

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.

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

**PATENT OWNER OBJECTIONS TO ADMISSIBILITY
OF PETITIONER EVIDENCE**

¹ An identical Paper is being entered into each listed proceeding.

Pursuant to 37 C.F.R. § 42.64(b)(1), Patent Owner The Trustees of Columbia University in the City of New York (“Columbia”) hereby files its objections to the admissibility of evidence submitted with the Petitioner’s Reply filed by Illumina, Inc. (“Illumina”) on January 22, 2019.

Exhibit Number and Description	Objections
Ex. 1092 – U.S. Patent No. 6,248,884	Relevance (FRE 401, 403): Illumina has not demonstrated that this document is prior art, nor that this document represents the knowledge of a person of ordinary skill in the art at the time of Columbia’s invention.
Ex. 1095 – IPR2017-02174	Incomplete, Relevance, Misleading (FRE 106, 401, 403): This document, when taken in isolation, provides an incomplete version of the previous IPR proceeding.
Ex. 1096 – IPR2017-02172	Incomplete, Relevance, Misleading (FRE 106, 401, 403): This document, when taken in isolation, provides an incomplete version of the previous IPR proceeding.
Ex. 1097 – Internet Page	Incomplete, Relevance, Misleading (FRE 106, 401, 403): This excerpt provides an incomplete version of this document, only providing the abstract of the article, and when taken in isolation, is misleading in the manner in which it is used.
Ex. 1098 – Deposition of Dr. George Trainor	Incomplete, Relevance, Misleading (FRE 106, 401, 403): This excerpt provides an incomplete version of this document, only providing Volume II of the deposition transcript, and when taken in isolation, is misleading in the manner in which it is used.
Ex. 1099 – IUPAC Nomenclature 1979	Incomplete, Relevance, Misleading (FRE 106, 401, 403): This excerpt provides an incomplete version of this document, only providing selected portions of the

Exhibit Number and Description	Objections
	<p>reference, and when taken in isolation, is misleading in the manner in which it is used.</p> <p>This document, when taken in isolation, provides an incomplete characterization of the knowledge in the art as of October 2000.</p>
Ex. 1101 – Greene 1999	<p>Incomplete, Relevance, Misleading (FRE 106, 401, 403): This excerpt provides an incomplete version of this document, only providing selected portions of the reference, and when taken in isolation, is misleading in the manner in which it is used.</p> <p>This document, when taken in isolation, provides an incomplete characterization of the knowledge in the art as of October 2000.</p>
Ex. 1102 – CRC Handbook of Chemistry and Physics 1991-1992	<p>Incomplete, Relevance, Misleading (FRE 106, 401, 403): This excerpt provides an incomplete version of this document, only providing selected portions of the reference, and when taken in isolation, is misleading in the manner in which it is used.</p> <p>This document, when taken in isolation, provides an incomplete characterization of the knowledge in the art as of October 2000.</p>
Ex. 1103 – McGraw-Hill Dictionary of Chemistry 1984	<p>Incomplete, Relevance, Misleading (FRE 106, 401, 403): This excerpt provides an incomplete version of this document, only providing selected portions of the reference, and when taken in isolation, is misleading in the manner in which it is used.</p> <p>This document, when taken in isolation, provides an incomplete characterization of the knowledge in the art as of October 2000.</p>

Exhibit Number and Description	Objections
Ex. 1104 – Solomons 1988	<p>Incomplete, Relevance, Misleading (FRE 106, 401, 403): This excerpt provides an incomplete version of this document, only providing selected portions of the reference, and when taken in isolation, is misleading in the manner in which it is used.</p> <p>This document, when taken in isolation, provides an incomplete characterization of the knowledge in the art as of October 2000.</p>
Ex. 1105 – Morrison 1973	<p>Incomplete, Relevance, Misleading (FRE 106, 401, 403): This excerpt provides an incomplete version of this document, only providing selected portions of the reference, and when taken in isolation, is misleading in the manner in which it is used.</p> <p>This document, when taken in isolation, provides an incomplete characterization of the knowledge in the art as of October 2000.</p>
Ex. 1107 – U.S. Patent No. 6,627,436	<p>Relevance (FRE 401, 403): Illumina has not demonstrated that this document is prior art, nor that this document represents the knowledge of a person of ordinary skill in the art at the time of Columbia’s invention.</p>
Ex. 1109 – Hedden 1994	<p>Incomplete, Relevance, Misleading (FRE 106, 401, 403): This excerpt provides an incomplete version of this document, only providing selected portions of the reference, and when taken in isolation, is misleading in the manner in which it is used.</p> <p>This document, when taken in isolation, provides an incomplete characterization of the knowledge in the art as of October 2000.</p>

Exhibit Number and Description	Objections
Ex. 1116 – Meng thesis 2006	<p>Relevance (FRE 401, 403): The date markings on this document are after the asserted priority date of Columbia’s patent. This document does not represent the knowledge of a person of ordinary skill in the art at the time of Columbia’s invention.</p>
Ex. 1119 – Romesberg Second Declaration	<p>Relevance, Misleading (FRE 106, 401, 403):</p> <p>¶¶ 5-11 are misleading, incomplete, and irrelevant because they lack support for the contentions for which they are cited.</p> <p>¶ 13 is misleading, incomplete, and irrelevant because it lacks support for the contentions for which it is cited.</p> <p>¶¶ 19-20 are misleading, incomplete, and irrelevant because they lack support for the contentions for which they are cited.</p> <p>¶ 22 is misleading, incomplete, and irrelevant because it lacks support for the contentions for which it is cited.</p> <p>¶ 24 is misleading, incomplete, and irrelevant because it lacks support for the contentions for which it is cited.</p> <p>¶¶ 28-31 are misleading, incomplete, and irrelevant because they lack support for the contentions for which they are cited.</p> <p>¶ 35 is misleading, incomplete, and irrelevant because it lacks support for the contentions for which it is cited.</p> <p>¶¶ 38-39 are misleading, incomplete, and irrelevant because they lack support for the contentions for which they are cited.</p>

Exhibit Number and Description	Objections
	<p>¶ 42 is misleading, incomplete, and irrelevant because it lacks support for the contentions for which it is cited.</p> <p>¶¶ 45-46 are misleading, incomplete, and irrelevant because they lack support for the contentions for which they are cited.</p> <p>¶¶ 50-52 are misleading, incomplete, and irrelevant because they lack support for the contentions for which they are cited.</p> <p>¶¶ 54-55 are misleading, incomplete, and irrelevant because they lack support for the contentions for which they are cited.</p> <p>¶ 60 is misleading, incomplete, and irrelevant because it lacks support for the contentions for which it is cited.</p> <p>¶¶ 66-67 are misleading, incomplete, and irrelevant because they lack support for the contentions for which they are cited.</p> <p>¶¶ 77-78 are misleading, incomplete, and irrelevant because they lack support for the contentions for which they are cited.</p> <p>¶¶ 81-82 are misleading, incomplete, and irrelevant because they lack support for the contentions for which they are cited.</p> <p>¶ 90 is misleading, incomplete, and irrelevant because it lacks support for the contentions for which it is cited.</p> <p>¶ 96 is misleading, incomplete, and irrelevant because it lacks support for the contentions for which it is cited.</p>

Exhibit Number and Description	Objections
	<p>¶¶ 98-101 are misleading, incomplete, and irrelevant because they lack support for the contentions for which they are cited.</p> <p>¶¶ 103-107 are misleading, incomplete, and irrelevant because they lack support for the contentions for which they are cited.</p> <p>¶ 110 is misleading, incomplete, and irrelevant because it lacks support for the contentions for which it is cited.</p> <p>Improper Testimony by Expert Witness (FRE 702):</p> <p>¶¶ 5-11 are not based on sufficient facts and data, and do not reliably apply facts and data using scientific principles.</p> <p>¶ 13 is not based on sufficient facts and data, and does not reliably apply facts and data using scientific principles.</p> <p>¶¶ 19-20 are not based on sufficient facts and data, and do not reliably apply facts and data using scientific principles.</p> <p>¶ 22 is not based on sufficient facts and data, and does not reliably apply facts and data using scientific principles.</p> <p>¶ 24 is not based on sufficient facts and data, and does not reliably apply facts and data using scientific principles.</p> <p>¶¶ 28-31 are not based on sufficient facts and data, and do not reliably apply facts and data using scientific principles.</p> <p>¶ 35 is not based on sufficient facts and data, and does not reliably apply facts and data using scientific principles.</p> <p>¶¶ 38-39 are not based on sufficient facts and data, and do not reliably apply facts and data using scientific principles.</p>

Exhibit Number and Description	Objections
	<p>¶ 42 is not based on sufficient facts and data, and does not reliably apply facts and data using scientific principles.</p> <p>¶¶ 45-46 are not based on sufficient facts and data, and do not reliably apply facts and data using scientific principles.</p> <p>¶¶ 50-52 are not based on sufficient facts and data, and do not reliably apply facts and data using scientific principles.</p> <p>¶¶ 54-55 are not based on sufficient facts and data, and do not reliably apply facts and data using scientific principles.</p> <p>¶ 60 is not based on sufficient facts and data, and does not reliably apply facts and data using scientific principles.</p> <p>¶¶ 66-67 are not based on sufficient facts and data, and do not reliably apply facts and data using scientific principles.</p> <p>¶¶ 77-78 are not based on sufficient facts and data, and do not reliably apply facts and data using scientific principles.</p> <p>¶¶ 81-82 are not based on sufficient facts and data, and do not reliably apply facts and data using scientific principles.</p> <p>¶ 90 is not based on sufficient facts and data, and does not reliably apply facts and data using scientific principles.</p> <p>¶ 96 is not based on sufficient facts and data, and does not reliably apply facts and data using scientific principles.</p> <p>¶¶ 98-101 are not based on sufficient facts and data, and do not reliably apply facts and data using scientific principles.</p> <p>¶¶ 103-107 are not based on sufficient facts and data, and do not reliably apply facts and data using scientific principles.</p>

Exhibit Number and Description	Objections
	¶ 110 is not based on sufficient facts and data, and do not reliably apply facts and data using scientific principles.
Ex. 1120 – “The Race for the \$1000 Genome” 2006	Relevance (FRE 401, 403): The date markings on this document are after the asserted priority date of Columbia’s patent. This document does not represent the knowledge of a person of ordinary skill in the art at the time of Columbia’s invention.
Ex. 1124 – WO 2004/018493	Relevance (FRE 401, 403): The date markings on this document are after the asserted priority date of Columbia’s patent. This document does not represent the knowledge of a person of ordinary skill in the art at the time of Columbia’s invention.
Ex. 1125 – WO 2004/018497	Relevance (FRE 401, 403): The date markings on this document are after the asserted priority date of Columbia’s patent. This document does not represent the knowledge of a person of ordinary skill in the art at the time of Columbia’s invention.
Ex. 1127 – IPR2012-00007 Paper 82	Incomplete, Relevance, Misleading (FRE 106, 401, 403): This document, when taken in isolation, provides an incomplete version of the previous IPR proceeding.
Ex. 1128 – IPR2012-00007 Paper 83	Incomplete, Relevance, Misleading (FRE 106, 401, 403): This document, when taken in isolation, provides an incomplete version of the previous IPR proceeding.
Ex. 1129 – Ju 2006	Relevance (FRE 401, 403): This exhibit is not cited to or otherwise relied upon in Petitioner’s Reply and therefore lacks relevance.
Ex. 1130 – U.S. Patent No. 5,614,365	Relevance (FRE 401, 403): This exhibit is not cited to or otherwise relied upon in Petitioner’s Reply and therefore lacks relevance.

Exhibit Number and Description	Objections
Ex. 1131 – U.S. Patent No. 5,885,813	Relevance (FRE 401, 403): This exhibit is not cited to or otherwise relied upon in Petitioner’s Reply and therefore lacks relevance.
Ex. 1133 – Southworth 1996	Relevance (FRE 401, 403): This exhibit is not cited to or otherwise relied upon in Petitioner’s Reply and therefore lacks relevance.
Ex. 1134 – Takahashi 1972	Relevance (FRE 401, 403): This exhibit is not cited to or otherwise relied upon in Petitioner’s Reply and therefore lacks relevance.
Ex. 1135 – Yamamoto 1986	Relevance (FRE 401, 403): This exhibit is not cited to or otherwise relied upon in Petitioner’s Reply and therefore lacks relevance.
Ex. 1136 – Fields 1994	Relevance (FRE 401, 403): This exhibit is not cited to or otherwise relied upon in Petitioner’s Reply and therefore lacks relevance.
Ex. 1137 – IPR2012-00007 Paper 79	Incomplete, Relevance, Misleading (FRE 106, 401, 403): This document, when taken in isolation, provides an incomplete version of the previous IPR proceeding.

Respectfully submitted,

Dated: January 29, 2019

By: /John P. White/
John P. White, Reg. No. 28,678
Lead Attorney for Patent Owner
Cooper & Dunham LLP
30 Rockefeller Plaza, 20th Floor
New York, NY 10112
Telephone: (212) 278-0400
Fax: (212) 391-0525

Gary J. Gershik, Reg. No. 39,992
Cooper & Dunham LLP
30 Rockefeller Plaza, 20th Floor
New York, NY 10112
Telephone: (212) 278-0400
Fax: (212) 391-0525

John D. Murnane, Reg. No. 29,836
VENABLE | FITZPATRICK
VENABLE LLP
JDMurnane@Venable.com
1290 Avenue of the Americas
New York, NY 10104
Telephone: (212) 218-2100
Fax: (212) 218-2200

Justin J. Oliver, Reg. No. 44,986
VENABLE | FITZPATRICK
VENABLE LLP
JOliver@Venable.com
600 Massachusetts Ave.
Washington, D.C. 20001
Tel: (202) 721-5423
Fax: (212) 218-2200

Robert S. Schwartz (pro hac vice)
VENABLE | FITZPATRICK

VENABLE LLP
RSchwartz@Venable.com
1290 Avenue of the Americas
New York, NY 10104
Telephone: (212) 218-2100
Fax: (212) 218-2200

Zachary L. Garrett (pro hac vice)
VENABLE | FITZPATRICK
VENABLE LLP
ZGarrett@Venable.com
1290 Avenue of the Americas
New York, NY 10104
Telephone: (212) 218-2100
Fax: (212) 218-2200

CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of the foregoing **PATENT OWNER OBJECTIONS TO ADMISSIBILITY OF PETITIONER EVIDENCE** is being served on January 29, 2019, via email to Counsel for Petitioner at the email addresses below:

Kerry S. Taylor
Michael L. Fuller
William R. Zimmerman
Nathanael R. Luman
KNOBBE, MARTENS, OLSON
& BEAR, LLP
2040 Main Street, 14th Floor
Irvine, CA 92614
Email: BoxIllumina@knobbe.com

Derek Walter
derek.walter@weil.com
Edward R. Reines
edward.reines@weil.com
WEIL, GOTSHAL & MANGES LLP
201 Redwood Shores Parkway
Redwood Shores, CA 94065

Dated: January 29, 2019

By: /Brittany N. Internoscia/
Brittany N. Internoscia
Associate
Cooper & Dunham LLP