement as prohibited by 35 U.S.C. § 271(b). In
26 addition to inducing infringement by third parties, each Defendant is inducing infringement of the
27 other Defendants. The operation of Defendants' DNBSEQ products directly infringe at least claim
28

1 1 of the '025 Patent. Defendants actively induce infringement by promoting the infringing products,
2 encouraging their infringing use and threatening to sell them throughout the United States. For
3 example, Defendants have recently began actively seeking to hire sales personnel, including at least
4 a Senior Regional Sales Manager/Director and Strategic Accounts Specialist/Manager/Director, in
5 the United States to promote and sell the infringing products domestically. As a further example,
6 Defendants distribute DNBSEQ promotional and marketing materials and the DNBSEQ User
7 Manuals in websites directed to the United States market.

8 62. Defendants are contributing to infringement pursuant to 35 U.S.C. § 271(c). Users
9 of the DNBSEQ products directly infringe at least claim 1 of the '025 Patent when they use these
10 systems. Defendants contribute to infringement by supplying in the United States products designed
11 for use in practicing claim 1 of the '025 Patent, including for example the DNBSEQ systems
12 themselves, DNBSEQ reagent kits, and DNBSEQ Sample Preparation Systems and by threatening
13 to sell those systems throughout the United States.

14 63. On information and belief, Defendants have supplied in or from the United States the
15 DNBSEQ products and/or components thereof, which comprise all or a substantial portion of the
16 components of the claims of the '025 Patent, where such components are uncombined in whole or
17 in part, in such manner as to actively induce the combination of such components outside of the
18 United States in a manner that would infringe the patent if such combination occurred within the
19 United States, in violation of 35 USC § 271(f)(1). Alternatively, on information and belief,
20 Defendants have supplied in or from the United States components of the DNBSEQ products, which
21 products are especially made or especially adapted for use in practicing the claims of the '025 Patent
22 and are not staple articles or commodities of commerce suitable for substantial noninfringing use,
23 knowing that such component is so made or adapted and intending that such component will be
24 combined outside of the United States in a manner that would infringe the patent if such combination
25 occurred within the United States, in violation of 35 USC § 271(f)(2).

COUNT I

Infringement of U.S. Patent No. 7,771,973 (the “’973 Patent”)

64. Illumina re-alleges and incorporates by this reference the allegations contained throughout this Complaint into each allegation of infringement and request for remedies.

65. Defendants and users of Defendants’ infringing products have and continue to directly infringe, literally or by equivalence, claim 13 of the ’973 Patent by practicing one or more claims of the ’973 Patent by using the DNBSEQ products and other infringing products. The following allegations identify the acts of direct, induced and contributory infringement by each named defendant as supplemented by the allegations throughout this Complaint.

BGI Ltd.’s Infringement of the ’973 Patent

66. Illumina’s patented sequencing technology is well-known and has been enforced very publicly against infringers. Together with the other Defendants, BGI Ltd. has copied that technology. On information and belief, BGI Ltd. has had knowledge of the ’973 Patent at least since December 31, 2009, when the patent application was first published. Alternatively, BGI Ltd. was or should have been aware of the ’973 Patent at least by October 5, 2017, when CGI filed an IPR against the related ’537 Patent.

67. BGI Ltd. has failed to resist the temptation of importing its infringing technology into the large United States market and has done so in the face of the ’973 Patent. BGI Ltd. knows that its activities in connection with the DNBSEQ products will infringe the ’973 Patent.

Direct Infringement By BGI Ltd.

68. BGI Ltd. has directly infringed and continues to directly infringe the ’973 Patent pursuant to 35 U.S.C. § 271(a), literally or under the doctrine of equivalents, by importing the DNBSEQ products into the United States and using DNBSEQ products within the United States, among other infringing acts. Specifically, BGI Ltd. has used DNBSEQ products in the United States at its San Jose, California facility.

69. Alternatively, BGI Ltd. directly infringes because it directs and controls other BGI entities with respect to their use of DNBSEQ products in the United States. Upon information and

1 belief, BGI Ltd. has directed, either directly or indirectly, its subsidiaries and affiliates, including
2 the other Defendants, to develop, install, and use the MGISEQ-2000 and BGISEQ-500 in its San
3 Jose, California facility. For example, BGI Ltd.’s own press release asserts that “the BGISEQ-500
4 NGS platform [was] developed by it’s [sic] Complete Genomics Subsidiary in Silicon Valley,
5 California.” Ex. 7 at 3. BGI Ltd.’s direction and control of this and the other infringing conduct of
6 its subsidiaries set forth herein can be reasonably inferred from BGI’s public documents and
7 activity.

8 70. For example, BGI Ltd.’s website represents that it has multiple locations in
9 California, including San Francisco, San Jose, Los Angeles, and San Diego. Ex. 50 (available at:
10 <http://en.genomics.cn/en-global.html> (last accessed: February 25, 2020). It touts that it has both
11 “representative offices” and “laboratories” in California, thus suggesting that it controls the
12 activities in those offices notwithstanding that they may be formally associated with another BGI
13 entity. In addition, CGI identified BGI Ltd. as a real-party-in-interest in CGI’s IPR directed to the
14 ’537 Patent, thus indicating that BGI Ltd. ultimately directs and controls the BGI Group’s activity
15 that infringes the ’973 Patent.

16 71. Further, BGI Ltd.’s executives travel to California to manage and promote the
17 infringing products. This includes BGI Ltd.’s presence at industry and trade shows, including
18 SynBioBeta SF 2017 in San Francisco, California (Oct. 3-5, 2017); J.P. Morgan Healthcare
19 Conference in San Francisco, California (Jan. 8-11, 2018); Plant & Animal Genome Conference
20 (“PAG”) XXVI in San Diego, California (Jan. 13-17, 2018); American Society of Human Genetics
21 2018 in San Diego, California (Oct. 16-20, 2018); and PAG XXVII in San Diego, California (Jan.
22 12-16, 2019). Exs. 51, 7-10. For example, BGI Ltd.’s CEO, Ye Yin, traveled to the Northern District
23 of California to promote the accused products at the J.P. Morgan Conference in January 2018. Ex.
24 7. Indeed, BGI Ltd.’s executives often travel to this District in order to manage and direct the
25 infringing activity.

26 **Induced Infringement by BGI Ltd.**

27

28

1 72. BGI Ltd. is liable for the induced infringement of the '973 Patent pursuant to 35
2 U.S.C. § 271(b). Specifically, BGI Ltd. has and is actively, knowingly, and intentionally inducing
3 infringement of at least claim 13 of the '973 Patent through a range of activities related to the
4 DNBSEQ products. BGI Ltd. is responsible for substantial marketing of BGI products, including
5 the DNBSEQ, and is threatening to encourage and support the sale of those products in the United
6 States.

7 73. BGI Ltd. has induced infringement by controlling, alone or in concert with other
8 Defendants, the design, manufacture, and supply of the DNBSEQ systems with the knowledge and
9 specific intent that users, including other Defendants, will use the DNBSEQ systems to infringe by
10 performing the patented methods of the '973 Patent. For example, BGI has controlled, alone or in
11 concert with the other Defendants, the design, manufacture, and supply of the DNBSEQ systems
12 such that the DNBSEQ systems have pre-programmed software protocols that control operation of
13 the DNBSEQ systems so that users are given the sole option of operating the DNBSEQ systems in
14 a manner that infringes.

15 74. BGI Ltd. has induced infringement by controlling, alone or in concert with the other
16 Defendants, the design, manufacture, and supply of materials or apparatuses to be used with the
17 DNBSEQ systems, including for example the MGISP-960, with the knowledge and specific intent
18 that users, including the other Defendants, will use these products to infringe by performing the
19 patented methods of the '973 Patent.

20 75. BGI Ltd. has induced infringement by controlling, alone or in concert with the other
21 Defendants, the design, manufacture, and supply of various reagent kits (with both standardMPS
22 and CoolMPS™ chemistry), including for example the CoolMPS High-throughput Rapid
23 Sequencing Set (DNBSEQ-G400RS FCL SE100) or DNBSEQ-G400RS High-throughput Rapid
24 Sequencing Set (FCS SE100) which contains all reagents (including dNTPs that are needed to
25 perform DNA sequencing on the DNBSEQ-G400RS), with the knowledge and specific intent that
26 users, including the other Defendants, will use these products to infringe by performing the patented
27 methods of the '973 Patent.

28

1 76. BGI Ltd. has induced infringement by disseminating promotional and marketing
2 materials relating to the DNBSEQ systems with the knowledge and specific intent that users,
3 including the other Defendants, will use these sequencing instruments to infringe by performing the
4 patented methods of the '973 Patent. For example, BGI Ltd. CEO, Ye Yin, promoted the BGISEQ-
5 500 at the J.P. Morgan Conference in 2018.

6 77. BGI Ltd. has induced infringement by distributing other instructional materials,
7 product manuals, technical materials, and bioinformatics software platforms with the knowledge
8 and the specific intent to encourage and facilitate the infringing use of their DNBSEQ products by
9 others, including the other Defendants. For example, BGI Ltd. is responsible for the DNBSEQ User
10 Manuals, the various reagent kit manuals, technical handbooks, product detail sheets, and technical
11 specification sheets. These materials direct users to use DNBSEQ products in an infringing manner.

12 78. Further, BGI Ltd. induces the infringement of the other Defendants by directing,
13 participating in, supporting, and encouraging their use of the DNBSEQ products at the San Jose
14 facility and elsewhere in the United States

15 79. BGI Ltd. performed all these acts with knowledge that the induced acts constitute
16 infringement. At a minimum, BGI Ltd. acted with knowledge of or willful blindness with regards
17 to users' underlying infringement.

18 **Contributory Infringement By BGI Ltd.**

19 80. BGI Ltd. is liable for contributory infringement of the '973 Patent pursuant to 35
20 U.S.C. § 271(c). Specifically, BGI Ltd. has and is contributing to the infringement of the '973 Patent
21 by, without authority, supplying within the United States, materials and apparatuses for practicing
22 the claimed invention of the '973 Patent, including at least DNBSEQ systems, the DNBSEQ Sample
23 Preparation Systems, and the DNBSEQ reagent kits (with both standardMPS and CoolMPST[™]
24 chemistry). These products constitute a material part of the claimed invention of the '973 Patent.

25 81. BGI Ltd. knows that DNBSEQ systems, materials and apparatuses designed for use
26 with DNBSEQ systems, and the DNBSEQ reagent kits, constitute material parts of the inventions
27 of the '973 Patent and that they are not a staple article or commodity of commerce suitable for
28

1 substantial non-infringing use. As documented above, DNBSEQ systems are specialized
2 sequencing instruments that carry out a specific method for sequencing DNA using either
3 standardMPS or CoolMPS™ chemistry. As such, neither DNBSEQ systems, the materials or
4 apparatuses specifically designed for use with DNBSEQ systems, nor the DNBSEQ reagent kits are
5 a staple article of commerce suitable for substantial non-infringing use. BGI Ltd. knows that
6 DNBSEQ systems, the materials or apparatuses specifically designed for use with DNBSEQ
7 systems, and the DNBSEQ reagents kits are not staple articles or commodities of commerce suitable
8 for substantial non-infringing use because these products have no use apart from infringing the '973
9 Patent. BGI Ltd. knows that the use of its products by the other Defendants and third parties
10 infringes the '973 Patent and it supplies them anyway.

11 **Willful Infringement By BGI Ltd.**

12 82. As set forth throughout this Complaint, BGI Ltd. has acted willfully and egregiously
13 in performing the acts of infringement and threatening to perform the acts of infringement identified
14 in this Complaint. BGI Ltd.'s infringement of the '973 Patent has been and is deliberate and willful
15 and constitutes egregious misconduct. On information and belief, BGI Ltd., with the other
16 Defendants, monitors Illumina's patents, including the enforcement of related patents against
17 Defendants and others, in both the U.S. and abroad, and is or should be aware of the '973 Patent
18 since at least December 31, 2009, when the patent application was first published. Alternatively,
19 BGI Ltd. was or should have been aware of the '973 Patent at least by October 5, 2017, when CGI
20 filed an IPR against the related '537 Patent. Despite this, BGI Ltd. continues to perform the acts of
21 infringement and threatens to perform the acts of infringement identified in this Complaint. In
22 performing the acts of infringement and threatening to perform the acts of infringement identified
23 in this Complaint, BGI Ltd. has been willfully blind to its ongoing infringement.

24 83. BGI Ltd.'s infringement of the '973 Patent has injured Illumina in its business and
25 property rights. Illumina is entitled to recovery of monetary damages for such injuries pursuant to
26 35 U.S.C. § 284 in an amount to be determined at trial. Illumina deserves treble damages and the
27 reimbursement of its fees and costs as set forth in 35 U.S.C. §§ 284 and 285.

28

1 84. BGI Ltd.'s infringement of the '973 Patent has caused irreparable harm to Illumina
2 and will continue to cause such harm unless and until their infringing activities are enjoined by this
3 Court.

4 **BGI Americas' Infringement of the '973 Patent**

5 85. Illumina's patented sequencing technology is well-known and has been enforced
6 very publicly against infringers. Together with the other Defendants, BGI Americas has copied that
7 technology. On information and belief, BGI Americas has had knowledge of the '973 Patent at least
8 since December 31, 2009, when the patent application was first published. Alternatively, BGI
9 Americas was or should have been aware of the '973 Patent at least by October 5, 2017, when CGI
10 filed an IPR against the related '537 Patent, or at the very least by July 1, 2019, when Illumina
11 served them with the complaint alleging infringement of the '537 Patent.

12 **Direct Infringement By BGI Americas**

13 86. BGI Americas has and is directly infringing the '973 Patent pursuant to 35 U.S.C. §
14 271(a), literally or under the doctrine of equivalents, by using DNBSEQ products within the United
15 States, among other infringing acts. Specifically, BGI Americas has used DNBSEQ products in the
16 United States at its San Jose, California facility.

17 **Induced Infringement By BGI Americas**

18 87. BGI Americas is liable for their induced infringement of the '973 Patent pursuant to
19 35 U.S.C. § 271(b). Specifically, BGI Americas has and is actively, knowingly, and intentionally
20 inducing infringement of at least claim 13 of the '973 Patent through a range of activities related to
21 DNBSEQ products, among other things.

22 88. BGI Americas is inducing infringement by promoting the use of DNBSEQ products
23 with the knowledge and specific intent that users, including other Defendants, will use DNBSEQ
24 products to infringe by performing the patented methods of the '973 Patent. BGI Americas is
25 responsible for substantial marketing of BGI products, including DNBSEQ products, and is
26 threatening to encourage and support the sale of those products in the United States.

1 89. BGI Americas is inducing infringement by disseminating promotional and marketing
2 materials relating to DNBSEQ products with the knowledge and specific intent that users, including
3 other Defendants, will use DNBSEQ products to infringe by performing the patented methods of
4 the '973 Patent.

5 90. BGI Americas is inducing infringement by distributing other instructional materials,
6 product manuals, technical materials, and bioinformatics software platforms with the knowledge
7 and the specific intent to encourage and facilitate the infringing use of their DNBSEQ products.
8 These materials direct users, including other Defendants, to use DNBSEQ products in an infringing
9 manner. By providing reagent kits for use on DNBSEQ systems, BGI Americas induces
10 infringement.

11 91. Further, BGI Americas induces the infringement of other Defendants by participating
12 in, supporting, and encouraging their use of the DNBSEQ products at the San Jose facility and
13 elsewhere in the United States.

14 92. BGI Americas acted with knowledge that the induced acts constitute infringement.
15 BGI Americas acted with knowledge of or willful blindness with regards to users' underlying
16 infringement.

17 **Contributory Infringement by BGI Americas**

18 93. BGI Americas is liable for contributory infringement of the '973 Patent pursuant to
19 35 U.S.C. § 271(c). Specifically, BGI Americas contributes to the infringement of the '973 Patent
20 by, without authority, supplying within the United States materials and apparatuses for practicing
21 the claimed invention of the '973 Patent, including at least DNBSEQ systems, the DNBSEQ Sample
22 Preparation Systems, and the associated reagent kits (with both standardMPS and CoolMPSTM
23 chemistry). These products constitute a material part of the claimed inventions of the '973 Patent.

24 94. BGI Americas knows that DNBSEQ systems, materials and apparatuses designed for
25 use with DNBSEQ systems, and the DNBSEQ reagent kits, constitute material parts of the
26 inventions of the '973 Patent and that they are not a staple article or commodity of commerce
27 suitable for substantial non-infringing use. As documented above, DNBSEQ systems are specialized
28

1 sequencing instruments that carry out a specific method for sequencing DNA using either
2 standardMPS or CoolMPS™ chemistry. As such, neither DNBSEQ systems, the materials or
3 apparatuses specifically designed for use with DNBSEQ systems, nor the DNBSEQ reagent kits are
4 a staple article of commerce suitable for substantial non-infringing use. BGI Americas knows that
5 DNBSEQ systems, the materials or apparatuses specifically designed for use with DNBSEQ
6 systems, and the DNBSEQ reagents kits are not staple articles or commodities of commerce suitable
7 for substantial non-infringing use because these products have no use apart from infringing the '973
8 Patent. BGI Americas knows that the use of its products by other Defendants and third parties
9 infringes the '973 Patent and supplies them anyway.

10 **Willful Infringement By BGI Americas**

11 95. As set forth throughout this Complaint, BGI Americas has acted willfully and
12 egregiously in performing the acts of infringement and threatening to perform the acts of
13 infringement identified in this Complaint. BGI Americas' infringement of the '973 Patent has been
14 and is deliberate and willful and constitutes egregious misconduct. On information and belief, BGI
15 Americas, with the other Defendants, monitors Illumina's patents, including the enforcement of
16 related patents against Defendants and others, in both the U.S. and abroad, and is or should be aware
17 of the '973 Patent since at least December 31, 2009, when the patent application was first published.
18 Alternatively, BGI Americas was or should have been aware of the '973 Patent at least by October
19 5, 2017, when CGI filed an IPR against the related '537 Patent, or at the very least by July 1, 2019,
20 when Illumina served them with the complaint alleging infringement of the '537 Patent. Despite
21 this, BGI Americas continues to perform the acts of infringement and threatens to perform the acts
22 of infringement identified in this Complaint. In performing the acts of infringement and threatening
23 to perform the acts of infringement identified in this Complaint, BGI Americas has been willfully
24 blind to its ongoing infringement.

25 96. BGI Americas' infringement of the '973 Patent has injured Illumina in its business
26 and property rights. Illumina is entitled to recovery of monetary damages for such injuries pursuant
27
28

1 to 35 U.S.C. § 284 in an amount to be determined at trial. Illumina deserves treble damages and the
2 reimbursement of its fees and costs as set forth in 35 U.S.C. §§ 284 and 285.

3 97. BGI Americas' infringement of the '973 Patent has caused irreparable harm to
4 Illumina and will continue to cause such harm unless and until their infringing activities are enjoined
5 by this Court.

6 **MGI Ltd.'s Infringement of the '973 Patent**

7 98. Illumina's patented sequencing technology is well-known and has been enforced
8 very publicly against infringers. Together with the other Defendants, MGI Ltd. has copied that
9 technology. On information and belief, MGI Ltd. has had knowledge of the '973 Patent at least
10 since December 31, 2009, when the patent application was first published. Alternatively, MGI Ltd.
11 was or should have been aware of the '973 Patent at least by October 5, 2017, when CGI filed an
12 IPR against the related '537 Patent, or at the very least by July 1, 2019, when Illumina served them
13 with the complaint alleging infringement of the '537 Patent.

14 **Direct Infringement By MGI Ltd.**

15 99. MGI Ltd. directly infringes the '973 Patent pursuant to 35 U.S.C. § 271(a), literally
16 or under the doctrine of equivalents, because it is responsible for the use of DNBSEQ products in
17 the United States. Specifically, because MGI Ltd. claims to be the "leading manufacturer and
18 developer of BGI's proprietary NGS instrumentation," MGI Ltd. has used DNBSEQ products in
19 the United States. MGI Ltd.'s website states that its Silicon Valley, California facility has a "State-
20 of-the-art technology research and development base."

21 **Induced Infringement By MGI Ltd.**

22 100. MGI Ltd. is liable for the induced infringement of the '973 Patent pursuant to 35
23 U.S.C. § 271(b). Specifically, MGI Ltd. is actively, knowingly, and intentionally inducing
24 infringement of at least claim 13 of the '973 Patent through a range of activities related to DNBSEQ
25 products, among other infringing acts. MGI Ltd. is responsible for substantial marketing of BGI
26 products, including DNBSEQ products, and is threatening to encourage and support the sale of those
27 products in the United States.

28

1 101. On information and belief, MGI Ltd. will induce infringement when it begins making
2 infringing CoolMPS™ sequencers and reagent kits commercially available, as it announced
3 recently. Ex. 39.

4 102. MGI Ltd. has induced infringement by controlling, alone or in concert with other
5 Defendants, the design, manufacture, and supply of DNBSEQ products with the knowledge and
6 specific intent that users, including other Defendants, will use DNBSEQ products to infringe by
7 performing the patented methods of the '973 Patent. For example, MGI Ltd. is the “legal
8 manufacturer” of DNBSEQ products. MGI Ltd. controls the website on which DNBSEQ products
9 are marketed and sold. MGI Ltd. controls the website that hosts *inter alia* the DNBSEQ User
10 Manual(s), the various reagent kit manuals, technical handbooks, product detail sheets, and
11 technical specification sheets. These materials direct users, including other Defendants, to use
12 DNBSEQ systems and DNBSEQ reagent kits in an infringing manner. By providing reagent kits
13 and directing users, including other Defendants, to purchase these reagent kits for use on DNBSEQ
14 systems, MGI Ltd. induces infringement.

15 103. MGI Ltd. has induced infringement by controlling, alone or in concert with the other
16 Defendants, the design, manufacture, and supply of materials or apparatuses to be used with the
17 DNBSEQ systems, including for example the MGISP-960, with the knowledge and specific intent
18 that users, including other Defendants, will use these products to infringe by performing the
19 patented methods of the '973 Patent.

20 104. MGI Ltd. has induced infringement by controlling, alone or in concert with the other
21 Defendants, the design, manufacture, and supply of various DNBSEQ reagent kits (with both
22 standardMPS and CoolMPS™ chemistry), with the knowledge and specific intent that users,
23 including other Defendants, will use these products to infringe by performing the patented methods
24 of the claimed inventions. For example, Ms. Abigail Frank, Field Service Engineer at MGI
25 represents that her job entails “servic[ing] NGS instruments and lab automated work stations at
26 Complete Genomics in San Jose, as well as external customers throughout North and South
27 America.” Ex. 28.

28

1 105. MGI Ltd. has induced infringement by users of its products, including the other
2 Defendants, by disseminating promotional and marketing materials relating to DNBSEQ products
3 with the knowledge and specific intent that users will use DNBSEQ products to infringe by
4 performing the patented methods of the '973 Patent. MGI Ltd. controls the website that hosts
5 promotional and marketing materials.

6 106. MGI Ltd. has induced infringement by distributing other instructional materials,
7 product manuals, technical materials, and bioinformatics software platforms with the knowledge
8 and the specific intent to encourage and facilitate the infringing use of their DNBSEQ products. For
9 example, MGI Ltd. is responsible for the DNBSEQ User Manuals, the various reagent kit manuals,
10 technical handbooks, product detail sheets, and technical specification sheets, all of which are
11 available on the MGI Ltd.'s website. These materials direct users, including other Defendants, to
12 use DNBSEQ products in an infringing manner. For example, the DNBSEQ reagent kit handbooks
13 state that the kits are for preparation of DNA sequencing using DNBSEQ systems, which are sold
14 with pre-programmed software protocols that control operation of DNBSEQ sequencers so that each
15 use of the DNBSEQ sequencer infringes. By providing reagent kits and directing users, including
16 other Defendants, to purchase these reagent kits for use on DNBSEQ systems, MGI Ltd. induces
17 infringement.

18 107. Further, MGI Ltd. induces the infringement of other Defendants by participating in,
19 supporting, and encouraging their use of DNBSEQ products at the San Jose facility and elsewhere
20 in the United States.

21 108. MGI Ltd. acted with knowledge that the induced acts constitute infringement. MGI
22 Ltd. acted with knowledge of or willful blindness with regards to users' underlying infringement.

23 **Contributory Infringement By MGI Ltd.**

24 109. MGI Ltd. is liable for contributory infringement of the '973 Patent pursuant to 35
25 U.S.C. § 271(c). Specifically, MGI Ltd. contributes to the infringement of the '973 Patent by,
26 without authority, supplying within the United States, materials and apparatuses for practicing the
27 claimed invention of the '973 Patent, including at least DNBSEQ systems, the DNBSEQ Sample
28

1 Preparation Systems, and the associated reagent kits (with both standardMPS and CoolMPST[™]
2 chemistry). These products constitute a material part of the claimed invention of the '973 Patent.

3 110. MGI Ltd. knows that DNBSEQ systems, materials and apparatuses designed for use
4 with DNBSEQ systems, and the associated reagent kits, constitute material parts of the inventions
5 of the '973 Patent and that they are not a staple article or commodity of commerce suitable for
6 substantial non-infringing use. As documented above, DNBSEQ systems are specialized
7 sequencing instruments that carry out a specific method for sequencing DNA using either
8 standardMPS or CoolMPST[™] chemistry. As such, neither DNBSEQ systems, the materials or
9 apparatuses specifically designed for use with DNBSEQ systems, nor the DNBSEQ reagent kits are
10 a staple article of commerce suitable for substantial non-infringing use. MGI Ltd. knows that
11 DNBSEQ systems, the materials or apparatuses specifically designed for use with DNBSEQ
12 systems, and the DNBSEQ reagents kits are not staple articles or commodities of commerce suitable
13 for substantial non-infringing use because these products have no use apart from infringing the '973
14 Patent. MGI Ltd. knows that the use of its products by other Defendants and third parties infringes
15 the '973 Patent and supplies them anyway.

16 **Willful Infringement By MGI Ltd.**

17 111. As set forth throughout this Complaint, MGI Ltd. has acted willfully and egregiously
18 in performing the acts of infringement and threatening to perform the acts of infringement identified
19 in this Complaint. MGI Ltd.'s infringement of the '973 Patent has been and is deliberate and willful
20 and constitutes egregious misconduct. On information and belief, MGI Ltd., with the other
21 Defendants, monitors Illumina's patents, including the enforcement of related patents against
22 Defendants and others, in both the U.S. and abroad, and is or should be aware of the '973 Patent
23 since at least December 31, 2009, when the patent application was first published. Alternatively,
24 MGI Ltd. was or should have been aware of the '973 Patent at least by October 5, 2017, when CGI
25 filed an IPR against the related '537 Patent, or at the very least by July 1, 2019, when Illumina
26 served them with the complaint alleging infringement of the '537 Patent. Despite this, MGI Ltd.
27 continues to perform the acts of infringement and threatens to perform the acts of infringement
28

1 identified in this Complaint. In performing the acts of infringement and threatening to perform the
2 acts of infringement identified in this Complaint, MGI Ltd. has been willfully blind to its ongoing
3 infringement.

4 112. MGI Ltd.'s infringement of the '973 Patent has injured Illumina in its business and
5 property rights. Illumina is entitled to recovery of monetary damages for such injuries pursuant to
6 35 U.S.C. § 284 in an amount to be determined at trial. Illumina deserves treble damages and the
7 reimbursement of its fees and costs as set forth in 35 U.S.C. §§ 284 and 285.

8 113. MGI Ltd.'s infringement of the '973 Patent has caused irreparable harm to Illumina
9 and will continue to cause such harm unless and until their infringing activities are enjoined by this
10 Court.

11 **MGI Americas' Infringement of the '973 Patent**

12 114. Illumina's patented sequencing technology is well-known and has been enforced
13 very publicly against infringers. Together with the other Defendants, MGI Americas has copied that
14 technology. On information and belief, MGI Americas has had knowledge of the '973 Patent at
15 least since December 31, 2009, when the patent application was first published. Alternatively, MGI
16 Americas was or should have been aware of the '973 Patent at least by October 5, 2017, when CGI
17 filed an IPR against the related '537 Patent, or at the very least by July 1, 2019, when Illumina
18 served them with the complaint alleging infringement of the '537 Patent.

19 **Direct Infringement By MGI Americas**

20 115. MGI Americas has and is directly infringing the '973 Patent pursuant to 35 U.S.C. §
21 271(a), literally or under the doctrine of equivalents, by using DNBSEQ products within the United
22 States. Specifically, because MGI Americas claims to be the "leading manufacturer and developer
23 of BGI's proprietary NGS instrumentation," MGI Americas has used DNBSEQ products in the
24 United States. MGI Americas' Silicon Valley, California facility has a "State-of-the-art technology
25 research and development base."

26 **Induced Infringement By MGI Americas**

27
28

1 116. MGI Americas is liable for their induced infringement of the '973 Patent pursuant to
2 35 U.S.C. § 271(b). Specifically, MGI Americas has and is actively, knowingly, and intentionally
3 inducing of at least claim 13 of the '973 Patent through a range of activities related to DNBSEQ
4 products, among other infringing acts. MGI Americas is responsible for substantial marketing of
5 BGI products, including DNBSEQ products, and is threatening to encourage and support the sale
6 of those products in the United States.

7 117. On information and belief, MGI Americas will induce infringement when it begins
8 making infringing sequencing instruments and CoolMPSTM reagents commercially available, as it
9 recently provided notice it would do. Ex. 40. On information and belief, MGI Americas will induce
10 infringement when it begins to make infringing sequencing instruments and standardMPS reagents
11 available to key opinion leaders on a no cost trial basis in the United States.

12 118. MGI Americas has induced infringement by controlling, alone or in concert with the
13 other Defendants, the design, manufacture and supply of DNBSEQ products with the knowledge
14 and specific intent that users, including other Defendants, will use the DNBSEQ products to infringe
15 by performing the patented methods of the '973 Patent. MGI Americas distributes, *inter alia*, the
16 DNBSEQ User Manual(s), the various reagent kit manuals, technical handbooks, product detail
17 sheets, and technical specification sheets. These materials direct users, including other Defendants,
18 to use DNBSEQ systems and DNBSEQ reagent kits in an infringing manner. By providing reagent
19 kits and directing users to purchase these reagent kits for use on DNBSEQ systems, BGI Americas
20 induces infringement.

21 119. MGI Americas has induced infringement by distributing materials or apparatuses to
22 be used with the DNBSEQ systems, including for example the MGISP-960, with the knowledge
23 and specific intent that users, including the other Defendants, will use these products to infringe by
24 performing the patented methods of the '973 Patent.

25 120. MGI Americas has induced infringement by distributing DNBSEQ reagent kits (with
26 both standardMPS and CoolMPSTM chemistry) with the knowledge and specific intent that users,
27 including other Defendants, will use these products to infringe by performing the patented methods
28

1 of the '973 Patent. For example, Ms. Abigail Frank, Field Service Engineer at MGI represents that
2 her job entails “servic[ing] NGS instruments and lab automated work stations at Complete
3 Genomics in San Jose, as well as external customers throughout North and South America.” Ex. 28.

4 121. MGI Americas has induced infringement by users of its products, including other
5 Defendants, by disseminating promotional and marketing materials relating to DNBSEQ products
6 with the knowledge and specific intent that users will use DNBSEQ products to infringe by
7 performing the patented methods of the '973 Patent.

8 122. MGI Americas has induced infringement by distributing other instructional
9 materials, product manuals, technical materials, and bioinformatics software platforms with the
10 knowledge and the specific intent to encourage and facilitate the infringing use of their DNBSEQ
11 products. For example, MGI Americas is responsible for the DNBSEQ User Manuals, the various
12 reagent kit manuals, technical handbooks, product detail sheets, and technical specification sheets.
13 These materials direct users, including other Defendants, to use DNBSEQ products in an infringing
14 manner. For example, the DNBSEQ reagent kit handbooks state that the kits are for preparation of
15 DNA sequencing using DNBSEQ systems, which are sold with pre-programmed software protocols
16 that control operation of DNBSEQ sequencers so that each use of the DNBSEQ sequencer infringes.
17 By providing reagent kits and directing users, including other Defendants, to purchase these reagent
18 kits for use on DNBSEQ systems, MGI Americas induces infringement.

19 123. Further, MGI Americas induces the infringement of other Defendants by
20 participating in, supporting, and encouraging their use of DNBSEQ products at the San Jose facility
21 and elsewhere in the United States.

22 124. MGI Americas acted with knowledge that the induced acts constitute infringement.
23 MGI Americas acted with knowledge of or willful blindness with regards to users' underlying
24 infringement.

25 **Contributory Infringement By MGI Americas**

26 125. MGI Americas is liable for contributory infringement of the '973 Patent pursuant to
27 35 U.S.C. § 271(c). Specifically, MGI Americas has and is contributing to the infringement of the
28

1 '973 Patent by, without authority, distributing within the United States, materials and apparatuses
2 for practicing the claimed invention of the '973 Patent, including at least DNBSEQ systems, the
3 DNBSEQ Sample Preparation Systems, and the associated reagent kits (with both standardMPS and
4 CoolMPS™ chemistry). These products constitute a material part of the claimed invention of the
5 '973 Patent.

6 126. MGI Americas knows that DNBSEQ systems, materials and apparatuses designed
7 for use with DNBSEQ systems, and the associated reagent kits, constitute material parts of the
8 inventions of the '973 Patent and that they are not a staple article or commodity of commerce
9 suitable for substantial non-infringing use. As documented above, DNBSEQ systems are specialized
10 sequencing instruments that carry out a specific method for sequencing DNA using either
11 standardMPS or CoolMPS™ chemistry. As such, neither DNBSEQ systems, the materials or
12 apparatuses specifically designed for use with DNBSEQ systems, nor the DNBSEQ reagent kits are
13 a staple article of commerce suitable for substantial non-infringing use. MGI Americas knows that
14 DNBSEQ systems, the materials or apparatuses specifically designed for use with DNBSEQ
15 systems, and the DNBSEQ reagents kits are not staple articles or commodities of commerce suitable
16 for substantial non-infringing use because these products have no use apart from infringing the '973
17 Patent. MGI Americas knows that the use of its products by other Defendants and third parties
18 infringes the '973 Patent and supplies them anyway.

19 **Willful Infringement By MGI Americas**

20 127. As set forth throughout this Complaint, MGI Americas has acted willfully and
21 egregiously in performing the acts of infringement and threatening to perform the acts of
22 infringement identified in this Complaint. MGI Americas' infringement of the '973 Patent has been
23 and is deliberate and willful and constitutes egregious misconduct. On information and belief, MGI
24 Americas, with the other Defendants, monitors Illumina's patents, including the enforcement of
25 related patents against Defendants and others, in both the U.S. and abroad, and is or should be aware
26 of the '973 Patent since at least December 31, 2009, when the patent application was first published.
27 Alternatively, MGI Americas was or should have been aware of the '973 Patent at least by October
28

1 5, 2017, when CGI filed an IPR against the related '537 Patent, or at the very least by July 1, 2019,
2 when Illumina served them with the complaint alleging infringement of the '537 Patent. Despite
3 this, MGI Americas continues to perform the acts of infringement and threatens to perform the acts
4 of infringement identified in this Complaint. In performing the acts of infringement and threatening
5 to perform the acts of infringement identified in this Complaint, MGI Americas has been willfully
6 blind to its ongoing infringement.

7 128. MGI Americas' infringement of the '973 Patent has injured Illumina in its business
8 and property rights. Illumina is entitled to recovery of monetary damages for such injuries pursuant
9 to 35 U.S.C. § 284 in an amount to be determined at trial. Illumina deserves treble damages and the
10 reimbursement of its fees and costs as set forth in 35 U.S.C. §§ 284 and 285.

11 129. MGI Americas' infringement of the '973 Patent has caused irreparable harm to
12 Illumina and will continue to cause such harm unless and until their infringing activities are enjoined
13 by this Court.

14 **CGI's Infringement of the '973 Patent**

15 130. Illumina's patented sequencing technology is well-known and has been enforced
16 very publicly against infringers. Together with the other Defendants, CGI has copied that
17 technology. On information and belief, CGI has had knowledge of the '973 Patent at least since
18 December 31, 2009, when the patent application was first published. Alternatively, CGI was or
19 should have been aware of the '973 Patent at least by October 5, 2017, when CGI filed an IPR
20 against the related '537 Patent, or at the very least by July 1, 2019, when Illumina served them with
21 the complaint alleging infringement of the '537 Patent.

22 **Direct Infringement By CGI**

23 131. CGI has and is directly infringing the '973 Patent pursuant to 35 U.S.C. § 271(a),
24 literally or under the doctrine of equivalents, by using DNBSEQ products within the United States,
25 among other infringing acts. CGI has installed DNBSEQ systems at CGI locations in the United
26 States, including its San Jose, California facility. CGI has used the DNBSEQ in the United States.

27 **Induced Infringement by CGI**

28

1 132. CGI is liable for their induced infringement of the '973 Patent pursuant to 35 U.S.C.
2 § 271(b). Specifically, CGI has and is actively, knowingly, and intentionally inducing infringement
3 of at least claim 13 of the '973 Patent through a range of activities related to DNBSEQ products,
4 among other infringing acts. CGI is responsible for substantial marketing of BGI products, including
5 DNBSEQ products, and is threatening to encourage and support the sale of those products in the
6 United States.

7 133. CGI has induced infringement by controlling, alone or in concert with the other
8 Defendants, the design, manufacture, and supply of materials or apparatuses to be used with the
9 DNBSEQ systems, including for example the MGISP-960, with the knowledge and specific intent
10 that users, including other Defendants, will use these products to infringe by performing the
11 patented methods of the '973 Patent.

12 134. CGI has induced infringement by controlling, with the other Defendants, the design,
13 manufacture, and supply of various DNBSEQ reagent kits (with both standardMPS and CoolMPSTM
14 chemistry), with the knowledge and specific intent that users, including other Defendants, will use
15 these products to infringe by performing the patented methods of the '973 Patent.

16 135. CGI has induced infringement by disseminating promotional and marketing
17 materials relating to DNBSEQ products with the knowledge and specific intent that users, including
18 other Defendants, will use the DNBSEQ products to infringe by performing the patented methods
19 of the '973 Patent.

20 136. CGI has induced infringement by creating distribution channels for the
21 aforementioned DNBSEQ products, materials and apparatuses for use with the DNBSEQ systems,
22 and the associated reagent kits, with the knowledge and specific intent that users, including other
23 Defendants, will use these products to infringe by performing the patented methods of the '973
24 Patent.

25 137. CGI has induced infringement by distributing other instructional materials, product
26 manuals, technical materials, and bioinformatics software platforms with the knowledge and the
27 specific intent to encourage and facilitate the infringing use of their DNBSEQ products. These
28

1 materials direct users, including other Defendants, to use DNBSEQ products in an infringing
2 manner. For example, the DNBSEQ reagent kit manuals state that the kits are for preparation of
3 DNA sequencing using DNBSEQ systems, which are sold with pre-programmed software protocols
4 that control operation of DNBSEQ sequencers so that each use of the DNBSEQ sequencer infringes.
5 By providing reagent kits and directing users to purchase these reagent kits for use on DNBSEQ
6 systems, CGI induces infringement.

7 138. Further, CGI induces the infringement of other Defendants by participating in,
8 supporting, and encouraging their use of DNBSEQ products at the San Jose facility and elsewhere
9 in the United States.

10 139. CGI acted with knowledge that the induced acts constitute infringement. CGI acted
11 with knowledge of or willful blindness with regards to users' underlying infringement.

12 **Contributory Infringement by CGI**

13 140. CGI is liable for contributory infringement of the '973 Patent pursuant to 35 U.S.C.
14 § 271(c). Specifically, CGI has and is contributing to infringement of the '973 Patent by, without
15 authority, supplying within the United States, materials and apparatuses for practicing the claimed
16 invention of the '973 Patent, including at least DNBSEQ systems, the DNBSEQ Sample Preparation
17 Systems, and the associated reagent kits (with both standardMPS and CoolMPSTTM chemistry).
18 These products constitute a material part of the claimed invention of the '973 Patent.

19 141. CGI knows that DNBSEQ systems, materials and apparatuses designed for use with
20 DNBSEQ systems, and the DNBSEQ reagent kits, constitute material parts of the inventions of the
21 '973 Patent and that they are not a staple article or commodity of commerce suitable for substantial
22 non-infringing use. As documented above, DNBSEQ systems are specialized sequencing
23 instruments that carry out a specific method for sequencing DNA using either standardMPS or
24 CoolMPSTTM chemistry. As such, neither DNBSEQ systems, the materials or apparatuses
25 specifically designed for use with DNBSEQ systems, nor the DNBSEQ reagent kits are a staple
26 article of commerce suitable for substantial non-infringing use. CGI knows that DNBSEQ systems,
27 the materials or apparatuses specifically designed for use with DNBSEQ systems, and the DNBSEQ
28

1 reagents kits are not staple articles or commodities of commerce suitable for substantial non-
2 infringing use because these products have no use apart from infringing the '973 Patent. CGI knows
3 that the use of its products by other Defendants and third parties infringes the '973 Patent and it
4 supplies them anyway.

5 **Willful Infringement By CGI**

6 142. As set forth throughout this Complaint, CGI has acted willfully and egregiously in
7 performing the acts of infringement and threatening to perform the acts of infringement identified
8 in this Complaint. CGI's infringement of the '973 Patent has been and is deliberate and willful and
9 constitutes egregious misconduct. On information and belief, CGI, with the other Defendants,
10 monitors Illumina's patents, including the enforcement of related patents against Defendants and
11 others, in both the U.S. and abroad, and is or should be aware of the '973 Patent since at least
12 December 31, 2009, when the patent application was first published. Alternatively, CGI was or
13 should have been aware of the '973 Patent at least by October 5, 2017, when CGI filed an IPR
14 against the related '537 Patent, or at the very least by July 1, 2019, when Illumina served them with
15 the complaint alleging infringement of the '537 Patent. Despite this, CGI continues to perform the
16 acts of infringement and threatens to perform the acts of infringement identified in this Complaint.
17 In performing the acts of infringement and threatening to perform the acts of infringement identified
18 in this Complaint, CGI has been willfully blind to its ongoing infringement.

19 143. CGI's infringement of the '973 Patent has injured Illumina in its business and
20 property rights. Illumina is entitled to recovery of monetary damages for such injuries pursuant to
21 35 U.S.C. § 284 in an amount to be determined at trial. Illumina deserves treble damages and the
22 reimbursement of its fees and costs as set forth in 35 U.S.C. §§ 284 and 285.

23 144. CGI's infringement of the '973 Patent has caused irreparable harm to Illumina and
24 will continue to cause such harm unless and until their infringing activities are enjoined by this
25 Court.
26
27
28

1 **COUNT II**

2 **Infringement of U.S. Patent No. 7,541,444 (“’444 Patent”)**

3 145. Illumina re-alleges and incorporates by this reference the allegations contained
4 throughout this Complaint into each allegation of infringement and request for remedies.

5 146. Defendants and users of Defendants’ infringing products have and continue to
6 directly infringe, literally or by equivalence, claim 3 of the ’444 Patent by importing, selling,
7 offering to sell, and using the DNBSEQ products and other infringing products. The following
8 allegations identify the acts of direct, induced and contributory infringement by each named
9 defendant as supplemented by the allegations throughout this Complaint.

10 **BGI Ltd.’s Infringement of the ’444 Patent**

11 147. Illumina’s patented sequencing technology is well-known and has been enforced
12 very publicly against infringers. Together with the other Defendants, BGI Ltd. has copied that
13 technology. On information and belief, BGI Ltd. has had knowledge of the ’444 Patent at least since
14 July 19, 2007, when the patent application was first published. Alternatively, BGI Ltd. was or
15 should have been aware of the ’444 Patent at least by October 5, 2017, when CGI filed an IPR
16 against the related ’537 Patent.

17 148. BGI Ltd. has failed to resist the temptation of importing its infringing technology
18 into the large United States market and has done so in the face of the ’444 Patent. BGI Ltd. knows
19 that its activities in connection with the DNBSEQ products will infringe the ’444 Patent.

20 **Direct Infringement By BGI Ltd.**

21 149. BGI Ltd. has directly infringed and continues to directly infringe the ’444 Patent
22 pursuant to 35 U.S.C. § 271(a), literally or under the doctrine of equivalents, by importing the
23 DNBSEQ products into the United States and using DNBSEQ products within the United States,
24 among other infringing acts. Specifically, BGI Ltd. has used DNBSEQ products in the United States
25 at its San Jose, California facility.

26 150. Alternatively, BGI Ltd. directly infringes because it directs and controls other BGI
27 entities with respect to their use of DNBSEQ products in the United States. Upon information and
28

1 belief, BGI Ltd. has directed, either directly or indirectly, its subsidiaries and affiliates, including
2 the other Defendants, to develop, install, and use the MGISEQ-2000 and BGISEQ-500 in its San
3 Jose, California facility. For example, BGI Ltd.'s own press release asserts that "the BGISEQ-500
4 NGS platform [was] developed by it's [sic] Complete Genomics Subsidiary in Silicon Valley,
5 California." Ex. 7 at 3. BGI Ltd.'s direction and control of this and the other infringing conduct of
6 its subsidiaries set forth herein can be reasonably inferred from BGI's public documents and
7 activity.

8 151. For example, BGI Ltd.'s website represents that it has multiple locations in
9 California, including San Francisco, San Jose, Los Angeles, and San Diego. Ex. 50 (available at:
10 <http://en.genomics.cn/en-global.html> (last accessed: February 25, 2020)). It touts that it has both
11 "representative offices" and "laboratories" in California, thus suggesting that it controls the
12 activities in those offices notwithstanding that they may be formally associated with another BGI
13 entity. In addition, CGI identified BGI Ltd. as a real-party-in-interest in CGI's IPR directed to the
14 '537 Patent, thus indicating that BGI ultimately directs and controls the BGI Group's activity that
15 infringes the '444 Patent.

16 152. Further, BGI Ltd.'s executives travel to California to manage and promote the
17 infringing products. This includes BGI Ltd.'s presence at industry and trade shows, including
18 SynBioBeta SF 2017 in San Francisco, California (Oct. 3-5, 2017); J.P. Morgan Healthcare
19 Conference in San Francisco, California (Jan. 8-11, 2018); Plant & Animal Genome Conference
20 ("PAG") XXVI in San Diego, California (Jan. 13-17, 2018); American Society of Human Genetics
21 2018 in San Diego, California (Oct. 16-20, 2018); and PAG XXVII in San Diego, California (Jan.
22 12-16, 2019). Exs. 51, 7-10. For example, BGI Ltd.'s CEO, Ye Yin, traveled to the Northern District
23 of California to promote the accused products at the J.P. Morgan Conference in January 2018. Ex.
24 7. Indeed, BGI Ltd.'s executives often travel to this District in order to manage and direct the
25 infringing activity.

26 **Induced Infringement by BGI Ltd.**

27

28

1 153. BGI Ltd. is liable for the induced infringement of the '444 Patent pursuant to 35
2 U.S.C. § 271(b). Specifically, BGI Ltd. has and is actively, knowingly, and intentionally inducing
3 infringement of at least claim 3 of the '444 Patent through a range of activities related to the
4 DNBSEQ systems. BGI Ltd. is responsible for substantial marketing of BGI products, including the
5 DNBSEQ, and is threatening to encourage and support the sale of those products in the United
6 States.

7 154. BGI Ltd. has induced infringement by controlling, alone or in concert with other
8 Defendants, the design, manufacture, and supply of the DNBSEQ systems with the knowledge and
9 specific intent that users, including other Defendants, will use the DNBSEQ systems to infringe by
10 using the patented nucleotides of the '444 Patent. For example, BGI has controlled, alone or in
11 concert with the other Defendants, the design, manufacture, and supply of the DNBSEQ systems
12 such that the DNBSEQ systems have pre-programmed software protocols that control operation of
13 the DNBSEQ systems so that users, including other Defendants, are given the sole option of
14 operating the DNBSEQ systems in a manner that infringes.

15 155. BGI has induced infringement by controlling, alone or in concert with the other
16 Defendants, the design, manufacture, and supply of materials or apparatuses to be used with the
17 DNBSEQ systems, including for example the MGISP-960, with the knowledge and specific intent
18 that users, including the other Defendants, will use these products to infringe by using the patented
19 nucleotides of the '444 Patent.

20 156. BGI Ltd. has induced infringement by controlling, alone or in concert with the other
21 Defendants, the design, manufacture, and supply of various reagent kits (with both standardMPS
22 and CoolMPS™ chemistry), including for example the CoolMPS High-throughput Rapid
23 Sequencing Set (DNBSEQ-G400RS FCL SE100) or DNBSEQ-G400RS High-throughput Rapid
24 Sequencing Set (FCS SE100) which contains all reagents (including dNTPs that are needed to
25 perform DNA sequencing on the DNBSEQ-G400RS), with the knowledge and specific intent that
26 users, including the other Defendants, will use these products to infringe by using the patented
27 nucleotides of the '444 Patent.

28

1 157. BGI Ltd. has induced infringement by disseminating promotional and marketing
2 materials relating to the DNBSEQ systems with the knowledge and specific intent that users,
3 including the other Defendants, will use these sequencing instruments to infringe by using the
4 patented nucleotides of the '444 Patent. For example, BGI Ltd. CEO, Ye Yin, promoted the
5 BGISEQ-500 at the J.P. Morgan Conference in 2018.

6 158. BGI Ltd. has induced infringement by distributing other instructional materials,
7 product manuals, technical materials, and bioinformatics software platforms with the knowledge
8 and the specific intent to encourage and facilitate the infringing use of their DNBSEQ products by
9 others, including the other Defendants. For example, BGI Ltd. is responsible for the DNBSEQ User
10 Manuals, the various reagent kit manuals, technical handbooks, product detail sheets, and technical
11 specification sheets. These materials direct users to use DNBSEQ products in an infringing manner.

12 159. Further, BGI Ltd. induces the infringement of the other Defendants by directing,
13 participating in, supporting, and encouraging their use of the DNBSEQ products at the San Jose
14 facility and elsewhere in the United States.

15 160. BGI Ltd. performed all these acts with knowledge that the induced acts constitute
16 infringement. At a minimum, BGI Ltd. acted with knowledge of or willful blindness with regards
17 to users' underlying infringement.

18 **Contributory Infringement By BGI Ltd.**

19 161. BGI Ltd. is liable for contributory infringement of the '444 Patent pursuant to 35
20 U.S.C. § 271(c). Specifically, BGI Ltd. has and is contributing to the infringement of the '444 Patent
21 by, without authority, supplying within the United States, materials and apparatuses for practicing
22 the claimed invention of the '444 Patent, including at least DNBSEQ systems, the DNBSEQ Sample
23 Preparation Systems, and the DNBSEQ reagent kits (with both standardMPS and CoolMPSTTM
24 chemistry). These products constitute a material part of the claimed invention of the '444 Patent.

25 162. BGI Ltd. knows that DNBSEQ systems, materials and apparatuses designed for use
26 with DNBSEQ systems, and the DNBSEQ reagent kits, constitute material parts of the inventions
27 of the '444 Patent and that they are not a staple article or commodity of commerce suitable for
28

1 substantial non-infringing use. As documented above, DNBSEQ systems are a specialized
2 sequencing instruments that carry out a specific method for sequencing DNA using either
3 standardMPS or CoolMPS™ chemistry. As such, neither DNBSEQ systems, the materials or
4 apparatuses specifically designed for use with DNBSEQ systems, nor the DNBSEQ reagent kits are
5 a staple article of commerce suitable for substantial non-infringing use. BGI Ltd. knows that
6 DNBSEQ systems, the materials or apparatuses specifically designed for use with DNBSEQ
7 systems, and the DNBSEQ reagents kits are not staple articles or commodities of commerce suitable
8 for substantial non-infringing use because these products have no use apart from infringing the '444
9 Patent. BGI Ltd. knows that the use of its products by the other Defendants and third parties
10 infringes the '444 Patent and it supplies them anyway.

11 **Infringement Under 271(f) By BGI Ltd.**

12 163. On information and belief, BGI Ltd. has supplied in or from the United States the
13 DNBSEQ products and/or components thereof, which comprise all or a substantial portion of the
14 components of the claims of the '444 Patent, where such components are uncombined in whole or
15 in part, in such manner as to actively induce the combination of such components outside of the
16 United States in a manner that would infringe the patent if such combination occurred within the
17 United States, in violation of 35 USC § 271(f)(1). Alternatively, on information and belief, BGI
18 Ltd. has supplied in or from the United States components of DNBSEQ products, which products
19 are especially made or especially adapted for use in practicing the claims of the '444 Patent and are
20 not staple articles or commodities of commerce suitable for substantial noninfringing use, knowing
21 that such component is so made or adapted and intending that such component will be combined
22 outside of the United States in a manner that would infringe the patent if such combination occurred
23 within the United States, in violation of 35 USC § 271(f)(2).

24 **Willful Infringement By BGI Ltd.**

25 164. As set forth throughout this Complaint, BGI Ltd. has acted willfully and egregiously
26 in performing the acts of infringement and threatening to perform the acts of infringement identified
27 in this Complaint. BGI Ltd.'s infringement of the '444 Patent has been and is deliberate and willful
28

1 and constitutes egregious misconduct. On information and belief, BGI Ltd., with the other
2 Defendants, monitors Illumina's patents, including the enforcement of related patents against
3 Defendants and others, in both the U.S. and abroad, and is or should be aware of the '444 Patent
4 since at least July 19, 2007, when the patent application was first published. Alternatively, BGI Ltd.
5 was or should have been aware of the '444 Patent at least by October 5, 2017, when CGI filed an
6 IPR against the related '537 Patent. Despite this, BGI Ltd. continues to perform the acts of
7 infringement and threatens to perform the acts of infringement identified in this Complaint. In
8 performing the acts of infringement and threatening to perform the acts of infringement identified
9 in this Complaint, BGI Ltd. has been willfully blind to its ongoing infringement.

10 165. BGI Ltd.'s infringement of the '444 Patent has injured Illumina in its business and
11 property rights. Illumina is entitled to recovery of monetary damages for such injuries pursuant to
12 35 U.S.C. § 284 in an amount to be determined at trial. Illumina deserves treble damages and the
13 reimbursement of its fees and costs as set forth in 35 U.S.C. §§ 284 and 285.

14 166. BGI Ltd.'s infringement of the '444 Patent has caused irreparable harm to Illumina
15 and will continue to cause such harm unless and until their infringing activities are enjoined by this
16 Court.

17 **BGI Americas' Infringement of the '444 Patent**

18 167. Illumina's patented sequencing technology is well-known and has been enforced
19 very publicly against infringers. Together with the other Defendants, BGI Americas has copied that
20 technology. On information and belief, BGI Americas has had knowledge of the '444 Patent at least
21 since July 19, 2007, when the patent application was first published. Alternatively, BGI Americas
22 was or should have been aware of the '444 Patent at least by October 5, 2017, when CGI filed an
23 IPR against the related '537 Patent, or at the very least by July 1, 2019, when Illumina served them
24 with the complaint alleging infringement of the '537 Patent.

25 **Direct Infringement By BGI Americas**

26 168. BGI Americas has and is directly infringing the '444 Patent pursuant to 35 U.S.C. §
27 271(a), literally or under the doctrine of equivalents, by using DNBSEQ products within the United
28

1 States, among other infringing acts. Specifically, BGI Americas has used DNBSEQ products in the
2 United States at its San Jose, California facility.

3 **Induced Infringement By BGI Americas**

4 169. BGI Americas is liable for their induced infringement of the '444 Patent pursuant to
5 35 U.S.C. § 271(b). Specifically, BGI Americas has and is actively, knowingly, and intentionally
6 inducing infringement of at least claim 3 of the '444 Patent through a range of activities related to
7 DNBSEQ products, among other things.

8 170. BGI Americas is inducing infringement by promoting the use of DNBSEQ products
9 with the knowledge and specific intent that users, including other Defendants, will use DNBSEQ
10 products to infringe by using the patented nucleotides of the '444 Patent. BGI Americas is
11 responsible for substantial marketing of BGI products, including DNBSEQ products, and is
12 threatening to encourage and support the sale of those products in the United States.

13 171. BGI Americas is inducing infringement by disseminating promotional and marketing
14 materials relating to DNBSEQ products with the knowledge and specific intent that users, including
15 other Defendants, will use DNBSEQ products to infringe by using the patented nucleotides of the
16 '444 Patent.

17 172. BGI Americas is inducing infringement by distributing other instructional materials,
18 product manuals, technical materials, and bioinformatics software platforms with the knowledge
19 and the specific intent to encourage and facilitate the infringing use of their DNBSEQ products.
20 These materials direct users, including other Defendants, to use DNBSEQ products in an infringing
21 manner. By providing reagent kits for use on DNBSEQ systems, BGI Americas induces
22 infringement.

23 173. Further, BGI Americas induces the infringement of other Defendants by participating
24 in, supporting, and encouraging their use of the DNBSEQ products at the San Jose facility and
25 elsewhere in the United States.

1 174. BGI Americas acted with knowledge that the induced acts constitute infringement.
2 BGI Americas acted with knowledge of or willful blindness with regards to users' underlying
3 infringement.

4 **Contributory Infringement by BGI Americas**

5 175. BGI Americas is liable for contributory infringement of the '444 Patent pursuant to
6 35 U.S.C. § 271(c). Specifically, BGI Americas contributes to the infringement of the '444 Patent
7 by, without authority, supplying within the United States materials and apparatuses for using the
8 claimed invention of the '444 Patent, including at least DNBSEQ systems, the DNBSEQ Sample
9 Preparation Systems, and the associated reagent kits (with both standardMPS and CoolMPSTTM
10 chemistry). These products constitute a material part of the claimed inventions of the '444 Patent.

11 176. BGI Americas knows that DNBSEQ systems, materials and apparatuses designed for
12 use with DNBSEQ systems, and the DNBSEQ reagent kits, constitute material parts of the
13 inventions of the '444 Patent and that they are not a staple article or commodity of commerce
14 suitable for substantial non-infringing use. As documented above, DNBSEQ systems are specialized
15 sequencing instruments that carry out a specific method for sequencing DNA using either
16 standardMPS or CoolMPSTTM chemistry. As such, neither DNBSEQ systems, the materials or
17 apparatuses specifically designed for use with DNBSEQ systems, nor the DNBSEQ reagent kits are
18 a staple article of commerce suitable for substantial non-infringing use. BGI Americas knows that
19 DNBSEQ systems, the materials or apparatuses specifically designed for use with DNBSEQ
20 systems, and the DNBSEQ reagents kits are not staple articles or commodities of commerce suitable
21 for substantial non-infringing use because these products have no use apart from infringing the '444
22 Patent. BGI Americas knows that the use of its products by other Defendants and third parties
23 infringes the '444 Patent and supplies them anyway.

24 **Infringement Under 271(f) By BGI Americas**

25 177. On information and belief, BGI Americas has supplied in or from the United States
26 DNBSEQ products and/or components thereof, which comprise all or a substantial portion of the
27 components of the claims of the '444 Patent, where such components are uncombined in whole or
28

1 in part, in such manner as to actively induce the combination of such components outside of the
2 United States in a manner that would infringe the patent if such combination occurred within the
3 United States, in violation of 35 USC § 271(f)(1). Alternatively, on information and belief, BGI
4 Americas has supplied in or from the United States components of DNBSEQ products, which
5 products are especially made or especially adapted for use in practicing the claims of the '444 Patent
6 and are not staple articles or commodities of commerce suitable for substantial noninfringing use,
7 knowing that such component is so made or adapted and intending that such component will be
8 combined outside of the United States in a manner that would infringe the patent if such combination
9 occurred within the United States, in violation of 35 USC § 271(f)(2).

10 **Willful Infringement By BGI Americas**

11 178. As set forth throughout this Complaint, BGI Americas has acted willfully and
12 egregiously in performing the acts of infringement and threatening to perform the acts of
13 infringement identified in this Complaint. BGI Americas' infringement of the '444 Patent has been
14 and is deliberate and willful and constitutes egregious misconduct. On information and belief, BGI
15 Americas, with the other Defendants, monitors Illumina's patents, including the enforcement of
16 related patents against Defendants and others, in both the U.S. and abroad, and is or should be aware
17 of the '444 Patent since at least July 19, 2007, when the patent application was first published.
18 Alternatively, BGI Americas was or should have been aware of the '444 Patent at least by October
19 5, 2017, when CGI filed an IPR against the related '537 Patent, or at the very least by July 1, 2019,
20 when Illumina served them with the complaint alleging infringement of the '537 Patent. Despite
21 this, BGI Americas continues to perform the acts of infringement and threatens to perform the acts
22 of infringement identified in this Complaint. In performing the acts of infringement and
23 threatening to perform the acts of infringement identified in this Complaint, BGI Americas. has
24 been willfully blind to its ongoing infringement.

25 179. BGI Americas' infringement of the '444 Patent has injured Illumina in its business
26 and property rights. Illumina is entitled to recovery of monetary damages for such injuries pursuant
27
28

1 to 35 U.S.C. § 284 in an amount to be determined at trial. Illumina deserves treble damages and the
2 reimbursement of its fees and costs as set forth in 35 U.S.C. §§ 284 and 285.

3 180. BGI Americas' infringement of the '444 Patent has caused irreparable harm to
4 Illumina and will continue to cause such harm unless and until their infringing activities are enjoined
5 by this Court.

6 **MGI Ltd.'s Infringement of the '444 Patent**

7 181. Illumina's patented sequencing technology is well-known and has been enforced
8 very publicly against infringers. Together with the other Defendants, MGI Ltd. has copied that
9 technology. On information and belief, MGI Ltd. has had knowledge of the '444 Patent since at
10 least July 19, 2007, when the patent application was first published. Alternatively, MGI Ltd. was or
11 should have been aware of the '444 Patent at least by October 5, 2017, when CGI filed an IPR
12 against the related '537 Patent, or at the very least by July 1, 2019, when Illumina served them with
13 the complaint alleging infringement of the '537 Patent.

14 **Direct Infringement By MGI Ltd.**

15 182. MGI Ltd. directly infringes the '444 Patent pursuant to 35 U.S.C. § 271(a), literally
16 or under the doctrine of equivalents, because it is responsible for the use of DNBSEQ products in
17 the United States. Specifically, because MGI Ltd. claims to be the "leading manufacturer and
18 developer of BGI's proprietary NGS instrumentation," MGI Ltd. has used DNBSEQ products in
19 the United States. MGI Ltd.'s website states that its Silicon Valley, California facility has a "State-
20 of-the-art technology research and development base."

21 **Induced Infringement By MGI Ltd.**

22 183. MGI Ltd. is liable for the induced infringement of the '444 Patent pursuant to 35
23 U.S.C. § 271(b). Specifically, MGI Ltd. is actively, knowingly, and intentionally inducing
24 infringement of at least claims 3 of the '444 Patent through a range of activities related to the
25 DNBSEQ products, among other infringing acts. MGI Ltd. is responsible for substantia marketing
26 of BGI products, including DNBSEQ products, and is threatening to encourage and support the sale
27 of those products in the United States.

28

1 184. On information and belief, MGI Ltd. has induced infringement and will continue to
2 do so by offering to sell and selling its infringing CoolMPS™ sequencers and reagent kits, as it
3 announced recently. Ex. 39.

4 185. MGI Ltd. has induced infringement by controlling, alone or in concert with the other
5 Defendants, the design, manufacture, and supply of DNBSEQ products with the knowledge and
6 specific intent that users, including other Defendants, will use the DNBSEQ products to infringe by
7 using the patented nucleotides of the '444 Patent. For example, MGI Ltd. is the “legal manufacturer”
8 of DNBSEQ products. MGI Ltd. controls the website on which DNBSEQ products are marketed
9 and sold. MGI Ltd. controls the website that hosts *inter alia* the DNBSEQ User Manual(s), the
10 various reagent kit manuals, technical handbooks, product detail sheets, and technical specification
11 sheets. These materials direct users, including other Defendants, to use DNBSEQ systems and
12 DNBSEQ reagent kits in an infringing manner. By providing reagent kits and directing users,
13 including other Defendants, to purchase these reagent kits for use on DNBSEQ systems, MGI Ltd.
14 induces infringement.

15 186. MGI Ltd. has induced infringement by controlling, alone or in concert with the other
16 Defendants, the design, manufacture, and supply of materials or apparatuses to be used with the
17 DNBSEQ systems, including for example the MGISP-960, with the knowledge and specific intent
18 that users, including other Defendants, will use these products to infringe by using the patented
19 nucleotides of the '444 Patent.

20 187. MGI Ltd. has induced infringement by controlling, alone or in concert with the other
21 Defendants, the design, manufacture, and supply of various DNBSEQ reagent kits (with both
22 standardMPS and CoolMPS™ chemistry), with the knowledge and specific intent that users,
23 including other Defendants, will use these products to infringe by using the patented nucleotides of
24 the claimed inventions. For example, Ms. Abigail Frank, Field Service Engineer at MGI represents
25 that her job entails “servic[ing] NGS instruments and lab automated work stations at Complete
26 Genomics in San Jose, as well as external customers throughout North and South America.” Ex. 28.

1 188. MGI Ltd. has induced infringement by users of its products, including the other
2 Defendants, by disseminating promotional and marketing materials relating to DNBSEQ products
3 with the knowledge and specific intent that users will use DNBSEQ products to infringe by using
4 the patented nucleotides of the '444 Patent. MGI Ltd. controls the website that hosts promotional
5 and marketing materials.

6 189. MGI Ltd. has induced infringement by distributing other instructional materials,
7 product manuals, technical materials, and bioinformatics software platforms with the knowledge
8 and the specific intent to encourage and facilitate the infringing use of their DNBSEQ products. For
9 example, MGI Ltd. is responsible for the DNBSEQ User Manuals, the various reagent kit manuals,
10 technical handbooks, product detail sheets, and technical specification sheets, all of which are
11 available on the MGI Ltd.'s website. These materials direct users, including other Defendants, to
12 use DNBSEQ products in an infringing manner. For example, the DNBSEQ reagent kit handbooks
13 state that the kits are for preparation of DNA sequencing using DNBSEQ systems, which are sold
14 with pre-programmed software protocols that control operation of DNBSEQ sequencers so that each
15 use of the DNBSEQ sequencer infringes. By providing reagent kits and directing users, including
16 other Defendants, to purchase these reagent kits for use on DNBSEQ systems, MGI Ltd. induces
17 infringement.

18 190. Further, MGI Ltd. induces the infringement of other Defendants by participating in,
19 supporting, and encouraging their use of DNBSEQ products at the San Jose facility and elsewhere
20 in the United States.

21 191. MGI Ltd. acted with knowledge that the induced acts constitute infringement. MGI
22 Ltd. acted with knowledge of or willful blindness with regards to users' underlying infringement.

23 **Contributory Infringement By MGI Ltd.**

24 192. MGI Ltd. is liable for contributory infringement of the '444 Patent pursuant to 35
25 U.S.C. § 271(c). Specifically, MGI Ltd. contributes to the infringement of the '444 Patent by,
26 without authority, supplying within the United States, materials and apparatuses for using the
27 claimed invention of the '444 Patent, including at least DNBSEQ systems, the DNBSEQ Sample
28

1 Preparation Systems, and the associated reagent kits (with both standardMPS and CoolMPSTTM
2 chemistry). These products constitute a material part of the claimed invention of the '444 Patent.

3 193. MGI Ltd. knows that DNBSEQ systems, materials and apparatuses designed for use
4 with DNBSEQ systems, and the associated reagent kits, constitute material parts of the inventions
5 of the '444 Patent and that they are not a staple article or commodity of commerce suitable for
6 substantial non-infringing use. As documented above, DNBSEQ systems are specialized
7 sequencing instruments that carry out a specific method for sequencing DNA using either
8 standardMPS or CoolMPSTTM chemistry. As such, neither DNBSEQ systems, the materials or
9 apparatuses specifically designed for use with DNBSEQ systems, nor the DNBSEQ reagent kits are
10 a staple article of commerce suitable for substantial non-infringing use. MGI Ltd. knows that
11 DNBSEQ systems, the materials or apparatuses specifically designed for use with DNBSEQ
12 systems, and the DNBSEQ reagents kits are not staple articles or commodities of commerce suitable
13 for substantial non-infringing use because these products have no use apart from infringing the '444
14 Patent. MGI Ltd. knows that the use of its products by other Defendants and third parties infringes
15 the '444 Patent and supplies them anyway.

16 **Infringement Under 271(f) By MGI Ltd.**

17 194. On information and belief, MGI Ltd. has supplied in or from the United States
18 DNBSEQ products and/or components thereof, which comprise all or a substantial portion of the
19 components of the claims of the '444 Patent, where such components are uncombined in whole or
20 in part, in such manner as to actively induce the combination of such components outside of the
21 United States in a manner that would infringe the patent if such combination occurred within the
22 United States, in violation of 35 USC § 271(f)(1). Alternatively, on information and belief, MGI
23 Ltd. has supplied in or from the United States components of DNBSEQ products, which products
24 are especially made or especially adapted for use in practicing the claims of the '444 Patent and are
25 not staple articles or commodities of commerce suitable for substantial noninfringing use, knowing
26 that such component is so made or adapted and intending that such component will be combined
27
28

1 outside of the United States in a manner that would infringe the patent if such combination occurred
2 within the United States, in violation of 35 USC § 271(f)(2).

3 **Willful Infringement By MGI Ltd.**

4 195. As set forth throughout this Complaint, MGI Ltd. has acted willfully and egregiously
5 in performing the acts of infringement and threatening to perform the acts of infringement identified
6 in this Complaint. MGI Ltd.'s infringement of the '444 Patent has been and is deliberate and willful
7 and constitutes egregious misconduct. On information and belief, MGI Ltd., with the other
8 Defendants, monitors Illumina's patents, including the enforcement of related patents against
9 Defendants and others, in both the U.S. and abroad, and is or should be aware of the '444 Patent
10 since at least July 19, 2007, when the patent application was first published. Alternatively, MGI
11 Ltd. was or should have been aware of the '444 Patent at least by October 5, 2017, when CGI filed
12 an IPR against the related '537 Patent, or at the very least by July 1, 2019, when Illumina served
13 them with the complaint alleging infringement of the '537 Patent. Despite this, MGI Ltd. continues
14 to perform the acts of infringement and threatens to perform the acts of infringement identified in
15 this Complaint. In performing the acts of infringement and threatening to perform the acts of
16 infringement identified in this Complaint, MGI Ltd. has been willfully blind to its ongoing
17 infringement.

18 196. MGI Ltd's infringement of the '444 Patent has injured Illumina in its business and
19 property rights. Illumina is entitled to recovery of monetary damages for such injuries pursuant to
20 35 U.S.C. § 284 in an amount to be determined at trial. Illumina deserves treble damages and the
21 reimbursement of its fees and costs as set forth in 35 U.S.C. §§ 284 and 285.

22 197. MGI Ltd.'s infringement of the '444 Patent has caused irreparable harm to Illumina
23 and will continue to cause such harm unless and until their infringing activities are enjoined by this
24 Court.

25 **MGI Americas' Infringement of the '444 Patent**

26 198. Illumina's patented sequencing technology is well-known and has been enforced
27 very publicly against infringers. Together with the other Defendants, MGI Americas has copied that
28

1 technology. On information and belief, MGI Americas has had knowledge of the '444 Patent since
2 at least July 19, 2007, when the patent application was first published. Alternatively, MGI Americas
3 was or should have been aware of the '444 Patent at least by October 5, 2017, when CGI filed an
4 IPR against the related '537 Patent, or at the very least by July 1, 2019, when Illumina served them
5 with the complaint alleging infringement of the '537 Patent.

6 **Direct Infringement By MGI Americas**

7 199. MGI Americas has and is directly infringing the '444 Patent pursuant to 35 U.S.C. §
8 271(a), literally or under the doctrine of equivalents, by using DNBSEQ products within the United
9 States. Specifically, because MGI Americas claims to be the “leading manufacturer and developer
10 of BGI’s proprietary NGS instrumentation,” MGI Americas has used DNBSEQ products in the
11 United States. MGI Americas’ Silicon Valley, California facility has a “State-of-the-art technology
12 research and development base.”

13 **Induced Infringement By MGI Americas**

14 200. MGI Americas is liable for their induced infringement of the '444 Patent pursuant to
15 35 U.S.C. § 271(b). Specifically, MGI Americas has and is actively, knowingly, and intentionally
16 inducing of at least claims 3 of the '444 Patent through a range of activities related to DNBSEQ
17 products, among other infringing acts. MGI Americas is responsible for substantial marketing of
18 BGI products, including DNBSEQ products, and is threatening to encourage and support the sale
19 of those products in the United States.

20 201. On information and belief, MGI Americas has induced infringement and will
21 continue to do so by offering to sell and selling its infringing sequencing instruments and
22 CoolMPS™ reagents, as it recently provided notice it would do. Ex. 40. On information and belief,
23 MGI Americas will induce infringement when it begins to make infringing sequencing instruments
24 and standardMPS reagents available to key opinion leaders on a no cost trial basis in the United
25 States.

26 202. MGI Americas has induced infringement by controlling, alone or in concert with the
27 other Defendants, the design, manufacture and supply of DNBSEQ products with the knowledge
28

1 and specific intent that users, including other Defendants, will use the DNBSEQ products to infringe
2 by using the patented nucleotides of the '444 Patent. MGI Americas distributes, *inter alia*, the
3 DNBSEQ User Manual(s), the various reagent kit manuals, technical handbooks, product detail
4 sheets, and technical specification sheets. These materials direct users, including other Defendants,
5 to use DNBSEQ systems and DNBSEQ reagent kits in an infringing manner. By providing reagent
6 kits and directing users to purchase these reagent kits for use on DNBSEQ systems, MGI Americas
7 induces infringement.

8 203. MGI Americas has induced infringement by distributing materials or apparatuses to
9 be used with the DNBSEQ Systems, including for example the MGISP-960, with the knowledge
10 and specific intent that users, including the other Defendants, will use these products to infringe by
11 using the patented nucleotides of the '444 Patent.

12 204. MGI Americas has induced infringement by distributing DNBSEQ reagent kits (with
13 both standardMPS and CoolMPSTTM chemistry) with the knowledge and specific intent that users,
14 including other Defendants, will use these products to infringe by using the patented nucleotides of
15 the '444 Patent. For example, Ms. Abigail Frank, Field Service Engineer at MGI represents that her
16 job entails “servic[ing] NGS instruments and lab automated work stations at Complete Genomics
17 in San Jose, as well as external customers throughout North and South America.” Ex. 28.

18 205. MGI Americas has induced infringement by users of its products, including other
19 Defendants, by disseminating promotional and marketing materials relating to DNBSEQ products
20 with the knowledge and specific intent that users will use DNBSEQ products to infringe by using
21 the patented nucleotides of the '444 Patent.

22 206. MGI Americas has induced infringement by distributing other instructional
23 materials, product manuals, technical materials, and bioinformatics software platforms with the
24 knowledge and the specific intent to encourage and facilitate the infringing use of their DNBSEQ
25 products. For example, MGI Americas is responsible for the DNBSEQ User Manuals, the various
26 reagent kit manuals, technical handbooks, product detail sheets, and technical specification sheets.
27 These materials direct users, including other Defendants, to use DNBSEQ products in an infringing
28

1 manner. For example, the DNBSEQ reagent kit handbooks state that the kits are for preparation of
2 DNA sequencing using DNBSEQ systems, which are sold with pre-programmed software protocols
3 that control operation of DNBSEQ sequencers so that each use of the DNBSEQ sequencer infringes.
4 By providing reagent kits and directing users, including other Defendants, to purchase these reagent
5 kits for use on DNBSEQ systems, MGI Americas induces infringement.

6 207. Further, MGI Americas induces the infringement of other Defendants by
7 participating in, supporting, and encouraging their use of DNBSEQ products at the San Jose facility
8 and elsewhere in the United States.

9 208. MGI Americas acted with knowledge that the induced acts constitute infringement.
10 MGI Americas acted with knowledge of or willful blindness with regards to users' underlying
11 infringement.

12 **Contributory Infringement By MGI Americas**

13 209. MGI Americas is liable for contributory infringement of the '444 Patent pursuant to
14 35 U.S.C. § 271(c). Specifically, MGI Americas has and is contributing to the infringement of the
15 '444 Patent by, without authority, distributing within the United States, materials and apparatuses
16 for using the claimed invention of the '444 Patent, including at least DNBSEQ systems, the
17 DNBSEQ Sample Preparation Systems, and the associated reagent kits (with both standardMPS and
18 CoolMPS™ chemistry). These products constitute a material part of the claimed invention of the
19 '444 Patent.

20 210. MGI Americas knows that DNBSEQ systems, materials and apparatuses designed
21 for use with DNBSEQ systems, and the associated reagent kits, constitute material parts of the
22 inventions of the '444 Patent and that they are not a staple article or commodity of commerce
23 suitable for substantial non-infringing use. As documented above, DNBSEQ systems are specialized
24 sequencing instruments that carry out a specific method for sequencing DNA using either
25 standardMPS or CoolMPS™ chemistry. As such, neither DNBSEQ systems, the materials or
26 apparatuses specifically designed for use with DNBSEQ systems, nor the DNBSEQ reagent kits are
27 a staple article of commerce suitable for substantial non-infringing use. MGI Americas knows that
28

1 DNBSEQ systems, the materials or apparatuses specifically designed for use with DNBSEQ
2 systems, and the DNBSEQ reagents kits are not staple articles or commodities of commerce suitable
3 for substantial non-infringing use because these products have no use apart from infringing the '444
4 Patent. MGI Americas knows that the use of its products by other Defendants and third parties
5 infringes the '444 Patent and supplies them anyway.

6 **Infringement Under 271(f) By MGI Americas**

7 211. On information and belief, MGI Americas has supplied in or from the United States
8 DNBSEQ products and/or components thereof, which comprise all or a substantial portion of the
9 components of the claims of the '444 Patent, where such components are uncombined in whole or
10 in part, in such manner as to actively induce the combination of such components outside of the
11 United States in a manner that would infringe the patent if such combination occurred within the
12 United States, in violation of 35 USC § 271(f)(1). Alternatively, on information and belief, MGI
13 Americas has supplied in or from the United States components of DNBSEQ products, which
14 products are especially made or especially adapted for use in practicing the claims of the '444 Patent
15 and are not staple articles or commodities of commerce suitable for substantial noninfringing use,
16 knowing that such component is so made or adapted and intending that such component will be
17 combined outside of the United States in a manner that would infringe the patent if such combination
18 occurred within the United States, in violation of 35 USC § 271(f)(2).

19 **Willful Infringement By MGI Americas**

20 212. As set forth throughout this Complaint, MGI Americas has acted willfully and
21 egregiously in performing the acts of infringement and threatening to perform the acts of
22 infringement identified in this Complaint. MGI Americas' infringement of the '444 Patent has been
23 and is deliberate and willful and constitutes egregious misconduct. On information and belief, MGI
24 Americas, with the other Defendants, monitors Illumina's patents, including the enforcement of
25 related patents against Defendants and others, in both the U.S. and abroad, and is or should be aware
26 of the '444 Patent since at least July 19, 2007, when the patent application first published.
27 Alternatively, MGI Americas was or should have been aware of the '444 Patent at least by October
28

1 5, 2017, when CGI filed an IPR against the related '537 Patent, or at the very least by July 1, 2019,
2 when Illumina served them with the complaint alleging infringement of the '537 Patent. Despite
3 this, MGI Americas continues to perform the acts of infringement and threatens to perform the acts
4 of infringement identified in this Complaint. In performing the acts of infringement and threatening
5 to perform the acts of infringement identified in this Complaint, MGI Americas has been willfully
6 blind to its ongoing infringement.

7 213. MGI Americas' infringement of the '444 Patent has injured Illumina in its business
8 and property rights. Illumina is entitled to recovery of monetary damages for such injuries pursuant
9 to 35 U.S.C. § 284 in an amount to be determined at trial. Illumina deserves treble damages and the
10 reimbursement of its fees and costs as set forth in 35 U.S.C. §§ 284 and 285.

11 214. MGI Americas' infringement of the '444 Patent has caused irreparable harm to
12 Illumina and will continue to cause such harm unless and until their infringing activities are enjoined
13 by this Court.

14 **CGI's Infringement of the '444 Patent**

15 215. Illumina's patented sequencing technology is well-known and has been enforced
16 very publicly against infringers. Together with the other Defendants, CGI has copied that
17 technology. On information and belief, CGI has had knowledge of the '444 Patent since at least July
18 19, 2007, when the patent application first published. Alternatively, CGI was or should have been
19 aware of the '444 Patent at least by October 5, 2017, when CGI filed an IPR against the related '537
20 Patent, or at the very least by July 1, 2019, when Illumina served them with the complaint alleging
21 infringement of the '537 Patent.

22 **Direct Infringement By CGI**

23 216. CGI has and is directly infringing the '444 Patent pursuant to 35 U.S.C. § 271(a),
24 literally or under the doctrine of equivalents, by using DNBSEQ products within the United States,
25 among other infringing acts. CGI has installed DNBSEQ systems at CGI locations in the United
26 States, including its San Jose, California facility. CGI has used the DNBSEQ in the United States.

1 **Induced Infringement by CGI**

2 217. CGI is liable for their induced infringement of the '444 Patent pursuant to 35 U.S.C.
3 § 271(b). Specifically, CGI has and is actively, knowingly, and intentionally inducing infringement
4 of at least claim 3 of the '444 Patent through a range of activities related to DNBSEQ products,
5 among other infringing acts. CGI is responsible for substantial marketing of BGI products, including
6 DNBSEQ products, and is threatening to encourage and support the sale of those products in the
7 United States.

8 218. CGI has induced infringement by controlling, alone or in concert with the other
9 Defendants, the design, manufacture, and supply of materials or apparatuses to be used with the
10 DNBSEQ systems, including for example the MGISP-960, with the knowledge and specific intent
11 that users, including other Defendants, will use these products to infringe by using the patented
12 nucleotides of the '444 Patent.

13 219. CGI has induced infringement by controlling, with the other Defendants, the design,
14 manufacture, and supply of various DNBSEQ reagent kits (with both standardMPS and CoolMPSTM
15 chemistry), with the knowledge and specific intent that users, including other Defendants, will use
16 these products to infringe by using the patented nucleotides of the '444 Patent.

17 220. CGI has induced infringement by disseminating promotional and marketing
18 materials relating to DNBSEQ products with the knowledge and specific intent that users, including
19 other Defendants, will use the DNBSEQ products to infringe by using the patented nucleotides of
20 the '444 Patent.

21 221. CGI has induced infringement by creating distribution channels for the
22 aforementioned DNBSEQ products, materials and apparatuses for use with the DNBSEQ systems,
23 and the associated reagent kits, with the knowledge and specific intent that users, including other
24 Defendants, will use these products to infringe by using the patented nucleotides of the '444 Patent.

25 222. CGI has induced infringement by distributing other instructional materials, product
26 manuals, technical materials, and bioinformatics software platforms with the knowledge and the
27 specific intent to encourage and facilitate the infringing use of their DNBSEQ products. These
28

1 materials direct users, including other Defendants, to use DNBSEQ products in an infringing
2 manner. For example, the DNBSEQ reagent kit manuals state that the kits are for preparation of
3 DNA sequencing using DNBSEQ systems, which are sold with preprogrammed software protocols
4 that control operation of DNBSEQ sequencers so that each use of the DNBSEQ sequencer infringes.
5 By providing reagent kits and directing users to purchase these reagent kits for use on DNBSEQ
6 systems, CGI induces infringement.

7 223. Further, CGI induces the infringement of other Defendants by participating in,
8 supporting, and encouraging their use of DNBSEQ products at the San Jose facility and elsewhere
9 in the United States.

10 224. CGI acted with knowledge that the induced acts constitute infringement. CGI acted
11 with knowledge of or willful blindness with regards to users' underlying infringement.

12 **Contributory Infringement by CGI**

13 225. CGI is liable for contributory infringement of the '444 Patent pursuant to 35 U.S.C.
14 § 271(c). Specifically, CGI has and is contributing to infringement of the '444 Patent by, without
15 authority, supplying within the United States, materials and apparatuses for using the claimed
16 invention of the '444 Patent, including at least DNBSEQ systems, the DNBSEQ Sample Preparation
17 Systems, and the associated reagent kits (with both standardMPS and CoolMPSTTM chemistry).
18 These products constitute a material part of the claimed invention of the '444 Patent.

19 226. CGI knows that DNBSEQ systems, materials and apparatuses designed for use with
20 DNBSEQ systems, and the DNBSEQ reagent kits, constitute material parts of the inventions of the
21 '444 Patent and that they are not a staple article or commodity of commerce suitable for substantial
22 non-infringing use. As documented above, DNBSEQ systems are specialized sequencing
23 instruments that carry out a specific method for sequencing DNA using either standardMPS or
24 CoolMPSTTM chemistry. As such, neither DNBSEQ systems, the materials or apparatuses
25 specifically designed for use with DNBSEQ systems, nor the DNBSEQ reagent kits are a staple
26 article of commerce suitable for substantial non-infringing use. CGI knows that DNBSEQ systems,
27 the materials or apparatuses specifically designed for use with DNBSEQ systems, and the DNBSEQ
28

1 reagents kits are not staple articles or commodities of commerce suitable for substantial non-
2 infringing use because these products have no use apart from infringing the '444 Patent. CGI knows
3 that the use of its products by other Defendants and third parties infringes the '444 Patent and
4 supplies them anyway.

5 **Infringement Under 271(f) By CGI**

6 227. On information and belief, CGI has supplied in or from the United States DNBSEQ
7 products and/or components thereof, which comprise all or a substantial portion of the components
8 of the claims of the '444 Patent, where such components are uncombined in whole or in part, in
9 such manner as to actively induce the combination of such components outside of the United States
10 in a manner that would infringe the patent if such combination occurred within the United States,
11 in violation of 35 USC § 271(f)(1). Alternatively, on information and belief, CGI has supplied in or
12 from the United States components of DNBSEQ products, which products are especially made or
13 especially adapted for use in practicing the claims of the '444 Patent and are not staple articles or
14 commodities of commerce suitable for substantial noninfringing use, knowing that such component
15 is so made or adapted and intending that such component will be combined outside of the United
16 States in a manner that would infringe the patent if such combination occurred within the United
17 States, in violation of 35 USC § 271(f)(2).

18 **Willful Infringement By CGI**

19 228. As set forth throughout this Complaint, CGI has acted willfully and egregiously in
20 performing the acts of infringement and threatening to perform the acts of infringement identified
21 in this Complaint. CGI's infringement of the '444 Patent has been and is deliberate and willful and
22 constitutes egregious misconduct. On information and belief, CGI, with the other Defendants,
23 monitors Illumina's patents, including the enforcement of related patents against Defendants and
24 others, in both the U.S. and abroad, and is or should be aware of the '444 Patent since at least July
25 19, 2007, when the patent application first published. Alternatively, CGI was or should have been
26 aware of the '444 Patent at least by October 5, 2017, when CGI filed an IPR against the related '537
27 Patent, or at the very least by July 1, 2019, when Illumina served them with the complaint alleging
28

1 infringement of the '537 Patent. Despite this, CGI continues to perform the acts of infringement and
2 threatens to perform the acts of infringement identified in this Complaint. In performing the acts of
3 infringement and threatening to perform the acts of infringement identified in this Complaint, CGI
4 has been willfully blind to its ongoing infringement.

5 229. CGI's infringement of the '444 Patent has injured Illumina in its business and
6 property rights. Illumina is entitled to recovery of monetary damages for such injuries pursuant to
7 35 U.S.C. § 284 in an amount to be determined at trial. Illumina deserves treble damages and the
8 reimbursement of its fees and costs as set forth in 35 U.S.C. §§ 284 and 285.

9 230. CGI's infringement of the '444 Patent has caused irreparable harm to Illumina and
10 will continue to cause such harm unless and until their infringing activities are enjoined by this
11 Court.

12 **COUNT III**

13 **Infringement of U.S. Patent No. 10,480,025 ("'025 Patent")**

14 231. Illumina re-alleges and incorporates by this reference the allegations contained
15 throughout this Complaint into each allegation of infringement and request for remedies.

16 232. Defendants and users of Defendants' infringing products have and continue to
17 directly infringe, literally or by equivalence, claim 1 of the '025 Patent by practicing one or more
18 claims of the '025 Patent by using the DNBSEQ products and other infringing products. The
19 following allegations identify the acts of direct, induced and contributory infringement by each
20 named defendant as supplemented by the allegations throughout this Complaint.

21 **BGI Ltd.'s Infringement of the '025 Patent**

22 233. Illumina's patented sequencing technology is well-known and has been enforced
23 very publicly against infringers. Together with the other Defendants, BGI Ltd. has copied that
24 technology. On information and belief, BGI Ltd. has had knowledge of the '025 Patent at least since
25 January 5, 2017, when the patent application was first published. Alternatively, BGI Ltd. was or
26 should have been aware of the '025 Patent at least by October 5, 2017, when CGI filed an IPR
27 against the related '537 Patent.
28

1 234. BGI Ltd. has failed to resist the temptation of importing its infringing technology
2 into the large United States market and has done so in the face of the '025 Patent. BGI Ltd. knows
3 that its activities in connection with the DNBSEQ products will infringe the '025 Patent.

4 **Direct Infringement By BGI Ltd.**

5 235. BGI Ltd. has directly infringed and continues to directly infringe the '025 Patent
6 pursuant to 35 U.S.C. § 271(a), literally or under the doctrine of equivalents, by importing DNBSEQ
7 products into the United States and using DNBSEQ products with standardMPS chemistry within
8 the United States, among other infringing acts. Specifically, BGI Ltd. has used DNBSEQ products
9 in the United States at its San Jose, California facility.

10 236. Alternatively, BGI Ltd. directly infringes because it directs and controls other BGI
11 entities with respect to their use of DNBSEQ products with standardMPS chemistry in the United
12 States. Upon information and belief, BGI Ltd. has directed, either directly or indirectly, its
13 subsidiaries and affiliates, including the other Defendants, to develop, install, and use the MGISEQ-
14 2000 and BGISEQ-500 in its San Jose, California facility. For example, BGI Ltd.'s own press
15 release asserts that "the BGISEQ-500 NGS platform [was] developed by its [sic] Complete
16 Genomics Subsidiary in Silicon Valley, California." Ex. 7 at 3. BGI Ltd.'s direction and control of
17 this and the other infringing conduct of its subsidiaries set forth herein can be reasonably inferred
18 from BGI's public documents and activity.

19 237. For example, BGI Ltd.'s website represents that it has multiple locations in
20 California, including San Francisco, San Jose, Los Angeles, and San Diego. Ex. 50 (available at:
21 <http://en.genomics.cn/en-global.html> (last accessed: February 25, 2020)). It touts that it has both
22 "representative offices" and "laboratories" in California, thus suggesting that it controls the
23 activities in those offices notwithstanding that they may be formally associated with another BGI
24 entity. In addition, CGI identified BGI Ltd. as a real-party-in-interest in CGI's IPR directed to the
25 '537 Patent, thus indicating that BGI ultimately directs and controls the BGI Group's activity that
26 infringes the '025 Patent.

1 238. Further, BGI Ltd.’s executives travel to California to manage and promote the
2 infringing products. This includes BGI Ltd.’s presence at industry and trade shows, including
3 SynBioBeta SF 2017 in San Francisco, California (Oct. 3-5, 2017); J.P. Morgan Healthcare
4 Conference in San Francisco, California (Jan. 8-11, 2018); Plant & Animal Genome Conference
5 (“PAG”) XXVI in San Diego, California (Jan. 13-17, 2018); American Society of Human Genetics
6 2018 in San Diego, California (Oct. 16-20, 2018); and PAG XXVII in San Diego, California (Jan.
7 12-16, 2019). Exs. 51, 7-10. For example, BGI Ltd.’s CEO, Ye Yin, traveled to the Northern District
8 of California to promote the accused products at the J.P. Morgan Conference in January 2018. Ex.
9 7. Indeed, BGI Ltd.’s executives often travel to this District in order to manage and direct the
10 infringing activity.

11 **Induced Infringement by BGI Ltd.**

12 239. BGI Ltd. is liable for the induced infringement of the ’025 Patent pursuant to 35
13 U.S.C. § 271(b). Specifically, BGI Ltd. has and is actively, knowingly, and intentionally inducing
14 infringement of at least claim 1 of the ’025 Patent through a range of activities related to the
15 DNBSEQ systems with standardMPS chemistry. BGI Ltd. is responsible for substantial marketing
16 of BGI products, including DNBSEQ products, and is threatening to encourage and support the sale
17 of those products in the United States.

18 240. BGI Ltd. has induced infringement by controlling, alone or in concert with other
19 Defendants, the design, manufacture, and supply of DNBSEQ systems with standardMPS chemistry
20 with the knowledge and specific intent that users, including other Defendants, will use the DNBSEQ
21 systems to infringe by using the patented nucleotides of the ’025 Patent. For example, BGI has
22 controlled, alone or in concert with the other Defendants, the design, manufacture, and supply of
23 DNBSEQ systems such that the DNBSEQ systems have pre-programmed software protocols that
24 control operation of the DNBSEQ systems so that users, including other Defendants, are given the
25 sole option of operating the DNBSEQ systems in a manner that infringes.

26 241. BGI has induced infringement by controlling, alone or in concert with the other
27 Defendants, the design, manufacture, and supply of materials or apparatuses to be used with the
28

1 DNBSEQ systems, including for example the MGISP-960, with the knowledge and specific intent
2 that users, including other Defendants, will use these products to infringe by using the patented
3 nucleotides of the '025 Patent.

4 242. BGI Ltd. has induced infringement by controlling, alone or in concert with other
5 Defendants, the design, manufacture, and supply of various reagent kits (which use specialized
6 labeled nucleotides), including for example the DNBSEQ-G400RS High-throughput Rapid
7 Sequencing Set (FCS SE100) which contains all reagents (including dNTPs that are needed to
8 perform DNA sequencing on the DNBSEQ-G400RS), with the knowledge and specific intent that
9 users, including the other Defendants, will use these products to infringe by using the patented
10 nucleotides of the '025 Patent.

11 243. BGI Ltd. has induced infringement by disseminating promotional and marketing
12 materials relating to the DNBSEQ systems with standardMPS chemistry with the knowledge and
13 specific intent that users, including other Defendants, will use these sequencing instruments to
14 infringe by using the patented nucleotides of the '025 Patent. For example, BGI Ltd. CEO, Ye Yin,
15 promoted the BGISEQ-500 at the J.P. Morgan Conference in 2018.

16 244. BGI Ltd. has induced infringement by distributing other instructional materials,
17 product manuals, technical materials, and bioinformatics software platforms with the knowledge
18 and the specific intent to encourage and facilitate the infringing use of their DNBSEQ products with
19 standardMPS chemistry by others, including the other Defendants. For example, BGI Ltd. is
20 responsible for the DNBSEQ User Manuals, the various reagent kit manuals, technical handbooks,
21 product detail sheets, and technical specification sheets. These materials direct users to use
22 DNBSEQ products in an infringing manner.

23 245. Further, BGI Ltd. induces the infringement of the other Defendants by directing,
24 participating in, supporting, and encouraging their use of the DNBSEQ products with standardMPS
25 chemistry at the San Jose facility and elsewhere in the United States.

26
27
28

1 246. BGI Ltd. performed all these acts with knowledge that the induced acts constitute
2 infringement. At a minimum, BGI Ltd. acted with knowledge of or willful blindness with regards
3 to users' underlying infringement.

4 **Contributory Infringement By BGI Ltd.**

5 247. BGI Ltd. is liable for contributory infringement of the '025 Patent pursuant to 35
6 U.S.C. § 271(c). Specifically, BGI Ltd. has and is contributing to the infringement of the '025 Patent
7 by, without authority, supplying within the United States, materials and apparatuses for practicing
8 the claimed invention of the '025 Patent, including at least DNBSEQ systems, the DNBSEQ Sample
9 Preparation Systems, and the DNBSEQ reagent kits (which use specialized labeled nucleotides).
10 These products constitute a material part of the claimed invention of the '025 Patent.

11 248. BGI Ltd. knows that DNBSEQ systems, materials and apparatuses designed for use
12 with DNBSEQ systems, and the DNBSEQ reagent kits with standardMPS chemistry, constitute
13 material parts of the inventions of the '025 Patent and that they are not a staple article or commodity
14 of commerce suitable for substantial non-infringing use. As documented above, DNBSEQ systems
15 are specialized sequencing instruments that carries out a specific method for sequencing DNA using
16 specific labeled nucleotides. As such, neither DNBSEQ systems, the materials or apparatuses
17 specifically designed for use with DNBSEQ systems, nor the DNBSEQ reagent kits are a staple
18 article of commerce suitable for substantial non-infringing use. BGI Ltd. knows that DNBSEQ
19 systems, the materials or apparatuses specifically designed for use with DNBSEQ systems, and the
20 DNBSEQ reagents kits with standardMPS chemistry are not staple articles or commodities of
21 commerce suitable for substantial non-infringing use because these products have no use apart from
22 infringing the '025 Patent. BGI Ltd. knows that the use of its products by other Defendants and
23 third parties infringes the '025 Patent and it supplies them anyway.

24 **Infringement Under 271(f) By BGI Ltd.**

25 249. On information and belief, BGI Ltd. has supplied in or from the United States the
26 DNBSEQ products and/or components thereof, which comprise all or a substantial portion of the
27 components of the claims of the '025 Patent, where such components are uncombined in whole or
28

1 in part, in such manner as to actively induce the combination of such components outside of the
2 United States in a manner that would infringe the patent if such combination occurred within the
3 United States, in violation of 35 USC § 271(f)(1). Alternatively, on information and belief, BGI
4 Ltd. has supplied in or from the United States components of DNBSEQ products, which products
5 are especially made or especially adapted for use in practicing the claims of the '025 Patent and are
6 not staple articles or commodities of commerce suitable for substantial noninfringing use, knowing
7 that such component is so made or adapted and intending that such component will be combined
8 outside of the United States in a manner that would infringe the patent if such combination occurred
9 within the United States, in violation of 35 USC § 271(f)(2).

10 **Willful Infringement By BGI Ltd.**

11 250. As set forth throughout this Complaint, BGI Ltd. has acted willfully and egregiously
12 in performing the acts of infringement and threatening to perform the acts of infringement identified
13 in this Complaint. BGI Ltd.'s infringement of the '025 Patent has been and is deliberate and willful
14 and constitutes egregious misconduct. On information and belief, BGI Ltd., with the other
15 Defendants, monitors Illumina's patents, including the enforcement of related patents against
16 Defendants and others, in both the U.S. and abroad, and is or should be aware of the '025 Patent
17 since at least January 5, 2017, when the patent application first published. Alternatively, BGI Ltd.
18 was or should have been aware of the '025 Patent at least by October 5, 2017, when CGI filed an
19 IPR against the related '537 Patent. Despite this, BGI Ltd. continues to perform the acts of
20 infringement and threatens to perform the acts of infringement identified in this Complaint. In
21 performing the acts of infringement and threatening to perform the acts of infringement identified
22 in this Complaint, BGI Ltd. has been willfully blind to its ongoing infringement.

23 251. BGI Ltd.'s infringement of the '025 Patent has injured Illumina in its business and
24 property rights. Illumina is entitled to recovery of monetary damages for such injuries pursuant to
25 35 U.S.C. § 284 in an amount to be determined at trial. Illumina deserves treble damages and the
26 reimbursement of its fees and costs as set forth in 35 U.S.C. §§ 284 and 285.

1 252. BGI Ltd.'s infringement of the '025 Patent has caused irreparable harm to Illumina
2 and will continue to cause such harm unless and until their infringing activities are enjoined by this
3 Court.

4 **BGI Americas' Infringement of the '025 Patent**

5 253. Illumina's patented sequencing technology is well-known and has been enforced
6 very publicly against infringers. Together with the other Defendants, BGI Americas has copied that
7 technology. On information and belief, BGI Americas has had knowledge of the '025 Patent at least
8 since January 5, 2017, when the patent application was first published. Alternatively, BGI Americas
9 was or should have been aware of the '025 Patent at least by October 5, 2017, when CGI filed an
10 IPR against the related '537 Patent, or at the very least by July 1, 2019, when Illumina served them
11 with the complaint alleging infringement of the '537 Patent.

12 **Direct Infringement By BGI Americas**

13 254. BGI Americas has and is directly infringing the '025 Patent pursuant to 35 U.S.C. §
14 271(a), literally or under the doctrine of equivalents, by using DNBSEQ products with standardMPS
15 chemistry within the United States, among other infringing acts. Specifically, BGI Americas has
16 used DNBSEQ products with standardMPS chemistry in the United States at its San Jose, California
17 facility.

18 **Induced Infringement By BGI Americas**

19 255. BGI Americas is liable for their induced infringement of the '025 Patent pursuant to
20 35 U.S.C. § 271(b). Specifically, BGI Americas has and is actively, knowingly, and intentionally
21 inducing infringement of at least claim 1 of the '025 Patent through a range of activities related to
22 the DNBSEQ systems with standardMPS chemistry, among other things.

23 256. BGI Americas is inducing infringement by promoting the use of DNBSEQ products
24 with the knowledge and specific intent that users, including other Defendants, will use the DNBSEQ
25 products to infringe by using the patented nucleotides of the '025 Patent. BGI Americas is
26 responsible for substantial marketing of BGI products, including DNBSEQ products, and is
27 threatening to encourage and support the sale of those products in the United States.

28

1 257. BGI Americas is inducing infringement by disseminating promotional and marketing
2 materials relating to DNBSEQ products with the knowledge and specific intent that users, including
3 other Defendants, will use DNBSEQ products to infringe by using the patented nucleotides of the
4 '025 Patent.

5 258. BGI Americas is inducing infringement by distributing other instructional materials,
6 product manuals, technical materials, and bioinformatics software platforms with the knowledge
7 and the specific intent to encourage and facilitate the infringing use of their DNBSEQ products.
8 These materials direct users, including other Defendants, to use DNBSEQ products in an infringing
9 manner. By providing reagent kits for use on DNBSEQ systems, BGI Americas induces
10 infringement.

11 259. Further, BGI Americas induces the infringement of other Defendants by participating
12 in, supporting, and encouraging their use of DNBSEQ products with standardMPS chemistry at the
13 San Jose facility and elsewhere in the United States.

14 260. BGI Americas acted with knowledge that the induced acts constitute infringement.
15 BGI Americas acted with knowledge of or willful blindness with regards to users' underlying
16 infringement.

17 **Contributory Infringement by BGI Americas**

18 261. BGI Americas is liable for contributory infringement of the '025 Patent pursuant to
19 35 U.S.C. § 271(c). Specifically, BGI Americas contributes to the infringement of the '025 Patent
20 by, without authority, supplying within the United States materials and apparatuses for practicing
21 the claimed invention of the '025 Patent, including at least DNBSEQ systems, the DNBSEQ Sample
22 Preparation Systems, and the associated reagent kits (which use specialized labeled nucleotides).
23 These products constitute a material part of the claimed inventions of the '025 Patent.

24 262. BGI Americas knows that DNBSEQ systems, materials and apparatuses designed for
25 use with DNBSEQ systems, and the DNBSEQ reagent kits with standardMPS chemistry, constitute
26 material parts of the inventions of the '025 Patent and that they are not a staple article or commodity
27 of commerce suitable for substantial non-infringing use. As documented above, DNBSEQ systems
28

1 are specialized sequencing instruments that carry out a specific method for sequencing DNA using
2 specific labeled nucleotides. As such, neither DNBSEQ systems, the materials or apparatuses
3 specifically designed for use with DNBSEQ systems, nor the DNBSEQ reagent kits with
4 standardMPS chemistry are a staple article of commerce suitable for substantial non-infringing use.
5 BGI Americas knows that DNBSEQ systems, the materials or apparatuses specifically designed for
6 use with DNBSEQ systems, and the DNBSEQ reagents kits with standardMPS chemistry are not
7 staple articles or commodities of commerce suitable for substantial non-infringing use because these
8 products have no use apart from infringing the '025 Patent. BGI Americas knows that the use of its
9 products by other Defendants and third parties infringes the '025 Patent and supplies them anyway.

10 **Infringement Under 271(f) By BGI Americas**

11 263. On information and belief, BGI Americas has supplied in or from the United States
12 DNBSEQ products and/or components thereof, which comprise all or a substantial portion of the
13 components of the claims of the '025 Patent, where such components are uncombined in whole or
14 in part, in such manner as to actively induce the combination of such components outside of the
15 United States in a manner that would infringe the patent if such combination occurred within the
16 United States, in violation of 35 USC § 271(f)(1). Alternatively, on information and belief, BGI
17 Americas has supplied in or from the United States components of DNBSEQ products, which
18 products are especially made or especially adapted for use in practicing the claims of the '025 Patent
19 and are not staple articles or commodities of commerce suitable for substantial noninfringing use,
20 knowing that such component is so made or adapted and intending that such component will be
21 combined outside of the United States in a manner that would infringe the patent if such combination
22 occurred within the United States, in violation of 35 USC § 271(f)(2).

23 **Willful Infringement By BGI Americas**

24 264. As set forth throughout this Complaint, BGI Americas has acted willfully and
25 egregiously in performing the acts of infringement and threatening to perform the acts of
26 infringement identified in this Complaint. BGI Americas' infringement of the '025 Patent has been
27 and is deliberate and willful and constitutes egregious misconduct. On information and belief, BGI
28

1 Americas, with the other Defendants, monitors Illumina's patents, including the enforcement of
2 related patents against Defendants and others, in both the U.S. and abroad, and is or should be aware
3 of the '025 Patent since at least January 5, 2017, when the patent application first published.
4 Alternatively, BGI Americas was or should have been aware of the '025 Patent at least by October
5 5, 2017, when CGI filed an IPR against the related '537 Patent, or at the very least by July 1, 2019,
6 when Illumina served them with the complaint alleging infringement of the '537 Patent. Despite
7 this, BGI Americas continues to perform the acts of infringement and threatens to perform the acts
8 of infringement identified in this Complaint. In performing the acts of infringement and threatening
9 to perform the acts of infringement identified in this Complaint, BGI Americas has been willfully
10 blind to its ongoing infringement.

11 265. BGI Americas' infringement of the '025 Patent has injured Illumina in its business
12 and property rights. Illumina is entitled to recovery of monetary damages for such injuries pursuant
13 to 35 U.S.C. § 284 in an amount to be determined at trial. Illumina deserves treble damages and the
14 reimbursement of its fees and costs as set forth in 35 U.S.C. §§ 284 and 285.

15 266. BGI Americas' infringement of the '025 Patent has caused irreparable harm to
16 Illumina and will continue to cause such harm unless and until their infringing activities are enjoined
17 by this Court.

18 **MGI Ltd.'s Infringement of the '025 Patent**

19 267. Illumina's patented sequencing technology is well-known and has been enforced
20 very publicly against infringers. Together with the other Defendants, MGI Ltd. has copied that
21 technology. On information and belief, MGI Ltd. has had knowledge of the '025 Patent at least
22 since January 5, 2017, when the patent application was first published. Alternatively, MGI Ltd. was
23 or should have been aware of the '025 Patent at least by October 5, 2017, when CGI filed an IPR
24 against the related '537 Patent, or at the very least by July 1, 2019, when Illumina served them with
25 the complaint alleging infringement of the '537 Patent.

26 **Direct Infringement By MGI Ltd.**

27

28

1 268. MGI Ltd. directly infringes the '025 Patent pursuant to 35 U.S.C. § 271(a), literally
2 or under the doctrine of equivalents, because it is responsible for the use of DNBSEQ products with
3 standardMPS chemistry in the United States. Specifically, because MGI Ltd. claims to be the
4 “leading manufacturer and developer of BGI’s proprietary NGS instrumentation,” MGI Ltd. has
5 used DNBSEQ products in the United States. MGI Ltd.’s website states that its Silicon Valley,
6 California facility has a “State-of-the-art technology research and development base.”

7 **Induced Infringement By MGI Ltd.**

8 269. MGI Ltd. is liable for the induced infringement of the '025 Patent pursuant to 35
9 U.S.C. § 271(b). Specifically, MGI Ltd. is actively, knowingly, and intentionally inducing
10 infringement of at least claims 1 of the '025 Patent through a range of activities related to the
11 DNBSEQ products with standardMPS chemistry, among other infringing acts. MGI Ltd. is
12 responsible for substantial marketing of BGI products, including DNBSEQ products, and is
13 threatening to encourage and support the sale of those products in the United States.

14 270. MGI Ltd. has induced infringement by controlling, alone or in concert with the other
15 Defendants, the design, manufacture, and supply of the DNBSEQ systems with standardMPS
16 chemistry with the knowledge and specific intent that users, including other Defendants, will use
17 DNBSEQ products to infringe by using the patented nucleotides of the '025 Patent. For example,
18 MGI Ltd. is the “legal manufacturer” of DNBSEQ products. MGI Ltd. controls the website on which
19 DNBSEQ products are marketed and sold. MGI Ltd. controls the website that hosts *inter alia* the
20 DNBSEQ User Manual(s), the various reagent kit manuals, technical handbooks, product detail
21 sheets, and technical specification sheets. These materials direct users, including other Defendants,
22 to use DNBSEQ systems and DNBSEQ reagent kits in an infringing manner. By providing reagent
23 kits and directing users, including other Defendants, to purchase these reagent kits for use on
24 DNBSEQ systems, MGI Ltd. induces infringement.

25 271. MGI Ltd. has induced infringement by controlling, alone or in concert with the other
26 Defendants, the design, manufacture, and supply of materials or apparatuses to be used with the
27 DNBSEQ systems, including for example the MGISP-960, with the knowledge and specific intent
28

1 that users, including other Defendants, will use these products to infringe by using the patented
2 nucleotides of the '025 Patent.

3 272. MGI Ltd. has induced infringement by controlling, alone or in concert with the other
4 Defendants, the design, manufacture, and supply of various DNBSEQ reagent kits (which use
5 specialized labeled nucleotides), with the knowledge and specific intent that users, including other
6 Defendants, will use these products to infringe by performing the patented methods of the claimed
7 inventions. For example, Ms. Abigail Frank, Field Service Engineer at MGI represents that her job
8 entails “servic[ing] NGS instruments and lab automated work stations at Complete Genomics in
9 San Jose, as well as external customers throughout North and South America.” Ex. 28.

10 273. MGI Ltd. has induced infringement by users of its products, including other
11 Defendants, by disseminating promotional and marketing materials relating to DNBSEQ products
12 with the knowledge and specific intent that users will use DNBSEQ products to infringe by using
13 the patented nucleotides of the '025 Patent. MGI Ltd. controls the website that hosts promotional
14 and marketing materials.

15 274. MGI Ltd. has induced infringement by distributing other instructional materials,
16 product manuals, technical materials, and bioinformatics software platforms with the knowledge
17 and the specific intent to encourage and facilitate the infringing use of their DNBSEQ products with
18 standardMPS chemistry. For example, MGI Ltd. is responsible for the DNBSEQ User Manuals, the
19 various reagent kit manuals, technical handbooks, product detail sheets, and technical specification
20 sheets, all of which are available on the MGI Ltd.'s website. These materials direct users, including
21 other Defendants, to use DNBSEQ products in an infringing manner. For example, the DNBSEQ
22 reagent kit handbooks state that the kits are for preparation of DNA sequencing using DNBSEQ
23 systems, which are sold with pre-programmed software protocols that control operation of
24 DNBSEQ sequencers so that each use of the DNBSEQ sequencer infringes. By providing reagent
25 kits and directing users including other Defendants, to purchase these reagent kits for use on
26 DNBSEQ systems, MGI Ltd. induces infringement.

1 275. Further, MGI Ltd. induces the infringement of other Defendants by participating in,
2 supporting, and encouraging their use of the DNBSEQ products with standardMPS chemistry at the
3 San Jose facility and elsewhere in the United States.

4 276. MGI Ltd. acted with knowledge that the induced acts constitute infringement. MGI
5 Ltd. acted with knowledge of or willful blindness with regards to users' underlying infringement.

6 **Contributory Infringement By MGI Ltd.**

7 277. MGI Ltd. is liable for contributory infringement of the '025 Patent pursuant to 35
8 U.S.C. § 271(c). Specifically, MGI Ltd. contributes to the infringement of the '025 Patent by,
9 without authority, supplying within the United States, materials and apparatuses for practicing the
10 claimed invention of the '025 Patent, including at least DNBSEQ systems, the DNBSEQ Sample
11 Preparation Systems, and the associated reagent kits (which use specialized labeled nucleotides).
12 These products constitute a material part of the claimed invention of the '025 Patent.

13 278. MGI Ltd. knows that DNBSEQ systems, materials and apparatuses designed for use
14 with DNBSEQ systems, and the associated reagent kits with standardMPS chemistry, constitute
15 material parts of the inventions of the '025 Patent and that they are not a staple article or commodity
16 of commerce suitable for substantial non-infringing use. As documented above, DNBSEQ systems
17 are specialized sequencing instruments that carry out a specific method for sequencing DNA using
18 specific labeled nucleotides. As such, neither DNBSEQ systems, the materials or apparatuses
19 specifically designed for use with DNBSEQ systems, nor the DNBSEQ reagent kits with
20 standardMPS chemistry are a staple article of commerce suitable for substantial non-infringing use.
21 MGI Ltd. knows that DNBSEQ systems, the materials or apparatuses specifically designed for use
22 with DNBSEQ systems, and the DNBSEQ reagents kits are not staple articles or commodities of
23 commerce suitable for substantial non-infringing use because these products have no use apart from
24 infringing the '025 Patent. MGI Ltd. knows that the use of its products by other Defendants and
25 third parties infringes the '025 Patent and it supplies them anyway.

26 **Infringement Under 271(f) By MGI Ltd.**

27

28

1 279. On information and belief, MGI Ltd. has supplied in or from the United States
2 DNBSEQ products and/or components thereof, which comprise all or a substantial portion of the
3 components of the claims of the '025 Patent, where such components are uncombined in whole or
4 in part, in such manner as to actively induce the combination of such components outside of the
5 United States in a manner that would infringe the patent if such combination occurred within the
6 United States, in violation of 35 USC § 271(f)(1). Alternatively, on information and belief, MGI
7 Ltd. has supplied in or from the United States components of DNBSEQ products, which products
8 are especially made or especially adapted for use in practicing the claims of the '025 Patent and are
9 not staple articles or commodities of commerce suitable for substantial noninfringing use, knowing
10 that such component is so made or adapted and intending that such component will be combined
11 outside of the United States in a manner that would infringe the patent if such combination occurred
12 within the United States, in violation of 35 USC § 271(f)(2).

13 **Willful Infringement By MGI Ltd.**

14 280. As set forth throughout this Complaint, MGI Ltd. has acted willfully and egregiously
15 in performing the acts of infringement and threatening to perform the acts of infringement identified
16 in this Complaint. MGI Ltd.'s infringement of the '025 Patent has been and is deliberate and willful
17 and constitutes egregious misconduct. On information and belief, MGI Ltd., with the other
18 Defendants, monitors Illumina's patents, including the enforcement of related patents against
19 Defendants and others, in both the U.S. and abroad, and is or should be aware of the '025 Patent
20 since at least January 5, 2017, when the patent application first published. Alternatively, MGI Ltd.
21 was or should have been aware of the '025 Patent at least by October 5, 2017, when CGI filed an
22 IPR against the related '537 Patent, or at the very least by July 1, 2019, when Illumina served them
23 with the complaint alleging infringement of the '537 Patent. Despite this, MGI Ltd. continues to
24 perform the acts of infringement and threatens to perform the acts of infringement identified in this
25 Complaint. In performing the acts of infringement and threatening to perform the acts of
26 infringement identified in this Complaint, MGI Ltd. has been willfully blind to its ongoing
27 infringement.
28

1 281. MGI Ltd's infringement of the '025 Patent has injured Illumina in its business and
2 property rights. Illumina is entitled to recovery of monetary damages for such injuries pursuant to
3 35 U.S.C. § 284 in an amount to be determined at trial. Illumina deserves treble damages and the
4 reimbursement of its fees and costs as set forth in 35 U.S.C. §§ 284 and 285.

5 282. MGI Ltd.'s infringement of the '025 Patent has caused irreparable harm to Illumina
6 and will continue to cause such harm unless and until their infringing activities are enjoined by this
7 Court.

8 **MGI Americas' Infringement of the '025 Patent**

9 283. Illumina's patented sequencing technology is well-known and has been enforced
10 very publicly against infringers. Together with the other Defendants, MGI Americas has copied that
11 technology. On information and belief, MGI Americas has had knowledge of the '025 Patent at
12 least since January 5, 2017, when the patent application was first published. Alternatively, MGI
13 Americas was or should have been aware of the '025 Patent at least by October 5, 2017, when CGI
14 filed an IPR against the related '537 Patent, or at the very least by July 1, 2019, when Illumina
15 served them with the complaint alleging infringement of the '537 Patent.

16 **Direct Infringement By MGI Americas**

17 284. MGI Americas has and is directly infringing the '025 Patent pursuant to 35 U.S.C. §
18 271(a), literally or under the doctrine of equivalents, by using DNBSEQ products with standardMPS
19 chemistry within the United States. Specifically, because MGI Americas claims to be the "leading
20 manufacturer and developer of BGI's proprietary NGS instrumentation," MGI Americas has used
21 DNBSEQ products in the United States. MGI Americas' Silicon Valley, California facility has a
22 "State-of-the-art technology research and development base."

23 **Induced Infringement By MGI Americas**

24 285. MGI Americas is liable for their induced infringement of the '025 Patent pursuant to
25 35 U.S.C. § 271(b). Specifically, MGI Americas has and is actively, knowingly, and intentionally
26 inducing of at least claims 1 of the '025 Patent through a range of activities related to the DNBSEQ
27 products with standardMPS chemistry, among other infringing acts. MGI Americas is responsible
28

1 for substantial marketing of BGI products, including DNBSEQ products, and is threatening to
2 encourage and support the sale of those products in the United States.

3 286. On information and belief, MGI Americas will induce infringement when it begins
4 to make infringing sequencing instruments and standardMPS reagents available to key opinion
5 leaders on a no cost trial basis in the United States.

6 287. MGI Americas has induced infringement by controlling, alone or in concert with the
7 other Defendants, the design, manufacture and supply of the DNBSEQ systems with standardMPS
8 chemistry with the knowledge and specific intent that users, including other Defendants, will use
9 DNBSEQ systems to infringe by using the patented nucleotides of the '025 Patent. MGI Americas
10 distributes, *inter alia*, the DNBSEQ User Manual(s), the various reagent kit manuals, technical
11 handbooks, product detail sheets, and technical specification sheets. These materials direct users,
12 including other Defendants, to use DNBSEQ systems and DNBSEQ reagent kits in an infringing
13 manner. By providing reagent kits and directing users to purchase these reagent kits for use on
14 DNBSEQ systems, BGI Americas induces infringement.

15 288. MGI Americas has induced infringement by distributing materials or apparatuses to
16 be used with DNBSEQ systems, including for example the MGISP-960, with the knowledge and
17 specific intent that users, including the other Defendants, will use these products to infringe by using
18 the patented nucleotides of the '025 Patent.

19 289. MGI Americas has induced infringement by distributing DNBSEQ reagent kits
20 (which use specialized labeled nucleotides) with the knowledge and specific intent that users,
21 including other Defendants, will use these products to infringe by using the patented nucleotides of
22 the '025 Patent. For example, Ms. Abigail Frank, Field Service Engineer at MGI represents that her
23 job entails “servic[ing] NGS instruments and lab automated work stations at Complete Genomics
24 in San Jose, as well as external customers throughout North and South America.” Ex. 28.

25 290. MGI Americas has induced infringement by users of its products, including other
26 Defendants, by disseminating promotional and marketing materials relating to DNBSEQ products
27
28

1 with the knowledge and specific intent that users will use DNBSEQ products to infringe by using
2 the patented nucleotides of the '025 Patent.

3 291. MGI Americas has induced infringement by distributing other instructional
4 materials, product manuals, technical materials, and bioinformatics software platforms with the
5 knowledge and the specific intent to encourage and facilitate the infringing use of their DNBSEQ
6 products with standardMPS chemistry. For example, MGI Americas is responsible for the DNBSEQ
7 User Manuals, the various reagent kit manuals, technical handbooks, product detail sheets, and
8 technical specification sheets. These materials direct users, including other Defendants, to use
9 DNBSEQ products in an infringing manner. For example, the DNBSEQ reagent kit handbooks state
10 that the kits are for preparation of DNA sequencing using DNBSEQ systems, which are sold with
11 pre-programmed software protocols that control operation of DNBSEQ sequencers so that each use
12 of the DNBSEQ sequencer infringes. By providing reagent kits and directing users, including other
13 Defendants, to purchase these reagent kits for use on DNBSEQ systems, MGI Americas induces
14 infringement.

15 292. Further, MGI Americas induces the infringement of other Defendants by
16 participating in, supporting, and encouraging their use of the DNBSEQ products with standardMPS
17 chemistry at the San Jose facility and elsewhere in the United States.

18 293. MGI Americas acted with knowledge that the induced acts constitute infringement.
19 MGI Americas acted with knowledge of or willful blindness with regards to users' underlying
20 infringement.

21 **Contributory Infringement By MGI Americas**

22 294. MGI Americas is liable for contributory infringement of the '025 Patent pursuant to
23 35 U.S.C. § 271(c). Specifically, MGI Americas has and is contributing to the infringement of the
24 '025 Patent by, without authority, distributing within the United States, materials and apparatuses
25 for practicing the claimed invention of the '025 Patent, including at least DNBSEQ systems, the
26 DNBSEQ Sample Preparation Systems, and the associated reagent kits (which use specialized
27
28

1 labeled nucleotides). These products constitute a material part of the claimed invention of the '025
2 Patent.

3 295. MGI Americas knows that DNBSEQ systems, materials and apparatuses designed
4 for use with DNBSEQ systems, and the associated reagent kits with standardMPS chemistry,
5 constitute material parts of the inventions of the '025 Patent and that they are not a staple article or
6 commodity of commerce suitable for substantial non-infringing use. As documented above,
7 DNBSEQ systems are specialized sequencing instruments that carry out a specific method for
8 sequencing DNA using specific labeled nucleotides. As such, neither DNBSEQ systems, the
9 materials or apparatuses specifically designed for use with DNBSEQ systems, nor the DNBSEQ
10 reagent kits are a staple article of commerce suitable for substantial non-infringing use. MGI
11 Americas knows that DNBSEQ systems, the materials or apparatuses specifically designed for use
12 with DNBSEQ systems, and the DNBSEQ reagents kits with standardMPS chemistry are not staple
13 articles or commodities of commerce suitable for substantial non-infringing use because these
14 products have no use apart from infringing the '025 Patent. MGI Americas knows that the use of its
15 products by other Defendants and third parties infringes the '025 Patent and it supplies them
16 anyway.

17 **Infringement Under 271(f) By MGI Americas**

18 296. On information and belief, MGI Americas has supplied in or from the United States
19 DNBSEQ products and/or components thereof, which comprise all or a substantial portion of the
20 components of the claims of the '025 Patent, where such components are uncombined in whole or
21 in part, in such manner as to actively induce the combination of such components outside of the
22 United States in a manner that would infringe the patent if such combination occurred within the
23 United States, in violation of 35 USC § 271(f)(1). Alternatively, on information and belief, MGI
24 Americas has supplied in or from the United States components of DNBSEQ products, which
25 products are especially made or especially adapted for use in practicing the claims of the '025 Patent
26 and are not staple articles or commodities of commerce suitable for substantial noninfringing use,
27 knowing that such component is so made or adapted and intending that such component will be
28

1 combined outside of the United States in a manner that would infringe the patent if such combination
2 occurred within the United States, in violation of 35 USC § 271(f)(2).

3 **Willful Infringement By MGI Americas**

4 297. As set forth throughout this Complaint, MGI Americas has acted willfully and
5 egregiously in performing the acts of infringement and threatening to perform the acts of
6 infringement identified in this Complaint. MGI Americas' infringement of the '025 Patent has been
7 and is deliberate and willful and constitutes egregious misconduct. On information and belief, MGI
8 Americas, with the other Defendants, monitors Illumina's patents, including the enforcement of
9 related patents against Defendants and others, in both the U.S. and abroad, and is or should be aware
10 of the '025 Patent since at least January 5, 2017, when the patent application first published.
11 Alternatively, MGI Americas was or should have been aware of the '025 Patent at least by October
12 5, 2017, when CGI filed an IPR against the related '537 Patent, or at the very least by July 1, 2019,
13 when Illumina served them with the complaint alleging infringement of the '537 Patent. Despite
14 this, MGI Americas continues to perform the acts of infringement and threatens to perform the acts
15 of infringement identified in this Complaint. In performing the acts of infringement and threatening
16 to perform the acts of infringement identified in this Complaint, MGI Americas has been willfully
17 blind to its ongoing infringement.

18 298. MGI Americas' infringement of the '025 Patent has injured Illumina in its business
19 and property rights. Illumina is entitled to recovery of monetary damages for such injuries pursuant
20 to 35 U.S.C. § 284 in an amount to be determined at trial. Illumina deserves treble damages and the
21 reimbursement of its fees and costs as set forth in 35 U.S.C. §§ 284 and 285.

22 299. MGI Americas' infringement of the '025 Patent has caused irreparable harm to
23 Illumina and will continue to cause such harm unless and until their infringing activities are enjoined
24 by this Court.

25 **CGI's Infringement of the '025 Patent**

26 300. Illumina's patented sequencing technology is well-known and has been enforced
27 very publicly against infringers. Together with the other Defendants, CGI has copied that
28

1 technology. On information and belief, CGI has had knowledge of the '025 Patent at least since
2 January 5, 2017, when the patent application was first published. Alternatively, CGI was or should
3 have been aware of the '025 Patent at least by October 5, 2017, when CGI filed an IPR against the
4 related '537 Patent, or at the very least by July 1, 2019, when Illumina served them with the
5 complaint alleging infringement of the '537 Patent.

6 **Direct Infringement By CGI**

7 301. CGI has and is directly infringing the '025 Patent pursuant to 35 U.S.C. § 271(a),
8 literally or under the doctrine of equivalents, by using DNBSEQ system with standardMPS
9 chemistry within the United States, among other infringing acts. CGI has installed DNBSEQ
10 systems at CGI locations in the United States, including its San Jose, California facility. CGI has
11 used DNBSEQ products in the United States.

12 **Induced Infringement by CGI**

13 302. CGI is liable for their induced infringement of the '025 Patent pursuant to 35 U.S.C.
14 § 271(b). Specifically, CGI has and is actively, knowingly, and intentionally inducing infringement
15 of at least claim 1 of the '025 Patent through a range of activities related to the DNBSEQ products
16 with standardMPS chemistry, among other infringing acts. CGI is responsible for substantial
17 marketing of BGI products, including DNBSEQ products, and is threatening to encourage and
18 support the sale of those products in the United States.

19 303. CGI has induced infringement by controlling, alone or in concert with the other
20 Defendants, the design, manufacture, and supply of materials or apparatuses to be used with the
21 DNBSEQ systems with standardMPS chemistry, including for example the MGISP-960, with the
22 knowledge and specific intent that users, including other Defendants, will use these products to
23 infringe by using the patented nucleotides of the '025 Patent.

24 304. CGI has induced infringement by controlling, with the other Defendants, the design,
25 manufacture, and supply of various DNBSEQ reagent kits (which use specialized labeled
26 nucleotides), with the knowledge and specific intent that users, including other Defendants, will use
27 these products to infringe by using the patented nucleotides of the '025 Patent.

28

1 305. CGI has induced infringement by disseminating promotional and marketing
2 materials relating to the DNBSEQ systems with standardMPS chemistry with the knowledge and
3 specific intent that users, including other Defendants, will use DNBSEQ systems to infringe by
4 using the patented nucleotides of the '025 Patent.

5 306. CGI has induced infringement by creating distribution channels for the
6 aforementioned DNBSEQ systems, materials and apparatuses for use with the DNBSEQ systems
7 with standardMPS chemistry, and the associated reagent kits, with the knowledge and specific intent
8 that users, including other Defendants, will use these products to infringe by using the patented
9 nucleotides of the '025 Patent.

10 307. CGI has induced infringement by distributing other instructional materials, product
11 manuals, technical materials, and bioinformatics software platforms with the knowledge and the
12 specific intent to encourage and facilitate the infringing use of their DNBSEQ products with
13 standardMPS chemistry. These materials direct users, including other Defendants, to use DNBSEQ
14 products in an infringing manner. For example, the DNBSEQ reagent kit manuals state that the kits
15 are for preparation of DNA sequencing using DNBSEQ systems, which are sold with pre-
16 programmed software protocols that control operation of DNBSEQ sequencers so that each use of
17 the DNBSEQ sequencer infringes. By providing reagent kits and directing users to purchase these
18 reagent kits for use on DNBSEQ systems, CGI induces infringement.

19 308. Further, CGI induces the infringement of other Defendants by participating in,
20 supporting, and encouraging their use of the DNBSEQ products with standardMPS chemistry at the
21 San Jose facility and elsewhere in the United States.

22 309. CGI acted with knowledge that the induced acts constitute infringement. CGI acted
23 with knowledge of or willful blindness with regards to users' underlying infringement.

24 **Contributory Infringement by CGI**

25 310. CGI is liable for contributory infringement of the '025 Patent pursuant to 35 U.S.C.
26 § 271(c). Specifically, CGI has and is contributing to infringement of the '025 Patent by, without
27 authority, supplying within the United States, materials and apparatuses for practicing the claimed
28

1 invention of the '025 Patent, including at least DNBSEQ systems, the DNBSEQ Sample Preparation
2 Systems, and the associated reagent kits (which use specialized labeled nucleotides). These products
3 constitute a material part of the claimed invention of the '025 Patent.

4 311. CGI knows that DNBSEQ systems, materials and apparatuses designed for use with
5 DNBSEQ systems, and the DNBSEQ reagent kits with standardMPS chemistry, constitute material
6 parts of the inventions of the '025 Patent and that they are not a staple article or commodity of
7 commerce suitable for substantial non-infringing use. As documented above, DNBSEQ systems are
8 specialized sequencing instruments that carry out a specific method for sequencing DNA using
9 specific labeled nucleotides. As such, neither DNBSEQ systems, the materials or apparatuses
10 specifically designed for use with DNBSEQ systems, nor the DNBSEQ reagent kits are a staple
11 article of commerce suitable for substantial non-infringing use. CGI knows that DNBSEQ systems,
12 the materials or apparatuses specifically designed for use with DNBSEQ systems, and the DNBSEQ
13 reagents kits with standardMPS chemistry are not staple articles or commodities of commerce
14 suitable for substantial non-infringing use because these products have no use apart from infringing
15 the '025 Patent. CGI knows that the use of its products by other Defendants and third parties
16 infringes the '025 Patent and supplies them anyway.

17 **Infringement Under 271(f) By CGI**

18 312. On information and belief, CGI has supplied in or from the United States DNBSEQ
19 products and/or components thereof, which comprise all or a substantial portion of the components
20 of the claims of the '025 Patent, where such components are uncombined in whole or in part, in
21 such manner as to actively induce the combination of such components outside of the United States
22 in a manner that would infringe the patent if such combination occurred within the United States,
23 in violation of 35 USC § 271(f)(1). Alternatively, on information and belief, CGI has supplied in or
24 from the United States components of DNBSEQ products, which products are especially made or
25 especially adapted for use in practicing the claims of the '025 Patent and are not staple articles or
26 commodities of commerce suitable for substantial noninfringing use, knowing that such component
27 is so made or adapted and intending that such component will be combined outside of the United
28

1 States in a manner that would infringe the patent if such combination occurred within the United
2 States, in violation of 35 USC § 271(f)(2).

3 **Willful Infringement By CGI**

4 313. As set forth throughout this Complaint, CGI has acted willfully and egregiously in
5 performing the acts of infringement and threatening to perform the acts of infringement identified
6 in this Complaint. CGI's infringement of the '025 Patent has been and is deliberate and willful and
7 constitutes egregious misconduct. On information and belief, CGI, with the other Defendants,
8 monitors Illumina's patents, including the enforcement of related patents against Defendants and
9 others, in both the U.S. and abroad, and is or should be aware of the '025 Patent since at least
10 January 5, 2017, when the patent application first published. Alternatively, CGI was or should have
11 been aware of the '025 Patent at least by October 5, 2017, when CGI filed an IPR against the related
12 '537 Patent, or at the very least by July 1, 2019, when Illumina served them with the complaint
13 alleging infringement of the '537 Patent. Despite this, CGI continues to perform the acts of
14 infringement and threatens to perform the acts of infringement identified in this Complaint. In
15 performing the acts of infringement and threatening to perform the acts of infringement identified
16 in this Complaint, CGI has been willfully blind to its ongoing infringement.

17 314. CGI's infringement of the '025 Patent has injured Illumina in its business and
18 property rights. Illumina is entitled to recovery of monetary damages for such injuries pursuant to
19 35 U.S.C. § 284 in an amount to be determined at trial. Illumina deserves treble damages and the
20 reimbursement of its fees and costs as set forth in 35 U.S.C. §§ 284 and 285.

21 315. CGI's infringement of the '025 Patent has caused irreparable harm to Illumina and
22 will continue to cause such harm unless and until their infringing activities are enjoined by this
23 Court.

1 **PRAYER FOR RELIEF**

2 WHEREFORE, Illumina prays for relief as follows:

3 A. Judgment that Defendants have infringed one or more claims of the '973, '444 and
4 '025 Patents;

5 B. An order preliminarily and permanently enjoining Defendants and their officers,
6 directors, agents, servants, affiliates, employees, divisions, branches, subsidiaries, parents, and all
7 others acting in active concert therewith from further infringement of the '973, '444 and '025
8 Patents;

9 C. An award of damages pursuant to 35 U.S.C. § 284;

10 D. A declaration that Defendants' infringement of the patents in-suit has been willful
11 and deliberate, and an increase to the award of damages of three times the amount found or
12 assessed by the Court, in accordance with 35 U.S.C. § 284;

13 E. An order for an accounting of damages from Defendants' infringement;

14 F. An award to Illumina of their costs and reasonable expenses to the fullest extent
15 permitted by law;

16 G. A declaration that this case is exceptional pursuant to 35 U.S.C. § 285, and an
17 award of attorneys' fees and costs; and

18 H. An award of such other and further relief as the Court may deem just and proper.

19 **DEMAND FOR JURY TRIAL**

20 Pursuant to Federal Rule of Civil Procedure 38(b) and Civil Local Rule 3-6(a), Illumina hereby
21 demands a trial by jury on all issues so triable.
22
23
24
25
26
27
28

1 Dated: February 27, 2020

Respectfully Submitted,

2
3 /s/ Edward R. Reines

4 EDWARD R. REINES (Bar No. 135960)
5 DEREK C. WALTER (Bar No. 246322)
6 CHRISTOPHER S. LAVIN (Bar No. 301702)
7 WEIL, GOTSHAL & MANGES LLP
8 Silicon Valley Office
9 201 Redwood Shores Parkway
10 Redwood Shores, CA 94065
11 Telephone: (650) 802-3000
12 Facsimile: (650) 802-3100
13 edward.reines@weil.com
14 derek.walter@weil.com
15 christopher.lavin@weil.com

16
17 Attorneys for Plaintiffs
18 ILLUMINA, INC. and ILLUMINA
19 CAMBRIDGE LTD.
20
21
22
23
24
25
26
27
28