

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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ILLUMINA, INC.,  
Petitioner,

v.

THE TRUSTEES OF COLUMBIA UNIVERSITY  
IN THE CITY OF NEW YORK  
Patent Owner.

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IPR2020-01177 (Patent 10,435,742)

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**PATENT OWNER'S SUR-REPLY TO PETITIONER'S REPLY**

The Board should deny the Petition and confirm that Columbia's claimed "linker" can consist of multiple chemical groups stitched together.

**I. THE BOARD'S § 314(a) FINTIV FACTORS FAVOR DENYING INSTITUTION**

All six *Fintiv* factors favor denying institution. Illumina's Reply does not address *Fintiv* factors 1 and 5 (likelihood of stay, identity of parties), which support denying institution as previously explained. *See* Paper 12 at 54-56, 59. Regarding *Fintiv* factor 2, Illumina admits that the Delaware trial date is earlier than the projected statutory deadline for the relevant Final Written Decisions, but characterizes the trial date as merely "tentatively scheduled[.]" That is wrong. The Scheduling Order states that "[t]his matter is scheduled for a 5-day jury trial beginning at 9:30 a.m. on November 15, 2021, with the subsequent trial days beginning at 9:00 am." Ex. 1154 at ¶ 25. Prior to Illumina's Reply, neither the Court, Columbia, nor Illumina has ever expressed doubt regarding the trial date.

Illumina's COVID-19 conjecture should likewise be rejected. Illumina quotes the *current* District of Delaware guidelines ("no more than one jury trial at a time") to speculate that the trial, which is scheduled to begin *in 12 months*, will be delayed. Illumina also makes far too much of the "seven extensions" in the litigation. One extended Illumina's deadline to file its Answer, five extended claim construction briefing deadlines, and the last extended the document production deadline. Exs. 1146-1152. Such extensions are routine in complex patent litigations, and they rarely

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affect trial dates. Notably, here, the *Markman* hearing occurred as originally scheduled despite the aforementioned extensions.

Further downplaying *Fintiv* factor 2, Illumina characterizes the trial date as being only “three weeks” prior to the projected statutory deadline “in closely related IPR2020-00988.” However, Illumina ignores the four related IPR proceedings (IPR2020-01065, IPR2020-01125, IPR2020-01177, and IPR2020-01323), and that the Delaware trial date is over *two and a half months* prior to the projected deadline for the Final Written Decision in counterpart IPR2020-01323. *See* Paper 12 at 57.

Regarding *Fintiv* factor 3, Columbia’s Preliminary Response detailed the significant resources already expended in the Delaware litigation. Illumina’s Reply merely notes that “fact witness depositions” and “[e]xpert discovery” have yet to occur, but the fact that additional discovery costs will be incurred says nothing about whether significant resources have already been expended. They have, as Columbia explained and Illumina failed to address. Illumina also belittles the number of documents that Columbia has produced, but in fact Columbia has produced over 89,000 pages of documents, which were first produced in a related litigation and are considered re-produced in the present litigation by agreement of the parties. Ex. 2046 at ¶ 18.

Regarding *Fintiv* factor 4, Illumina admits that the obviousness grounds raised in its Petition have also been asserted in the Delaware litigation. While Illumina

hypothesizes that it could drop those obviousness grounds in the litigation, it has not yet done so, and thus this factor favors denying institution. Regarding *Fintiv* factor 6, Illumina's obviousness grounds are particularly weak, as previously explained. Paper 12 at 59. Moreover, Illumina's assertion that the claims are essentially the same as those previously adjudicated in prior *Illumina v. Columbia* IPRs is belied by Illumina's admission that it took almost eight months of "diligent[]" efforts for Illumina to formulate the arguments in its current Petition.

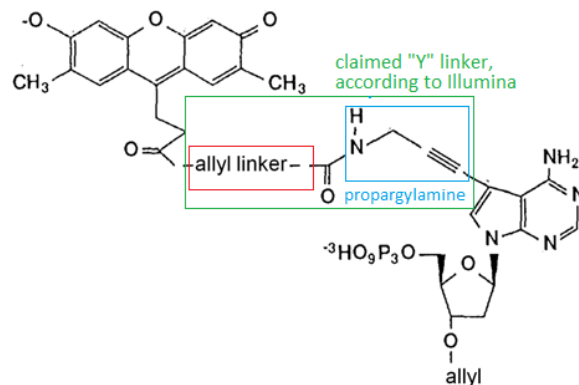
## **II. ILLUMINA'S PETITION SHOULD BE DENIED UNDER 35 U.S.C. § 325(d)**

Notably, Illumina's Reply *does not* dispute that its Petition re-raises arguments that the Board has previously declined to adopt concerning Sanger sequencing and Hiatt, as set forth in Columbia's Preliminary Response. Paper 12 at 60-61. In fact, Illumina's Reply does not even address the Board's prior findings or the 35 U.S.C. § 325(d) standard. Having no rebuttal to § 325(d), Illumina instead improperly uses its Reply to raise new theories regarding the prior art in an attempt to fix its deficient Petition. *See, e.g.*, Paper 14 at 4 (raising new (and incorrect) argument regarding Kwiatkowski). Such tactics should be rejected.

## **III. COLUMBIA'S "LINKER" COVERS MULTIPLE CHEMICAL GROUPS STITCHED TOGETHER**

Contrary to Illumina's contention, Columbia is not seeking an "advisory claim construction," but is merely confirming what (i) the Board previously found in this patent family and (ii) Illumina again confirmed in its Petition. Under § 103,

Illumina's Petition must show that there was a reasonable expectation of success in making the claimed nucleotides. To meet that standard, Illumina contends in its Petition that a POSA would synthesize the linker of the claimed nucleotides by stitching together an "alkynylamino group" and "a cleavable linker" group. Petition at 36-39. Illumina's expert provides additional detail, explaining that a POSA would synthesize the claimed linker by stitching together a "propargylamine group" (another term for an alkynylamino group) and an "allyl linker" group. Ex. 1131 at ¶ 162. Illumina has previously depicted such a structure in its Petitions:



Ex. 2034 at 49 (Illumina's IPR2018-00291 Petition, colored annotations added). Thus, there can be no dispute that Illumina's current Petition depends on the claimed "linker" (as depicted in the green box above) covering a structure consisting of multiple chemical groups, e.g., a propargylamine group (as depicted in the blue box above) and an "allyl linker" group (as depicted in the red box above). *See also* Ex. 1131 at ¶ 200 (Dr. Romesberg explaining that a POSA would make the claimed

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