

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

INTEGRATED DNA TECHNOLOGIES, INC.,
Petitioner,

v.

TECAN GENOMICS, INC.,
Patent Owner.

IPR2025-00015
IPR2025-00016

U.S. Patent Nos. 10,036,012 and 10,876,108

**PETITIONER'S OBJECTIONS TO
ADMISSIBILITY OF EVIDENCE SUBMITTED BY PATENT OWNER**

Pursuant to 37 C.F.R. § 42.64(b) and the Federal Rules of Evidence (“FRE”), Petitioner Integrated DNA Technologies, Inc. (“IDT”), hereby objects as follows to the admissibility of evidence filed by Patent Owner Tecan Genomics, Inc. in conjunction with the Patent Owner Response filed on July 18, 2025.

Exhibit	Objections
Ex. 2001—Evans MF, <i>The polymerase chain reaction and pathology practice</i>, 15 Diagnostic Histopathology 344 (2009) (“Evans”)	FRE 401 and 402: The exhibit is not relevant to any ground upon which trial was instituted, including because the exhibit was not cited in the Patent Owner’s Response. FRE 802: To the extent it is being offered to prove the truth of the matter asserted, Exhibit 2001 constitutes inadmissible hearsay. FRE 901: Patent Owner has not produced evidence or certification sufficient to support a finding that the exhibit is what Patent Owner claims it is.
Ex. 2002—<i>The Cost of Sequencing a Human Genome</i> (“Cost of Sequencing”)	FRE 106: The exhibit is incomplete and ought to be considered, in fairness, at the same time as the remainder of the source from which it originates. FRE 401 and 402: The exhibit is not prior art and therefore is not relevant to any question of patentability. The exhibit is not relevant to any ground upon which trial was instituted, including because the exhibit was not cited in the Patent Owner’s Response and because the exhibit is a post-priority document. FRE 402 and 403: The exhibit is not prior art. Therefore, the exhibit’s probative value with respect to any ground upon which trial was instituted is substantially outweighed by the danger of unfair prejudice, confusing the

	issues, undue delay, wasting time, or needlessly presenting cumulative evidence. FRE 802: To the extent it is being offered to prove the truth of the matter asserted, Exhibit 2002 constitutes inadmissible hearsay. FRE 901: Patent Owner has not produced evidence or certification sufficient to support a finding that the exhibit is what Patent Owner claims it is.
Ex. 2003—Goodwin S, McPherson JD & McCombie WR, <i>Coming of age: ten years of next-generation sequencing technologies</i>, 17 Nature Reviews Genetics 333 (2016) (“Goodwin”)	FRE 401 and 402: The exhibit is not prior art and therefore is not relevant to any question of patentability. The exhibit is not relevant to any ground upon which trial was instituted, including because the exhibit was not cited in the Patent Owner’s Response and because the exhibit is a post-priority document. FRE 402 and 403: The exhibit is not prior art. Therefore, the exhibit’s probative value with respect to any ground upon which trial was instituted is substantially outweighed by the danger of unfair prejudice, confusing the issues, undue delay, wasting time, or needlessly presenting cumulative evidence. FRE 802: To the extent it is being offered to prove the truth of the matter asserted, Exhibit 2003 constitutes inadmissible hearsay. FRE 901: Patent Owner has not produced evidence or certification sufficient to support a finding that the exhibit is what Patent Owner claims it is.
Ex. 2004—Mardis ER, <i>DNA sequencing technologies: 2006–2016</i>, 12 Nature Protocols 213 (2017) (“Mardis”)	FRE 401 and 402: The exhibit is not prior art and therefore is not relevant to any question of patentability. The exhibit is not relevant to any ground upon which trial was instituted, including because the exhibit was not cited in the Patent Owner’s Response and because the exhibit is a post-priority document.

	FRE 402 and 403: The exhibit is not prior art. Therefore, the exhibit’s probative value with respect to any ground upon which trial was instituted is substantially outweighed by the danger of unfair prejudice, confusing the issues, undue delay, wasting time, or needlessly presenting cumulative evidence. FRE 802: To the extent it is being offered to prove the truth of the matter asserted, Exhibit 2004 constitutes inadmissible hearsay. FRE 901: Patent Owner has not produced evidence or certification sufficient to support a finding that the exhibit is what Patent Owner claims it is.
Ex. 2005—Fuller CW, et al., <i>The challenges of sequencing by synthesis</i>, 27 Nature Biotechnology 1013 (2009) (“Fuller”)	FRE 401 and 402: The exhibit is not relevant to any ground upon which trial was instituted, including because the exhibit was not cited in the Patent Owner’s Response. FRE 802: To the extent it is being offered to prove the truth of the matter asserted, Exhibit 2005 constitutes inadmissible hearsay. FRE 901: Patent Owner has not produced evidence or certification sufficient to support a finding that the exhibit is what Patent Owner claims it is.
Ex. 2006—Margulies M, et al., <i>Genome Sequencing in Open Microfabricated High Density Picoliter Reactors</i>, 437 Nature 376 (2005) (“Margulies”)	FRE 401 and 402: The exhibit is not relevant to any ground upon which trial was instituted, including because the exhibit was not cited in the Patent Owner’s Response. FRE 802: To the extent it is being offered to prove the truth of the matter asserted, Exhibit 2006 constitutes inadmissible hearsay. FRE 901: Patent Owner has not produced evidence or certification sufficient to support a finding that the exhibit is what Patent Owner claims it is.

Ex. 2007—Luo C, et al., <i>Direct Comparisons of Illumina vs. Roche 454 Sequencing Technologies on the Same Microbial Community DNA Sample</i>, 7 PLoS ONE 1 (2012) (“Luo”)	FRE 401 and 402: The exhibit is not relevant to any ground upon which trial was instituted, including because the exhibit was not cited in the Patent Owner’s Response. FRE 802: To the extent it is being offered to prove the truth of the matter asserted, Exhibit 2007 constitutes inadmissible hearsay. FRE 901: Patent Owner has not produced evidence or certification sufficient to support a finding that the exhibit is what Patent Owner claims it is.
Ex. 2008—Hert DG, Fredlake CP & Barron AE, <i>Advantages and limitations of next-generation sequencing technologies: A comparison of electrophoresis and non-electrophoresis methods</i>, 29 Electrophoresis 4618 (2008) (“Hert”)	FRE 401 and 402: The exhibit is not relevant to any ground upon which trial was instituted, including because the exhibit was not cited in the Patent Owner’s Response. FRE 802: To the extent it is being offered to prove the truth of the matter asserted, Exhibit 2008 constitutes inadmissible hearsay. FRE 901: Patent Owner has not produced evidence or certification sufficient to support a finding that the exhibit is what Patent Owner claims it is.
Ex. 2009—Bio-IT World Staff, <i>Six Years After Acquisition, Roche Quietly Shuttters 454</i>, Bio-IT World, October 16, 2013 (“Bio-IT”)	FRE 106: The exhibit is incomplete and ought to be considered, in fairness, at the same time as the remainder of the source from which it originates. FRE 401 and 402: The exhibit is not prior art and therefore is not relevant to any question of patentability. The exhibit is not relevant to any ground upon which trial was instituted, including because the exhibit was not cited in the Patent Owner’s Response and because the exhibit is a post-priority document. FRE 402 and 403: The exhibit is not prior art. Therefore, the exhibit’s probative value with respect to any ground upon which trial was instituted is substantially outweighed by the danger of unfair prejudice, confusing the

	issues, undue delay, wasting time, or needlessly presenting cumulative evidence. FRE 802: To the extent it is being offered to prove the truth of the matter asserted, Exhibit 2009 constitutes inadmissible hearsay. FRE 901: Patent Owner has not produced evidence or certification sufficient to support a finding that the exhibit is what Patent Owner claims it is.
Ex. 2010—Mamanova L, et al., <i>Target-enrichment strategies for next-generation sequencing</i>, 7 Nature Methods 111 (2010) (“Mamanova”)	FRE 401 and 402: The exhibit is not relevant to any ground upon which trial was instituted, including because the exhibit was not cited in the Patent Owner’s Response. FRE 802: To the extent it is being offered to prove the truth of the matter asserted, Exhibit 2010 constitutes inadmissible hearsay. FRE 901: Patent Owner has not produced evidence or certification sufficient to support a finding that the exhibit is what Patent Owner claims it is.
Ex. 2011—Treangen TJ & Salzberg SL, <i>Repetitive DNA and next-generation sequencing: computational challenges and solutions</i>, 13 Nature Reviews Genetics 36 (2012) (“Treangen”)	FRE 106: The exhibit is incomplete and ought to be considered, in fairness, at the same time as the published correction, dated January 17, 2012. FRE 401 and 402: The exhibit is not relevant to any ground upon which trial was instituted, including because the exhibit was not cited in the Patent Owner’s Response. FRE 802: To the extent it is being offered to prove the truth of the matter asserted, Exhibit 2011 constitutes inadmissible hearsay. FRE 901: Patent Owner has not produced evidence or certification sufficient to support a finding that the exhibit is what Patent Owner claims it is.

Ex. 2012—Brownie J, et al., <i>The elimination of primer-dimer accumulation in PCR</i>, 25 Nucleic Acids Rsch. 3235 (1997) (“Brownie”)	FRE 401 and 402: The exhibit is not relevant to any ground upon which trial was instituted, including because the exhibit was not cited in the Patent Owner’s Response. FRE 802: To the extent it is being offered to prove the truth of the matter asserted, Exhibit 2012 constitutes inadmissible hearsay. FRE 901: Patent Owner has not produced evidence or certification sufficient to support a finding that the exhibit is what Patent Owner claims it is.
Ex. 2013—Tewhey R, et al., <i>Microdroplet-based PCR enrichment for large-scale targeted sequencing</i>, 27 Nature Biotechnology 1025 (2009) (“Tewhey”)	FRE 401 and 402: The exhibit is not relevant to any ground upon which trial was instituted, including because the exhibit was not cited in the Patent Owner’s Response. FRE 802: To the extent it is being offered to prove the truth of the matter asserted, Exhibit 2013 constitutes inadmissible hearsay. FRE 901: Patent Owner has not produced evidence or certification sufficient to support a finding that the exhibit is what Patent Owner claims it is.
Ex. 2014—United States Patent Application Publication US2012/0309002A1 (2012) (“Link”)	FRE 106: The exhibit is incomplete and ought to be considered, in fairness, at the same time as the remainder of the file history of United States Patent Application Publication US2012/0309002A1. FRE 401 and 402: The exhibit is not relevant to any ground upon which trial was instituted, including because the exhibit was not cited in the Patent Owner’s Response. FRE 802: To the extent it is being offered to prove the truth of the matter asserted, Exhibit 2014 constitutes inadmissible hearsay. FRE 901: Patent Owner has not produced evidence or certification sufficient to support a

	finding that the exhibit is what Patent Owner claims it is.
Ex. 2015 —Franck SM, Bosworth BT & Moon HW, <i>Multiplex PCR for Enterotoxigenic, Attaching and Effacing, and Shiga Toxin-Producing Escherichia coli Strains from Calves</i> , 36 Journal of Clinical Microbiology 1795 (1998) (“Franck”)	FRE 401 and 402: The exhibit is not relevant to any ground upon which trial was instituted, including because the exhibit was not cited in the Patent Owner’s Response. FRE 802: To the extent it is being offered to prove the truth of the matter asserted, Exhibit 2015 constitutes inadmissible hearsay. FRE 901: Patent Owner has not produced evidence or certification sufficient to support a finding that the exhibit is what Patent Owner claims it is.
Ex. 2016 —Applied Biosystems AmpliTaq Gold [®] Brochure (2000) (“Applied Biosystems”)	FRE 106: The exhibit is incomplete and ought to be considered, in fairness, at the same time as the remainder of the source from which it originates. FRE 401 and 402: The exhibit is not relevant to any ground upon which trial was instituted, including because the exhibit was not cited in the Patent Owner’s Response. FRE 802: To the extent it is being offered to prove the truth of the matter asserted, Exhibit 2016 constitutes inadmissible hearsay. FRE 901: Patent Owner has not produced evidence or certification sufficient to support a finding that the exhibit is what Patent Owner claims it is.
Ex. 2017 —The Simple Fool’s Guide to PCR, version 2.0, October 29, 2022 (“Fool’s Guide”)	FRE 401 and 402: The exhibit is not prior art and therefore is not relevant to any question of patentability. The exhibit is not relevant to any ground upon which trial was instituted, including because the exhibit was not cited in the Patent Owner’s Response and because the exhibit is a post-priority document. FRE 402 and 403: The exhibit is not prior art. Therefore, the exhibit’s probative value with

	respect to any ground upon which trial was instituted is substantially outweighed by the danger of unfair prejudice, confusing the issues, undue delay, wasting time, or needlessly presenting cumulative evidence. FRE 802: To the extent it is being offered to prove the truth of the matter asserted, Exhibit 2017 constitutes inadmissible hearsay. FRE 901: Patent Owner has not produced evidence or certification sufficient to support a finding that the exhibit is what Patent Owner claims it is.
Ex. 2018—Ying H, et al., <i>The Whole-Genome Sequence of the Coral Acropora millepora</i>, 11 <i>Genome Biol. Evol.</i> 1374 (2019) (“Ying”)	FRE 401 and 402: The exhibit is not prior art and therefore is not relevant to any question of patentability. The exhibit is not relevant to any ground upon which trial was instituted, including because the exhibit was not cited in the Patent Owner’s Response and because the exhibit is a post-priority document. FRE 402 and 403: The exhibit is not prior art. Therefore, the exhibit’s probative value with respect to any ground upon which trial was instituted is substantially outweighed by the danger of unfair prejudice, confusing the issues, undue delay, wasting time, or needlessly presenting cumulative evidence. FRE 802: To the extent it is being offered to prove the truth of the matter asserted, Exhibit 2018 constitutes inadmissible hearsay. FRE 901: Patent Owner has not produced evidence or certification sufficient to support a finding that the exhibit is what Patent Owner claims it is.
Ex. 2019—U.S. Application No. 13/750,768, Non-Final Office Action, dated July 15, 2015 (“U.S. Application No. 13/750,768 NFOA”)	FRE 106: The exhibit is incomplete and ought to be considered, in fairness, at the same time as the remainder of the file history of United States Patent Application No. 13/750,768.

	FRE 401 and 402: The exhibit is not prior art and therefore is not relevant to any question of patentability. The exhibit is not relevant to any ground upon which trial was instituted, including because the exhibit was not cited in the Patent Owner’s Response and because the exhibit is a post-priority document. FRE 402 and 403: The exhibit is not prior art. Therefore, the exhibit’s probative value with respect to any ground upon which trial was instituted is substantially outweighed by the danger of unfair prejudice, confusing the issues, undue delay, wasting time, or needlessly presenting cumulative evidence. FRE 901: Patent Owner has not produced evidence or certification sufficient to support a finding that the exhibit is what Patent Owner claims it is.
Ex. 2020—Singleton AB, <i>Exome sequencing: a transformative technology</i>, 10 The Lancet Neurology 942 (2011) (“Singleton”)	FRE 401 and 402: The exhibit is not relevant to any ground upon which trial was instituted, including because the exhibit was not cited in the Patent Owner’s Response. FRE 802: To the extent it is being offered to prove the truth of the matter asserted, Exhibit 2020 constitutes inadmissible hearsay. FRE 901: Patent Owner has not produced evidence or certification sufficient to support a finding that the exhibit is what Patent Owner claims it is.
Ex. 2021—Declaration of Carlos D. Bustamante, Ph.D. (“Bustamante Decl.”)	FRE 401 and 402: The exhibit is not relevant to any ground upon which trial was instituted, including because the exhibit was not cited in the Patent Owner’s Response. FRE 402 and 403: The exhibit is not prior art. Therefore, the exhibit’s probative value with respect to any ground upon which trial was instituted is substantially outweighed by the danger of unfair prejudice, confusing the

	issues, undue delay, wasting time, or needlessly presenting cumulative evidence. FRE 702 and 703: The testimony offered in paragraphs 32–148 is not based on sufficient facts or data, the product of reliable principles and methods, and/or a reliable application of the principles and methods to the facts. Right to Cross-Examine: Petitioner reserves the right to cross-examine the declarant or else seek to exclude the exhibit as hearsay.
Ex. 2036 —Transcript of Peter Sims, Ph.D., Day 1 (“Sims Day 1”)	Petitioner hereby preserves and renews all objections made on the record during the June 26, 2025 Deposition of Peter A. Sims. FRE 106: This exhibit may be an incomplete and/or inaccurate transcript of the June 26, 2025 deposition of Dr. Peter A. Sims because the transcript does not include any forthcoming errata sheet. To the extent the witness submits an errata sheet, it must in fairness be considered at the same time as the exhibit.
Ex. 2037 —Transcript of Peter Sims, Ph.D., Day 2 (“Sims Day 2”)	Petitioner hereby preserves and renews all objections made on the record during the June 27, 2025 Deposition of Peter A. Sims. FRE 106: This exhibit may be an incomplete and/or inaccurate transcript of the June 27, 2025 deposition of Dr. Peter A Sims because the transcript does not include any forthcoming errata sheet. To the extent the witness submits an errata sheet, it must in fairness be considered at the same time as the exhibit.
Ex. 2038 —Declaration of Carlos D. Bustamante, Ph.D. (“Bustamante Decl.”)	Conflict of Interest: The Bustamante Decl. relies upon and cites extensively Ex. 2039, the declaration of Dr. Matz. Dr. Matz had a prior confidential relationship with Petitioner and Petitioner disclosed confidential information to Dr. Matz that is relevant to the current proceeding. Dr. Matz’s disqualification is compelled on that basis. <i>See Galderma S.A. v. Medy-Tox, Inc.</i>, PGR2019-00062, Paper 56

	(Feb. 11, 2021). To the extent that Dr. Bustamante’s testimony depends on Dr. Matz’s declaration or on other information received from Dr. Matz, it must be excluded for the same reason as Dr. Matz’s testimony. FRE 401 and 402: For each paragraph not cited in Patent Owner’s Response, the exhibit is not relevant to any ground upon which trial was instituted. FRE 104, 401, 402, and 403: The testimony offered in paragraphs 39-365 is misleading, incomplete, and irrelevant, including because the testimony offered lacks support, mischaracterizes the ’012 and ’108 patents, and mischaracterizes the prior art. Therefore, the proffered testimony’s probative value with respect to any ground upon which trial was instituted is substantially outweighed by the danger of unfair prejudice, confusing the issues, undue delay, wasting time, or needlessly presenting cumulative evidence. FRE 702 and 703: The testimony offered in paragraphs 39-365 is not based on sufficient facts or data, the product of reliable principles or methods, and/or a reliable application of the principles and methods to the facts. Right to Cross-Examine: Petitioner reserves the right to cross-examine the declarant or else seek to exclude the exhibit as hearsay.
Ex. 2039—Declaration of Dr. Mikhail V. Matz (“Matz Decl.”)	Conflict of Interest: Dr. Matz had a prior confidential relationship with Petitioner and Petitioner disclosed confidential information to Dr. Matz that is relevant to the current proceeding. Dr. Matz’s disqualification is compelled on that basis. <i>See Galderma S.A. v. Medy-Tox, Inc.</i>, PGR2019-00062, Paper 56 (Feb. 11, 2021). FRE 401 and 402: For each paragraph not cited in Patent Owner’s Response, the exhibit

	is not relevant to any ground upon which trial was instituted. FRE 104, 401, 402, and 403: The testimony offered in paragraphs 15-77 is misleading, incomplete, and irrelevant, including because the testimony offered lacks support and mischaracterizes the prior art. Therefore, the proffered testimony’s probative value with respect to any ground upon which trial was instituted is substantially outweighed by the danger of unfair prejudice, confusing the issues, undue delay, wasting time, or needlessly presenting cumulative evidence. FRE 602: The testimony offered in paragraphs 15-77 is not sufficient to support a finding that the witness has personal knowledge of all matters testified on. FRE 701: The testimony offered in paragraphs 15-77 is not helpful to determining a fact in issue and is not based on scientific, technical, or other specialized knowledge. FRE 702 and 703: The testimony offered in paragraphs 15-77 is not based on sufficient facts or data, the product of reliable principles or methods, and/or a reliable application of the principles and methods to the facts. Right to Cross-Examine: Petitioner reserves the right to cross-examine the declarant or else seek to exclude the exhibit as hearsay.
Ex. 2040—Mullis, K, <i>Specific Enzymatic Amplification of DNA In Vitro: The Polymerase Chain Reaction</i>, LI Cold Spring Harbor Symposia on Quantitative Biology, 263 (1986) (“Mullis 1986”)	FRE 401 and 402: The exhibit is not relevant to any ground upon which trial was instituted, including because the exhibit was not cited in the Patent Owner’s Response. FRE 802: To the extent it is being offered to prove the truth of the matter asserted, this exhibit constitutes inadmissible hearsay. FRE 901: Patent Owner has not produced evidence or certification sufficient to support a

	finding that the exhibit is what Patent Owner claims it is.
Ex. 2041 —Kanagawa, T, <i>Bias and Artifacts in Multitemplate Polymerase Chain Reactions (PCR)</i> , Journal of Bioscience and Bioengineering Vol. 96, No. 4 317-323 (2003) (“Kanagawa 2003”)	FRE 401 and 402: The exhibit is not relevant to any ground upon which trial was instituted, including because the exhibit was not cited in the Patent Owner’s Response. FRE 802: To the extent it is being offered to prove the truth of the matter asserted, this exhibit constitutes inadmissible hearsay. FRE 901: Patent Owner has not produced evidence or certification sufficient to support a finding that the exhibit is what Patent Owner claims it is.
Ex. 2042 —Aird, D et al., <i>Analyzing and minimizing PCR amplification bias in Illumina sequencing libraries</i> , 12 Genome Biology (2011) (“Aird 2011”)	FRE 802: To the extent it is being offered to prove the truth of the matter asserted, this exhibit constitutes inadmissible hearsay. FRE 901: Patent Owner has not produced evidence or certification sufficient to support a finding that the exhibit is what Patent Owner claims it is.
Ex. 2043 —Chenchik, A, et al., <i>Full-Length cDNA Cloning and Determination of mRNA 5’ and 3’ Ends by Amplification of Adapter-Ligated cDNA</i> , BioTechniques, Vol. 21, No. 3 (1996) (“Chenchik 1996”)	FRE 802: To the extent it is being offered to prove the truth of the matter asserted, this exhibit constitutes inadmissible hearsay. FRE 901: Patent Owner has not produced evidence or certification sufficient to support a finding that the exhibit is what Patent Owner claims it is.
Ex. 2044 —Devon, R. et al., <i>Splinkerettes-improved vectorettes for greater efficiency in PCR walking</i> , Nucleic Acids Research, 1995, Vol. 23, No. 9, 1644-1645 (“Devon 1995”)	FRE 401 and 402: The exhibit is not relevant to any ground upon which trial was instituted, including because the exhibit was not cited in the Patent Owner’s Response. FRE 802: To the extent it is being offered to prove the truth of the matter asserted, this exhibit constitutes inadmissible hearsay. FRE 901: Patent Owner has not produced evidence or certification sufficient to support a

	finding that the exhibit is what Patent Owner claims it is.
Ex. 2045 — L. Padegimas, and N. Reichert, <i>Adaptor Ligation-Based Polymerase Chain Reaction-Mediated Walking</i> , ANALYTICAL BIOCHEMISTRY 260, 149–153 (1998) (“Padegimas 1998”)	FRE 401 and 402: The exhibit is not relevant to any ground upon which trial was instituted, including because the exhibit was not cited in the Patent Owner’s Response. FRE 802: To the extent it is being offered to prove the truth of the matter asserted, this exhibit constitutes inadmissible hearsay. FRE 901: Patent Owner has not produced evidence or certification sufficient to support a finding that the exhibit is what Patent Owner claims it is.
Ex. 2046 —C. Arnold and I.J. Hodgson, <i>Vectorette PCR: A Novel Approach to Genomic Walking</i> , Cold Spring Laboratory Press (1991) (“Arnold 1991”)	FRE 401 and 402: The exhibit is not relevant to any ground upon which trial was instituted, including because the exhibit was not cited in the Patent Owner’s Response. FRE 802: To the extent it is being offered to prove the truth of the matter asserted, this exhibit constitutes inadmissible hearsay. FRE 901: Patent Owner has not produced evidence or certification sufficient to support a finding that the exhibit is what Patent Owner claims it is.
Ex. 2047 —Miura, F., et al., <i>A novel strategy to design highly specific PCR primers based on the stability and uniqueness of 30-end subsequences</i> , Oxford University Press (2005) (“Miura 2005”)	FRE 802: To the extent it is being offered to prove the truth of the matter asserted, this exhibit constitutes inadmissible hearsay. FRE 901: Patent Owner has not produced evidence or certification sufficient to support a finding that the exhibit is what Patent Owner claims it is.
Ex. 2048 —Tsoktouridis, G., <i>Adaptor Long-Range PCR Procedure for CloneSpecific Characterization and Chromosomal Localization</i> , BioTechniques Vol. 38, No. 6 (2005) (“Tsoktouridis 2005”)	FRE 802: To the extent it is being offered to prove the truth of the matter asserted, this exhibit constitutes inadmissible hearsay. FRE 901: Patent Owner has not produced evidence or certification sufficient to support a

	finding that the exhibit is what Patent Owner claims it is.
Ex. 2049 —N. Bower and I. Johnston, <i>Targeted rapid amplification of cDNA ends (T-RACE)—an improved RACE reaction through degradation of non-target sequences</i> , Nucleic Acids Research, 2010, Vol. 38, No. 21 (“Bower 2010”)	FRE 401 and 402: The exhibit is not relevant to any ground upon which trial was instituted, including because the exhibit was not cited in the Patent Owner’s Response. FRE 802: To the extent it is being offered to prove the truth of the matter asserted, this exhibit constitutes inadmissible hearsay. FRE 901: Patent Owner has not produced evidence or certification sufficient to support a finding that the exhibit is what Patent Owner claims it is.
Ex. 2050 —Sohn, J, WO 2011/004994 A2 (“Sohn 2011”)	FRE 106: The exhibit is incomplete and ought to be considered, in fairness, at the same time as the remainder of the file history of published International application WO2011/004994 A2. FRE 802: To the extent it is being offered to prove the truth of the matter asserted, this exhibit constitutes inadmissible hearsay. FRE 901: Patent Owner has not produced evidence or certification sufficient to support a finding that the exhibit is what Patent Owner claims it is.
Ex. 2051 —Almomani R. et al., <i>Experiences with array-based sequence capture; toward clinical applications</i> , European Journal of Human Genetics (2011) 19, 50–55 (“Almomani 2011”)	FRE 802: To the extent it is being offered to prove the truth of the matter asserted, this exhibit constitutes inadmissible hearsay. FRE 901: Patent Owner has not produced evidence or certification sufficient to support a finding that the exhibit is what Patent Owner claims it is.
Ex. 2052 —Myllykangas, S. et al., <i>Targeted sequencing library preparation by genomic DNA circularization</i> , BMC Biotechnology 2011, 11:122 (“Myllykangas 2011”)	FRE 802: To the extent it is being offered to prove the truth of the matter asserted, this exhibit constitutes inadmissible hearsay. FRE 901: Patent Owner has not produced evidence or certification sufficient to support a

	finding that the exhibit is what Patent Owner claims it is.
Ex. 2053 —Quail, M., <i>A large genome center’s improvements to the Illumina sequencing system</i> , Nature Methods Vol. 5 No.12 December 2008 (“Quail 2008”)	FRE 802: To the extent it is being offered to prove the truth of the matter asserted, this exhibit constitutes inadmissible hearsay. FRE 901: Patent Owner has not produced evidence or certification sufficient to support a finding that the exhibit is what Patent Owner claims it is.
Ex. 2054 — Kozarewa, I., <i>Amplification-free Illumina sequencing-library preparation facilitates improved mapping and assembly of (G+C)-biased genomes</i> , Nature Methods Vol. 6 No. 4 April 2009, (“Kozarewa 2009”)	FRE 802: To the extent it is being offered to prove the truth of the matter asserted, this exhibit constitutes inadmissible hearsay. FRE 901: Patent Owner has not produced evidence or certification sufficient to support a finding that the exhibit is what Patent Owner claims it is.
Ex. 2055 — Syvänen, A., <i>Accessing Genetic Variation: Genotyping Singel Nucleotide Polymorphisms</i> , Nature Reviews, Genetics Vol. 2, December2001 (“Syvänen 2001”)	FRE 401 and 402: The exhibit is not relevant to any ground upon which trial was instituted, including because the exhibit was not cited in the Patent Owner’s Response. FRE 802: To the extent it is being offered to prove the truth of the matter asserted, this exhibit constitutes inadmissible hearsay. FRE 901: Patent Owner has not produced evidence or certification sufficient to support a finding that the exhibit is what Patent Owner claims it is.
Ex. 2056 — Grunenwald, H et al., <i>Rapid, high-throughput library preparation for next generation sequencing</i> , Nature Methods, August 2010 (“Grunenwald 2010”)	FRE 802: To the extent it is being offered to prove the truth of the matter asserted, this exhibit constitutes inadmissible hearsay. FRE 901: Patent Owner has not produced evidence or certification sufficient to support a finding that the exhibit is what Patent Owner claims it is.

Ex. 2057—Glenn, T., <i>Field guide to next-generation DNA sequencers</i>, Molecular Ecology Resources (2011) (“Glenn 2011”)	FRE 401 and 402: The exhibit is not relevant to any ground upon which trial was instituted, including because the exhibit was not cited in the Patent Owner’s Response. FRE 802: To the extent it is being offered to prove the truth of the matter asserted, this exhibit constitutes inadmissible hearsay. FRE 901: Patent Owner has not produced evidence or certification sufficient to support a finding that the exhibit is what Patent Owner claims it is.
Ex. 2058—Zhang, L., <i>Advances in Metagenomics and Its Application in Environmental Microorganisms</i>, Frontiers in Microbiology, December 2021 (“Zhang 2021”)	FRE 401 and 402: The exhibit is not prior art and therefore is not relevant to any question of patentability. The exhibit is not relevant to any ground upon which trial was instituted, including because the exhibit was not cited in the Patent Owner’s Response and because the exhibit is a post-priority document. FRE 402 and 403: The exhibit is not prior art. Therefore, the exhibit’s probative value with respect to any ground upon which trial was instituted is substantially outweighed by the danger of unfair prejudice, confusing the issues, undue delay, wasting time, or needlessly presenting cumulative evidence. FRE 802: To the extent it is being offered to prove the truth of the matter asserted, this exhibit constitutes inadmissible hearsay. FRE 901: Patent Owner has not produced evidence or certification sufficient to support a finding that the exhibit is what Patent Owner claims it is.
Ex. 2059—Genome Sequencer FLX Operator’s Manual, October 2008 (“FLX Operator’s Manual 2008”)	FRE 401 and 402: The exhibit is not relevant to any ground upon which trial was instituted, including because the exhibit was not cited in the Patent Owner’s Response.

	FRE 802: To the extent it is being offered to prove the truth of the matter asserted, this exhibit constitutes inadmissible hearsay. FRE 901: Patent Owner has not produced evidence or certification sufficient to support a finding that the exhibit is what Patent Owner claims it is.
Ex. 2060— Niedringhaus, T., et al. <i>Landscape of Next-Generation Sequencing Technologies</i>, Analytical Chemistry 2011 (“Niedringhaus 2011”)	FRE 401 and 402: The exhibit is not relevant to any ground upon which trial was instituted, including because the exhibit was not cited in the Patent Owner’s Response. FRE 802: To the extent it is being offered to prove the truth of the matter asserted, this exhibit constitutes inadmissible hearsay. FRE 901: Patent Owner has not produced evidence or certification sufficient to support a finding that the exhibit is what Patent Owner claims it is.
Ex. 2061—Thoma, C., et al., <i>Generation of Stable mRNA Fragments and Translation of N-Truncated Proteins Induced by Antisense Oligodeoxynucleotides</i>, Molecular Cell, Vol. 8, 865–872, October, 2001 (“Thoma 2001”)	FRE 401 and 402: The exhibit is not relevant to any ground upon which trial was instituted, including because the exhibit was not cited in the Patent Owner’s Response. FRE 802: To the extent it is being offered to prove the truth of the matter asserted, this exhibit constitutes inadmissible hearsay. FRE 901: Patent Owner has not produced evidence or certification sufficient to support a finding that the exhibit is what Patent Owner claims it is.
Ex. 2062—F. Ernani and E. LeProust, <i>Summary – Bringing Cost and Process Efficiency to Next Generation Sequencing</i>, DDW Summer 2009, (“Ernani 2009”)	FRE 106: The exhibit is incomplete and ought to be considered, in fairness, at the same time as the remainder of the source from which it originates. FRE 802: To the extent it is being offered to prove the truth of the matter asserted, this exhibit constitutes inadmissible hearsay.

	FRE 901: Patent Owner has not produced evidence or certification sufficient to support a finding that the exhibit is what Patent Owner claims it is.
Ex. 2063—Irwin, J., et al., <i>Assessing the potential of next generation sequencing technologies for missing persons identification efforts</i>, Forensic Science International: Genetics Supplement Series 3 (2011) (“Irwin 2011”)	FRE 401 and 402: The exhibit is not relevant to any ground upon which trial was instituted, including because the exhibit was not cited in the Patent Owner’s Response. FRE 802: To the extent it is being offered to prove the truth of the matter asserted, this exhibit constitutes inadmissible hearsay. FRE 901: Patent Owner has not produced evidence or certification sufficient to support a finding that the exhibit is what Patent Owner claims it is.
Ex. 2064—Lange, J., <i>Targeted resequencing for large-scale genomic studies: accelerating NGS throughput using molecular barcodes</i>, Nature Methods June 2020 (“Lange 2020”)	FRE 401 and 402: The exhibit is not prior art and therefore is not relevant to any question of patentability. FRE 402 and 403: The exhibit is not prior art. Therefore, the exhibit’s probative value with respect to any ground upon which trial was instituted is substantially outweighed by the danger of unfair prejudice, confusing the issues, undue delay, wasting time, or needlessly presenting cumulative evidence. FRE 802: To the extent it is being offered to prove the truth of the matter asserted, this exhibit constitutes inadmissible hearsay. FRE 901: Patent Owner has not produced evidence or certification sufficient to support a finding that the exhibit is what Patent Owner claims it is.
Ex. 2065—Barchi, L., <i>Single Primer Enrichment Technology (SPET) for High-Throughput Genotyping in Tomato and Eggplant Germplasm</i>, Frontiers in Plant Science, August 2019 (“Barchi 2019”)	FRE 401 and 402: The exhibit is not prior art and therefore is not relevant to any question of patentability. FRE 402 and 403: The exhibit is not prior art. Therefore, the exhibit’s probative value with

	respect to any ground upon which trial was instituted is substantially outweighed by the danger of unfair prejudice, confusing the issues, undue delay, wasting time, or needlessly presenting cumulative evidence. FRE 802: To the extent it is being offered to prove the truth of the matter asserted, this exhibit constitutes inadmissible hearsay. FRE 901: Patent Owner has not produced evidence or certification sufficient to support a finding that the exhibit is what Patent Owner claims it is.
Ex. 2066—Gnirke, A. et al., <i>Solution hybrid selection with ultra-long oligonucleotides for massively parallel targeted sequencing</i>, Nature Biotechnology, Vol 27 No. 2 February (2009) (“Gnirke 2009”)	FRE 401 and 402: The exhibit is not relevant to any ground upon which trial was instituted, including because the exhibit was not cited in the Patent Owner’s Response. FRE 802: To the extent it is being offered to prove the truth of the matter asserted, this exhibit constitutes inadmissible hearsay. FRE 901: Patent Owner has not produced evidence or certification sufficient to support a finding that the exhibit is what Patent Owner claims it is.
Ex. 2067—Smith, C., <i>Growing Options for Enriching Target DNA</i>, Biocompare June 2021 (“Smith 2021”)	FRE 401 and 402: The exhibit is not prior art and therefore is not relevant to any question of patentability. FRE 402 and 403: The exhibit is not prior art. Therefore, the exhibit’s probative value with respect to any ground upon which trial was instituted is substantially outweighed by the danger of unfair prejudice, confusing the issues, undue delay, wasting time, or needlessly presenting cumulative evidence. FRE 802: To the extent it is being offered to prove the truth of the matter asserted, this exhibit constitutes inadmissible hearsay.

	FRE 901: Patent Owner has not produced evidence or certification sufficient to support a finding that the exhibit is what Patent Owner claims it is.
Ex. 2068—Scaglione, D., <i>Single primer enrichment technology as a tool for massive genotyping: a benchmark on black poplar and maize</i>, Annals of Botany 124: 543–551, 2019 (“Scaglione 2019”)	FRE 401 and 402: The exhibit is not prior art and therefore is not relevant to any question of patentability. FRE 402 and 403: The exhibit is not prior art. Therefore, the exhibit’s probative value with respect to any ground upon which trial was instituted is substantially outweighed by the danger of unfair prejudice, confusing the issues, undue delay, wasting time, or needlessly presenting cumulative evidence. FRE 802: To the extent it is being offered to prove the truth of the matter asserted, this exhibit constitutes inadmissible hearsay. FRE 901: Patent Owner has not produced evidence or certification sufficient to support a finding that the exhibit is what Patent Owner claims it is.
Ex. 2069— Benjamino, J., et al., <i>Genome-Based Targeted Sequencing as a Reproducible Microbial Community Profiling Assay</i>, MShere Vol., Issue 2 (2021) (“Benjamino 2021”)	FRE 401 and 402: The exhibit is not prior art and therefore is not relevant to any question of patentability. FRE 402 and 403: The exhibit is not prior art. Therefore, the exhibit’s probative value with respect to any ground upon which trial was instituted is substantially outweighed by the danger of unfair prejudice, confusing the issues, undue delay, wasting time, or needlessly presenting cumulative evidence. FRE 802: To the extent it is being offered to prove the truth of the matter asserted, this exhibit constitutes inadmissible hearsay. FRE 901: Patent Owner has not produced evidence or certification sufficient to support a finding that the exhibit is what Patent Owner claims it is.

Ex. 2070—Knierim, E., et al., <i>Systematic Comparison of Three Methods for Fragmentation of Long-Range PCR Products for Next Generation Sequencing</i>, PLoS ONE, Vol. 6, Issue 11, Nov (2011) (“Knierim 2011”)	FRE 401 and 402: The exhibit is not relevant to any ground upon which trial was instituted, including because the exhibit was not cited in the Patent Owner’s Response. FRE 802: To the extent it is being offered to prove the truth of the matter asserted, this exhibit constitutes inadmissible hearsay. FRE 901: Patent Owner has not produced evidence or certification sufficient to support a finding that the exhibit is what Patent Owner claims it is.
Ex. 2071—Quail, M., et al., <i>Optimal enzymes for amplifying sequencing libraries</i>, Nature Methods Vol. 9 No. 1 January 2012 (“Quail 2012”)	FRE 802: To the extent it is being offered to prove the truth of the matter asserted, this exhibit constitutes inadmissible hearsay. FRE 901: Patent Owner has not produced evidence or certification sufficient to support a finding that the exhibit is what Patent Owner claims it is.
Ex. 2072—D. Whiley and T. Sloots, <i>Sequence variation in primer targets affects the accuracy of viral quantitative PCR</i>, Journal of Clinical Virology 34 (2005) 104–107 (“Whiley 2005”)	FRE 401 and 402: The exhibit is not relevant to any ground upon which trial was instituted, including because the exhibit was not cited in the Patent Owner’s Response. FRE 802: To the extent it is being offered to prove the truth of the matter asserted, this exhibit constitutes inadmissible hearsay. FRE 901: Patent Owner has not produced evidence or certification sufficient to support a finding that the exhibit is what Patent Owner claims it is.
Ex. 2073—Ghedira, R., <i>Assessment of Primer/Template Mismatch Effects on Real-Time PCR Amplification of Target Taxa for GMO Quantification</i>, J. Agric. Food Chem. 2009, 57, 9370–9377 (“Ghedira 2009”)	FRE 401 and 402: The exhibit is not relevant to any ground upon which trial was instituted, including because the exhibit was not cited in the Patent Owner’s Response. FRE 802: To the extent it is being offered to prove the truth of the matter asserted, this exhibit constitutes inadmissible hearsay.

	FRE 901: Patent Owner has not produced evidence or certification sufficient to support a finding that the exhibit is what Patent Owner claims it is.
Ex. 2074—Matz, M., <i>Amplification of Representative cDNA Samples from Microscopic Amounts of Invertebrate Tissue to Search for New Genes</i>, Methods in Molecular Biology, vol. 183 (2002) (“Matz 2002”)	FRE 401 and 402: The exhibit is not relevant to any ground upon which trial was instituted, including because the exhibit was not cited in the Patent Owner’s Response. FRE 802: To the extent it is being offered to prove the truth of the matter asserted, this exhibit constitutes inadmissible hearsay. FRE 901: Patent Owner has not produced evidence or certification sufficient to support a finding that the exhibit is what Patent Owner claims it is.
Ex. 2075—Bielas, J., WO 2013/123442 A1 (“Bielas 2013”)	FRE 106: The exhibit is incomplete and ought to be considered, in fairness, at the same time as the remainder of the file history of published International application WO 2013/123442 A1. FRE 802: To the extent it is being offered to prove the truth of the matter asserted, this exhibit constitutes inadmissible hearsay. FRE 901: Patent Owner has not produced evidence or certification sufficient to support a finding that the exhibit is what Patent Owner claims it is.
Ex. 2076—JP Morgan Report (2010)	FRE 106: The exhibit is incomplete and ought to be considered, in fairness, at the same time as the remainder of the source from which it originates. FRE 401 and 402: The exhibit is not relevant to any ground upon which trial was instituted, including because the exhibit was not cited in the Patent Owner’s Response.

	FRE 802: To the extent it is being offered to prove the truth of the matter asserted, this exhibit constitutes inadmissible hearsay. FRE 901: Patent Owner has not produced evidence or certification sufficient to support a finding that the exhibit is what Patent Owner claims it is.
Ex. 2077—RNA Fragment Reagents (“Ambion 2008”)	FRE 106: The exhibit is incomplete and ought to be considered, in fairness, at the same time as the remainder of the source from which it originates. FRE 401 and 402: The exhibit is not relevant to any ground upon which trial was instituted, including because the exhibit was not cited in the Patent Owner’s Response. FRE 802: To the extent it is being offered to prove the truth of the matter asserted, this exhibit constitutes inadmissible hearsay. FRE 901: Patent Owner has not produced evidence or certification sufficient to support a finding that the exhibit is what Patent Owner claims it is.
Ex. 2078—Preparing Samples for Sequencing of mRNA (“illumina 2008”)	FRE 106: The exhibit is incomplete and ought to be considered, in fairness, at the same time as the remainder of the source from which it originates. FRE 401 and 402: The exhibit is not relevant to any ground upon which trial was instituted, including because the exhibit was not cited in the Patent Owner’s Response. FRE 802: To the extent it is being offered to prove the truth of the matter asserted, this exhibit constitutes inadmissible hearsay. FRE 901: Patent Owner has not produced evidence or certification sufficient to support a finding that the exhibit is what Patent Owner claims it is.

Ex. 2079— Additional File 3 - Validation of predicted SNPs by PCR and re-sequencing (“Meyer Additional File 3”)	FRE 106: The exhibit is incomplete and ought to be considered, in fairness, at the same time as the remainder of the source from which it originates. FRE 401 and 402: The exhibit is not relevant to any ground upon which trial was instituted, including because the exhibit was not cited in the Patent Owner’s Response. FRE 802: To the extent it is being offered to prove the truth of the matter asserted, this exhibit constitutes inadmissible hearsay. FRE 901: Patent Owner has not produced evidence or certification sufficient to support a finding that the exhibit is what Patent Owner claims it is.
Ex. 2080—Lewin, B., Genes V, Chapter 23, <i>The eukaryotic gene: conserved exons and unique introns</i>, (“Lewin 1994”)	FRE 106: The exhibit is incomplete and ought to be considered, in fairness, at the same time as the remainder of the source from which it originates. FRE 401 and 402: The exhibit is not relevant to any ground upon which trial was instituted, including because the exhibit was not cited in the Patent Owner’s Response. FRE 802: To the extent it is being offered to prove the truth of the matter asserted, this exhibit constitutes inadmissible hearsay. FRE 901: Patent Owner has not produced evidence or certification sufficient to support a finding that the exhibit is what Patent Owner claims it is.
Ex. 2081 Evrogen Trimmer Kit User Manual (“Evrogen”)	FRE 106: The exhibit is incomplete and ought to be considered, in fairness, at the same time as the remainder of the source from which it originates.

	FRE 401 and 402: The exhibit is not relevant to any ground upon which trial was instituted, including because the exhibit was not cited in the Patent Owner’s Response. FRE 802: To the extent it is being offered to prove the truth of the matter asserted, this exhibit constitutes inadmissible hearsay. FRE 901: Patent Owner has not produced evidence or certification sufficient to support a finding that the exhibit is what Patent Owner claims it is.
Ex. 2082—<i>Accelerating genomics with advanced sample preparation solutions</i>, NuGen Technologies (“Accelerating genomics”)	FRE 106: The exhibit is incomplete and ought to be considered, in fairness, at the same time as the remainder of the source from which it originates. FRE 401 and 402: The exhibit is not relevant to any ground upon which trial was instituted, including because the exhibit was not cited in the Patent Owner’s Response. FRE 802: To the extent it is being offered to prove the truth of the matter asserted, this exhibit constitutes inadmissible hearsay. FRE 901: Patent Owner has not produced evidence or certification sufficient to support a finding that the exhibit is what Patent Owner claims it is.
Ex. 2083—Scolnick, J., et al., <i>An Efficient Method for Identifying Gene Fusions by Targeted RNA Sequencing from Fresh Frozen and FFPE Samples</i>, PLOS ONE July, 1, 2015 (“Scolnick 2015”)	FRE 401 and 402: The exhibit is not prior art and therefore is not relevant to any question of patentability. The exhibit is not relevant to any ground upon which trial was instituted, including because the exhibit was not cited in the Patent Owner’s Response and because the exhibit is a post-priority document. FRE 402 and 403: The exhibit is not prior art. Therefore, the exhibit’s probative value with respect to any ground upon which trial was instituted is substantially outweighed by the danger of unfair prejudice, confusing the

	issues, undue delay, wasting time, or needlessly presenting cumulative evidence. FRE 802: To the extent it is being offered to prove the truth of the matter asserted, this exhibit constitutes inadmissible hearsay. FRE 901: Patent Owner has not produced evidence or certification sufficient to support a finding that the exhibit is what Patent Owner claims it is.
Ex. 2084—<i>NuGEN Announces Issuance Of U.S. Patent For Its Single Primer Target Enrichment Technology (SPET) For Next Generation Sequencing Applications</i> (“NuGen Biospace 2017”)	FRE 401 and 402: The exhibit is not prior art and therefore is not relevant to any question of patentability. The exhibit is not relevant to any ground upon which trial was instituted, including because the exhibit was not cited in the Patent Owner’s Response and because the exhibit is a post-priority document. FRE 402 and 403: The exhibit is not prior art. Therefore, the exhibit’s probative value with respect to any ground upon which trial was instituted is substantially outweighed by the danger of unfair prejudice, confusing the issues, undue delay, wasting time, or needlessly presenting cumulative evidence. FRE 802: To the extent it is being offered to prove the truth of the matter asserted, this exhibit constitutes inadmissible hearsay. FRE 901: Patent Owner has not produced evidence or certification sufficient to support a finding that the exhibit is what Patent Owner claims it is.
Ex. 2085—Allegro® Targeted Genotyping V2 (“Allegro”)	FRE 106: The exhibit is incomplete and ought to be considered, in fairness, at the same time as the remainder of the source from which it originates. FRE 401 and 402: The exhibit is not relevant to any ground upon which trial was instituted, including because the exhibit was not cited in the Patent Owner’s Response.

	FRE 802: To the extent it is being offered to prove the truth of the matter asserted, this exhibit constitutes inadmissible hearsay. FRE 901: Patent Owner has not produced evidence or certification sufficient to support a finding that the exhibit is what Patent Owner claims it is.
Ex. 2086— Feng, W., <i>Improving alignment accuracy on homopolymer regions for semiconductor-based sequencing technologies</i>, BioMed Central (2016) (“Feng 2016”)	FRE 401 and 402: The exhibit is not prior art and therefore is not relevant to any question of patentability. The exhibit is not relevant to any ground upon which trial was instituted, including because the exhibit was not cited in the Patent Owner’s Response and because the exhibit is a post-priority document. FRE 402 and 403: The exhibit is not prior art. Therefore, the exhibit’s probative value with respect to any ground upon which trial was instituted is substantially outweighed by the danger of unfair prejudice, confusing the issues, undue delay, wasting time, or needlessly presenting cumulative evidence. FRE 802: To the extent it is being offered to prove the truth of the matter asserted, this exhibit constitutes inadmissible hearsay. FRE 901: Patent Owner has not produced evidence or certification sufficient to support a finding that the exhibit is what Patent Owner claims it is.
Ex. 2087— Nakamura, K., et al., <i>Sequence-specific error profile of Illumina Sequencers</i>, Nucleic Acids Research, 2011, Vol. 39, No. 13 (“Nakamura 2011”)	FRE 802: To the extent it is being offered to prove the truth of the matter asserted, this exhibit constitutes inadmissible hearsay. FRE 901: Patent Owner has not produced evidence or certification sufficient to support a finding that the exhibit is what Patent Owner claims it is.
Ex. 2088—J. Sambrook and D. Russell, <i>Fragmentation of DNA by Nebulization</i>	FRE 106: The exhibit is incomplete and ought to be considered, in fairness, at the same time

(“Sambrook 2006”)	as the remainder of the source from which it originates. FRE 401 and 402: The exhibit is not relevant to any ground upon which trial was instituted, including because the exhibit was not cited in the Patent Owner’s Response. FRE 802: To the extent it is being offered to prove the truth of the matter asserted, this exhibit constitutes inadmissible hearsay. FRE 901: Patent Owner has not produced evidence or certification sufficient to support a finding that the exhibit is what Patent Owner claims it is.
Ex. 2089— QIAGEN® Multiplex PCR Handbook (2010) (“QIAGEN Handbook”)	FRE 106: The exhibit is incomplete and ought to be considered, in fairness, at the same time as the remainder of the source from which it originates. FRE 401 and 402: The exhibit is not relevant to any ground upon which trial was instituted, including because the exhibit was not cited in the Patent Owner’s Response. FRE 802: To the extent it is being offered to prove the truth of the matter asserted, this exhibit constitutes inadmissible hearsay. FRE 901: Patent Owner has not produced evidence or certification sufficient to support a finding that the exhibit is what Patent Owner claims it is.
Ex. 2090—Han, S., <i>AtRTPrimer: database for Arabidopsis genome-wide homogeneous and specific RT-PCR primer-pairs</i>, BMC Bioinformatics (2006) (“Han 2006”)	FRE 401 and 402: The exhibit is not relevant to any ground upon which trial was instituted, including because the exhibit was not cited in the Patent Owner’s Response. FRE 802: To the extent it is being offered to prove the truth of the matter asserted, this exhibit constitutes inadmissible hearsay.

	FRE 901: Patent Owner has not produced evidence or certification sufficient to support a finding that the exhibit is what Patent Owner claims it is.
Ex. 2091—Matz, M., et al., <i>Amplification of cDNA ends based on template-switching effect and step-out PCR</i>, 1558–1560 <i>Nucleic Acids Research</i>, 1999, Vol. 27, No. 6 (“Matz 1999”)	FRE 401 and 402: The exhibit is not relevant to any ground upon which trial was instituted, including because the exhibit was not cited in the Patent Owner’s Response. FRE 802: To the extent it is being offered to prove the truth of the matter asserted, this exhibit constitutes inadmissible hearsay. FRE 901: Patent Owner has not produced evidence or certification sufficient to support a finding that the exhibit is what Patent Owner claims it is.
Ex. 2092—Bru, D., et al., <i>Quantification of the Detrimental Effect of a Single Primer-Template Mismatch by Real-Time PCR Using the 16S rRNA Gene as an Example</i>, APPLIED AND ENVIRONMENTAL MICROBIOLOGY, Mar. 2008, p. 1660–1663 (“Bru 2008”)	FRE 401 and 402: The exhibit is not relevant to any ground upon which trial was instituted, including because the exhibit was not cited in the Patent Owner’s Response. FRE 802: To the extent it is being offered to prove the truth of the matter asserted, this exhibit constitutes inadmissible hearsay. FRE 901: Patent Owner has not produced evidence or certification sufficient to support a finding that the exhibit is what Patent Owner claims it is.
Ex. 2093—Bustin, S., et al., Quantitative real-time RT-PCR – a perspective, <i>Journal of Molecular Endocrinology</i> (2005) 34, 597–601 (“Bustin 2005”)	FRE 401 and 402: The exhibit is not relevant to any ground upon which trial was instituted, including because the exhibit was not cited in the Patent Owner’s Response. FRE 802: To the extent it is being offered to prove the truth of the matter asserted, this exhibit constitutes inadmissible hearsay. FRE 901: Patent Owner has not produced evidence or certification sufficient to support a finding that the exhibit is what Patent Owner claims it is.

Ex. 2094—Duncavage, E. et al., <i>Hybrid Capture and Next-Generation Sequencing Identify Viral Integration Sites from Formalin-Fixed, Paraffin-Embedded Tissue</i>, The Journal of Molecular Diagnostics, Vol. 13, No. 3, May 2011 (“Duncavage 2011”)	FRE 401 and 402: The exhibit is not relevant to any ground upon which trial was instituted, including because the exhibit was not cited in the Patent Owner’s Response. FRE 802: To the extent it is being offered to prove the truth of the matter asserted, this exhibit constitutes inadmissible hearsay. FRE 901: Patent Owner has not produced evidence or certification sufficient to support a finding that the exhibit is what Patent Owner claims it is.
Ex. 2095—Mertes, F. et al., <i>Targeted enrichment of genomic DNA regions for next-generation sequencing</i>, Briefings in Functional Genomics VOL 10. NO 6. 374-386 (“Mertes 2011”)	FRE 401 and 402: The exhibit is not relevant to any ground upon which trial was instituted, including because the exhibit was not cited in the Patent Owner’s Response. FRE 802: To the extent it is being offered to prove the truth of the matter asserted, this exhibit constitutes inadmissible hearsay. FRE 901: Patent Owner has not produced evidence or certification sufficient to support a finding that the exhibit is what Patent Owner claims it is.
Ex. 2096—Shen, Z. et al., <i>MPprimer: a program for reliable multiplex PCR primer design</i>, BMC Bioinformatics 2010, 11:143 (“Shen 2010”)	FRE 401 and 402: The exhibit is not relevant to any ground upon which trial was instituted, including because the exhibit was not cited in the Patent Owner’s Response. FRE 802: To the extent it is being offered to prove the truth of the matter asserted, this exhibit constitutes inadmissible hearsay. FRE 901: Patent Owner has not produced evidence or certification sufficient to support a finding that the exhibit is what Patent Owner claims it is.
Ex. 2097—U. Deutsch and D. Mathur, <i>Streamlining Multiplex PCR Analysis</i> 2011,	FRE 401 and 402: The exhibit is not relevant to any ground upon which trial was instituted,

Genetic Engineering & Biotechnology News. (“Deutsch 2011”)	including because the exhibit was not cited in the Patent Owner’s Response. FRE 802: To the extent it is being offered to prove the truth of the matter asserted, this exhibit constitutes inadmissible hearsay. FRE 901: Patent Owner has not produced evidence or certification sufficient to support a finding that the exhibit is what Patent Owner claims it is.
Ex. 2098—Bragg, L. et al., <i>Shining a Light on Dark Sequencing: Characterising Errors in Ion Torrent PGM Data</i>, PLOS Computational Biology April 2013 Vol. 9 Issue 4 (“Bragg 2013”)	FRE 401 and 402: The exhibit is not prior art and therefore is not relevant to any question of patentability. The exhibit is not relevant to any ground upon which trial was instituted, including because the exhibit was not cited in the Patent Owner’s Response and because the exhibit is a post-priority document. FRE 402 and 403: The exhibit is not prior art. Therefore, the exhibit’s probative value with respect to any ground upon which trial was instituted is substantially outweighed by the danger of unfair prejudice, confusing the issues, undue delay, wasting time, or needlessly presenting cumulative evidence. FRE 802: To the extent it is being offered to prove the truth of the matter asserted, this exhibit constitutes inadmissible hearsay. FRE 901: Patent Owner has not produced evidence or certification sufficient to support a finding that the exhibit is what Patent Owner claims it is.
Ex. 2099—Stapleton, M. et al., <i>The Drosophila Gene Collection: Identification of Putative Full-Length cDNAs for 70% of D. melanogaster Genes</i>, Cold Spring Harbor Laboratory Press (2002) (“Stapleton 2002”)	FRE 401 and 402: The exhibit is not relevant to any ground upon which trial was instituted, including because the exhibit was not cited in the Patent Owner’s Response. FRE 802: To the extent it is being offered to prove the truth of the matter asserted, this exhibit constitutes inadmissible hearsay.

	FRE 901: Patent Owner has not produced evidence or certification sufficient to support a finding that the exhibit is what Patent Owner claims it is.
Ex. 2100 —Infinitives, Spring 2018 (“Infinitives”)	FRE 106: The exhibit is incomplete and ought to be considered, in fairness, at the same time as the remainder of the source from which it originates. FRE 802: To the extent it is being offered to prove the truth of the matter asserted, this exhibit constitutes inadmissible hearsay. FRE 901: Patent Owner has not produced evidence or certification sufficient to support a finding that the exhibit is what Patent Owner claims it is.

Dated: July 25, 2025

Respectfully submitted,

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CERTIFICATE OF SERVICE
(37 C.F.R. § 42.6(e))

The undersigned hereby certifies that on July 25, 2025, I caused a true and correct copy of the foregoing PETITIONER'S OBJECTIONS TO ADMISSIBILITY OF EVIDENCE SUBMITTED BY PATENT OWNER to be served on counsel for Patent Owner via email at:

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