

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

ILLUMINA, INC.,
Petitioner,

v.

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

Case IPR2018-00291 (Patent 9,718,852 B2)
Case IPR2018-00318 (Patent 9,719,139 B2)
Case IPR2018-00322 (Patent 9,708,358 B2)
Case IPR2018-00385 (Patent 9,725,480 B2)
Case IPR2018-00797 (Patent 9,868,985 B2)¹

Before JAMES A. WORTH, MICHELLE N. ANKENBRAND,
BRIAN D. RANGE *Administrative Patent Judges.*

WORTH, *Administrative Patent Judge.*

ORDER
Conduct of the Proceeding
37 C.F.R. §§ 42.5, 42.20(d)

¹ The proceedings have not been consolidated. The parties are not authorized to use a combined caption unless an identical paper is being entered into each proceeding, and the paper contains a footnote indicating the same.

IPR2018-00291 (Patent 9,718,852 B2); IPR2018-00318 (Patent 9,719,139 B2); IPR2018-00322 (Patent 9,708,358 B2); IPR2018-00385 (Patent 9,725,480 B2); IPR2018-00797 (Patent 9,868,985 B2)

The panel held oral argument for the above-captioned proceedings on March 5, 2019, with counsel for Illumina, Inc. (“Illumina” or “Petitioner”) and Trustees of Columbia University in the City of New York (“Columbia” or “Patent Owner”). The panel authorizes additional briefing as explained below.

The following facts are undisputed in view of the Petition (Paper 1, “Pet.”) and Patent Owner’s Mandatory Notices (Paper 4).² The same parties previously came before the Board in three *inter partes* reviews with respect to related U.S. Patents Nos. 7,790,869 (“the ’869 patent”), 7,713,698 (“the ’698 patent”), and 8,088,575 (“the ’575 patent”) in *Illumina, Inc. v. Trustees of Columbia University in the City of New York*, Case IPR2012-00007, Case IPR2012-00006, and Case IPR2013-00011, respectively (“previous proceedings”). In the previous proceedings, the Board determined all challenged claims from the ’869, ’698, and ’575 patents were unpatentable. Paper 4, 1. IPR2012-00007, Paper 140 (Ex. 1005); IPR2012-00006, Paper 128 (Ex. 1006); IPR2013-00011, Paper 130 (Ex. 1007). The Federal Circuit affirmed the Board’s unpatentability determinations from the previous proceedings in *Trustees of Columbia University in the City of New York v. Illumina, Inc.*, 620 F. App’x. 916 (Fed. Cir. 2015) (Ex. 1008). Paper 4, 1; Dec. Inst. 29.

Petitioner has variously asserted that the previous proceedings have preclusive effect, and the parties have briefed, *inter alia*, whether the

² Where the same or similar papers have been filed in multiple proceedings, we refer herein to the papers filed in Case IPR2018-00291, except where otherwise indicated.

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previous proceedings give rise to patent owner estoppel, e.g., by reason of 37 C.F.R. § 42.73(d)(3)(i), or judicial estoppel. *See* Pet. 17; *see also id.* 1–2, 6–7, 17–19; Paper 45 (Petitioner’s Reply, “Reply”) 2, 9, 14, 18; Paper 45³ (Patent Owner’s Response, “PO Resp.”) 62–63.

We note that in *B&B Hardware*, the Supreme Court stated as follows:

This Court has long recognized that “the determination of a question directly involved in one action is conclusive as to that question in a second suit.” *Cromwell v. County of Sac*, 94 U.S. 351, 354, 24 L.Ed. 195 (1877). The idea is straightforward: Once a court has decided an issue, it is “forever settled as between the parties,” *Baldwin v. Iowa State Traveling Men’s Assn.*, 283 U.S. 522, 525, 51 S.Ct. 517, 75 L.Ed. 1244 (1931), thereby “protect[ing]” against “the expense and vexation attending multiple lawsuits, conserv[ing] judicial resources, and foster[ing] reliance on judicial action by minimizing the possibility of inconsistent verdicts,” *Montana v. United States*, 440 U.S. 147, 153–154, 99 S.Ct. 970, 59 L.Ed.2d 210 (1979). In short, “a losing litigant deserves no rematch after a defeat fairly suffered.” *Astoria Fed. Sav. & Loan Assn. v. Solimino*, 501 U.S. 104, 107, 111 S.Ct. 2166, 115 L.Ed.2d 96 (1991).

Although the idea of issue preclusion is straightforward, it can be challenging to implement. The Court, therefore, regularly turns to the Restatement (Second) of Judgments for a statement of the ordinary elements of issue preclusion. *See, e.g., Bobby v. Bies*, 556 U.S. 825, 834, 129 S.Ct. 2145, 173 L.Ed.2d 1173 (2009); *New Hampshire v. Maine*, 532 U.S. 742, 748–749, 121 S.Ct. 1808, 149 L.Ed.2d 968 (2001); *Baker v. General Motors Corp.*, 522 U.S. 222, 233, n. 5, 118 S.Ct. 657, 139 L.Ed.2d 580 (1998). The Restatement explains that subject to certain well-known exceptions, the general rule is that “[w]hen an issue of fact or law is actually litigated and determined by a valid and final judgment, and the determination is essential to the

³ Where possible, citations are to the unsealed version of this paper (Paper 41).

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judgment, the determination is conclusive in a subsequent action between the parties, whether on the same or a different claim.” Restatement (Second) of Judgments § 27, p. 250 (1980); *see also id.*, § 28, at 273 (listing exceptions such as whether appellate review was available or whether there were “differences in the quality or extensiveness of the procedures followed”).

B & B Hardware, Inc. v. Hargis Industries, Inc., 135 S. Ct. 1293, 1302–03 (2015).

We request the parties to brief the following issues:

1. Do principles of collateral estoppel (issue preclusion) preclude relitigation of certain issues based on the affirmance of the three previous Board decisions by the Federal Circuit? *See, e.g., XY, LLC v. Trans Ova Genetics*, 890 F.3d 1282, 1294 (Fed. Cir. 2018) (applying estoppel based on affirmed decision); *B & B Hardware, Inc. v. Hargis Indus., Inc.*, 135 S. Ct. 1293, 1310 (“So long as the other ordinary elements of issue preclusion are met, when the usages adjudicated by the TTAB are materially the same as those before the district court, issue preclusion should apply.”).
2. Although the instant proceedings are based on different issued patents and claims than the previous proceedings, would that be a meaningful distinction here for patents that are in the same patent family and that are based on common antecedents?
3. Is a patentable distinction under 37 C.F.R. § 42.73(d)(3)(i) necessarily a material difference for purposes of applying *B & B Hardware*?

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4. Is it proper for the Board to reweigh obviousness for the claims as a whole, e.g., considering any narrowing of the claims at issue, without relitigating issues common to the previous proceedings?
5. If collateral estoppel applies, what issues have been decided and how do they apply to the current proceeding?
 - a. Is there collateral estoppel for the conclusion that Tsien (alone or further in view of Prober) would have rendered obvious the use of nucleotide analogues, including that a person of ordinary skill would have had a reasonable expectation of success in achieving cleavability of a 3'-O-allyl blocking group from a nucleotide analogue and incorporation of a nucleotide analogue with a 3'-O-allyl blocking group, for purposes of SBS?
 - b. Is there collateral estoppel for the conclusion that Tsien (alone or further in view of Prober) would have rendered obvious the use of nucleotide analogues in SBS, including that a person of ordinary skill would have had a reasonable expectation of success in using a nucleotide analogue with a label attached via a cleavable chemical linker to the 7-position of an adenine or guanine base, or attached to a thymine or cytidine base, into a growing DNA strand via a polymerase? *See* Pet. 18.
 - c. Were any conclusions of obviousness in the previous proceedings based on the specific blocking group, i.e., a 3'-O-allyl (2-propenyl) blocking group, e.g., that Petitioner

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