

Filed on behalf of Senior Party ToolGen, Inc.

Paper No. ____

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

**THE REGENTS OF THE UNIVERSITY OF CALIFORNIA, UNIVERSITY OF
VIENNA, AND EMMANUELLE CHARPENTIER**
Junior Party

Application No. 15/947,680; 15/947,700; 15/947,718; 15/981,807;
15/981,808; 15/981,809; 16/136,159; 16/136,165; 16/136,168; 16/136,175;
16/276,361; 16/276,365; 16/276,368; and 16/276,374

v.

TOOLGEN, INC.
Senior Party

Application 14/685,510

Patent Interference No. 106,127 (DK)

TOOLGEN OPPOSITION TO CVC MISCELLANEOUS MOTION 5
(motion to exclude)

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1 CVC’s Motion asks the Board to exclude evidence that shows CVC’s fact witnesses, Drs.
2 Dana Carroll and Jennifer Doudna, contradicting CVC’s present litigation positions. Specifically,
3 CVC seeks to exclude 15 seconds of an almost hour-long lecture by Dr. Carroll (Ex. 1283) because
4 in those 15 seconds, Dr. Carroll admits that ToolGen inventor Dr. Jin-Soo Kim discovered what
5 was not obvious to skilled artisans at the time—that adding two guanines to the 5’ end of guide
6 RNA improves its specificity. CVC argues that this video is unauthenticated and that “there is no
7 evidence regarding who posted this video.” CVC Motion to Exclude, Paper 854 (“Mot.”) at 2.
8 Yet CVC does not dispute that the video shows Dr. Carroll or the video’s content. And the video
9 shows that it was posted by the Innovative Genomics Institute, a company founded by CVC’s own
10 Dr. Doudna. Ex. 1283; Ex. 1614; Ex. 1615; Ex. 2024. CVC also seeks to exclude an interview
11 (Ex. 1593) in which Dr. Doudna expresses doubts about whether CRISPR-Cas9 could be adapted
12 for use in eukaryotes, as unreliable hearsay. Mot. at 2. Yet *CVC’s own exhibits* include articles
13 in which Dr. Doudna expresses the same doubts. *See, e.g.*, Ex. 2279 (“We weren’t sure if
14 CRISPR/Cas9 would work in eukaryotes[.]”); Ex. 2032 (“Doudna experienced ‘many frustrations’
15 getting CRISPR to work in human cells.”); Ex. 2033 (“[I]t was not known whether [a CRISPR-
16 Cas9] system would function in eukaryotic cells.”). In moving to exclude the interview, CVC
17 seeks to replace this contemporaneous evidence, which CVC characterizes as unreliable, with
18 litigation-driven declarations created for this interference. The Board should deny CVC’s motion
19 to exclude a portion of Exhibit 1283 and all of Exhibit 1593.

20 **I. ARGUMENT**

21 **1. The Video Of Dr. Carroll Praising ToolGen’s Invention Is Authentic**
22 **And Admissible**

23 Under FRE 901, CVC seeks to exclude a YouTube video in which Dr. Carroll admits that
24 ToolGen inventor Dr. Jin-Soo Kim first discovered that adding two guanines to the 5’ end of the
25 guide RNA improves specificity. Ex. 1283. CVC argues that the video is unauthenticated and

1 “lacks adequate context and foundation.” Mot. at 2. The response is that CVC’s argument ignores
2 the multiple indicia of authenticity supporting that the video reliably depicts Dr. Carroll and his
3 views.

4 FRE 901 requires a proponent to “produce evidence sufficient to support a finding that the
5 item is what the proponent claims it is” to satisfy the requirement of authenticating the item. Under
6 FRE 901(b)(4), evidence can be authenticated based on “[t]he appearance, contents, substance,
7 internal patterns, or other distinctive characteristics of the item, taken together with all the
8 circumstances.” The YouTube video portion that CVC seeks to exclude is properly authenticated
9 under FRE 901(b)(4) because the appearance, contents, and distinctive characteristics of the video
10 support a finding that the video is what ToolGen claims it is: a lecture by Dr. Dana Carroll. Ex.
11 1283; *see also Zen Design Grp., Ltd. v. Scholastic, Inc.*, No. 16-12936, 2019 WL 2996190, at *2
12 (E.D. Mich. July 9, 2019) (stating that for purposes of summary judgment motion, YouTube videos
13 depicting reviews of the allegedly infringing product were properly authenticated because videos
14 “clearly display the Top Secret UV Pen, identifiable by its name, packaging, appearance, and
15 operation”); F7. The video undisputedly depicts Dr. Carroll; he can be seen and heard throughout
16 the video giving a lecture on “Issues in CRISPR-Cas Editing” and discussing various aspects of
17 the CRISPR-Cas system. Ex. 1283; F8. And if the sight and sound of CVC’s own witness for
18 almost an hour were not convincing enough, the video was uploaded to YouTube by the Innovative
19 Genomics Institute, a UC Berkeley initiative that was *founded by Dr. Jennifer Doudna*. Ex. 1283;
20 Ex. 1614; Ex. 1615; Ex. 2024; F9. CVC is thus challenging the authenticity of a video of its own
21 witness, posted by its inventor’s organization. The Innovative Genomics Institute, Dr. Doudna,
22 and Dr. Carroll also have had years to remove this video from YouTube if there were any
23 inaccuracies depicted. They have not done so.

1 The fact that CVC moves to exclude only the portion relevant to Dr. Carroll’s admission—
2 15 seconds of a 53-minute video—further demonstrates that authentication is not an issue. CVC
3 moves to exclude this evidence only because the video clip directly contradicts CVC’s litigation
4 position with respect to obviousness. Given the totality of the circumstances, the video is authentic
5 and accurately depicts Dr. Carroll admitting that ToolGen was the first to discover that two
6 guanines on the 5’ end of the guide RNA improves specificity. The Board should reject CVC’s
7 attempt to exclude it.

8 **2. Dr. Doudna’s Interview Is Admissible And An Accurate**
9 **Representation Of The Inventor’s Own Doubts That CRISPR-Cas9**
10 **Could Be Adapted For Use In Eukaryotes**

11 CVC seeks to exclude, as hearsay and double hearsay, an interview with Dr. Doudna, in
12 which she discusses her doubts regarding CRISPR-Cas9. Mot. at 2–4. The response is that the
13 interview and the statements within it are supported by multiple indicia of trustworthiness and Dr.
14 Doudna’s contemporaneous thoughts are far more probative than Dr. Doudna’s testimony prepared
15 for litigation. The interview should therefore not be excluded as hearsay.

16 First, the portion of the interview asserted does not contain double hearsay because any
17 quoted statements are from Dr. Doudna, who is a party opponent, and so her statements are not
18 considered hearsay under FRE 801(d)(2). Ex. 1593. *See also Nuance Communs., Inc. v. Abbyy*
19 *Software House*, 626 F.3d 1222, 1230 n.1 (Fed. Cir. 2010) (rejecting the argument that an article
20 featuring quotes of a party-opponent is inadmissible hearsay); F10. The asserted statement
21 includes Dr. Doudna saying: “People have asked me over and over again: ‘Did you know it was
22 going to work?’ But until you do an experiment you don’t know — that’s science.” Ex. 1593;
23 F11. CVC’s arguments that these interviews were merely intended to capture the interest of lay
24 readers, and therefore should not be credited as party admissions, is belied by similar statements
25 of doubt made by Dr. Doudna in other scientific publications *and* popular media. CVC also

1 conspicuously fails to cite any applicable case law to support its arguments, relying instead on the
2 Standing Order’s section on the admissibility of a patent specification, and First and Tenth Circuit
3 case law in non-patent cases. *See, e.g.*, Mot. at 3–4 (citing SO ¶ 152.2.1).

4 The interview also is not inadmissible hearsay because it satisfies the residual exception to
5 hearsay, FRE 807. Under FRE 807, a hearsay statement is not excluded if “(1) the statement is
6 supported by sufficient guarantees of trustworthiness—after considering the totality of
7 circumstances under which it was made and evidence, if any, corroborating the statement; and (2)
8 it is more probative on the point for which it is offered than any other evidence that the proponent
9 can obtain through reasonable efforts.” The interview meets the requirements of the residual
10 exception because (1) Dr. Doudna confirmed in her deposition that she participated in this
11 interview; (2) the article is one of many articles capturing Dr. Doudna’s doubts and concerns about
12 whether CRISPR would work in eukaryotes; (3) Dr. Doudna never corrected this article; and (4)
13 Dr. Doudna’s contemporaneous admissions are more reliable than biased, litigation-driven
14 testimony produced years later.

15 The article’s trustworthiness is supported in at least three ways. First, Dr. Doudna
16 confirmed during her deposition, not just once, but twice, that the exhibit was an article written
17 from her interview with journalist Hannah Devlin. Ex. 1570 (Doudna Tr.), 198:22–199:4 (“Q:
18 Okay. So you gave an interview to Hannah Devlin for The Guardian, correct? A: Well, it states
19 that there. Q: Do you have any reason to doubt that? A: I don’t.”), 210:20–211:5 (“Q: Okay. I’m
20 asking you whether this reflects an interview with you done by Hannah Devlin? A: I believe it
21 reflects an interview that was conducted by Hannah Devlin.”); F12. FRE 807(a) specifically
22 contemplates that evidence “corroborating the statement” (*i.e.*, Dr. Doudna confirming the
23 statement under oath during her deposition) supports a finding that the statement has a sufficient
24 guaranty of trustworthiness and should not be excluded.

1 Second, the article represents only one of many instances of Dr. Doudna expressing the
2 doubts she and her team experienced in the summer of 2012. *See, e.g.*, Ex. 2279 (“Our 2012 paper
3 [Jinek 2012] was a big success, but there was a problem. We weren’t sure if CRISPR/Cas9 would
4 work in eukaryotes—plant and animal cells.”); Ex. 2032 (“[I]f the system could be made to work
5 in human cells, it would be a really profound discovery.”); Ex. 2033 (“These findings suggested
6 the exciting possibility that Cas9:sgRNA complexes might constitute a simple and versatile RNA-
7 directed system for generating DSBs that could facilitate site-specific genome editing. However,
8 it was not known whether such a bacterial system would function in eukaryotic cells.”); F13.

9 Third, and finally, Dr. Doudna has never issued a correction or retracted any statements
10 made in her interview with Hannah Devlin. The interview was published in July 2017, providing
11 Dr. Doudna over four years to make any corrections to her statements. She has not done so. F14.
12 Even during her deposition, Dr. Doudna was free to explain that her statements were inaccurate,
13 but she did not do so. F15. And CVC all but admits that the interview accurately reflects Dr.
14 Doudna’s responses, given that it includes “bracketed text within Dr. Doudna’s responses,” Mot.
15 at 3, indicating that the author took care to reflect Dr. Doudna’s responses and to make clear where
16 the author added content. F16.

17 Additionally, the interview is highly probative of Dr. Doudna’s contemporaneous thoughts
18 regarding the doubts she had that CRISPR-Cas9 could be adapted for use in eukaryotic cells. F17.
19 CVC argues that “Dr. Doudna’s sworn testimony in this proceeding is far more reliable.” Mot. at
20 4. This argument ignores the Board’s expressed view that contemporaneous statements are more
21 reliable than testimony prepared for litigation. *See* Ex. 2335 (’048 Decision on Motions) at 14:3–
22 15 (“We pay particular attention to the statements made contemporaneously . . . because where
23 such statements conflict with testimony prepared for litigation, contemporaneous statements have
24 been considered to be stronger evidence of a particular situation.”); F18. *See also United States v.*

1 *U.S. Gypsum Co.*, 333 U.S. 364, 395–96 (1948) (noting that oral testimony deserves little weight
2 when it contradicts contemporaneous written evidence). Notably, the Board has cited evidence of
3 Dr. Doudna and her colleagues’ contemporaneous doubts, and this evidence should be treated the
4 same. *See, e.g.*, Ex. 1101 (’115 Decision on Motions) at 101:19–102:12 (“CVC inventor Doudna
5 was credited as saying . . . [w]e weren’t sure if CRISPR/Cas9 would work in eukaryotes.”); Ex.
6 2335 (’048 Decision on Motions) at 15:9–18, 17:3–10. CVC has not provided any reason why
7 this article and its admissions should be treated any differently. The Board should give no credence
8 now to belated attempts to rewrite the contemporaneous record, which demonstrates time and time
9 again the shared doubts of the CVC inventors and the field at large. F19.

10 Given the totality of the circumstances, CVC has failed to establish that this evidence lacks
11 trustworthiness or that it is less probative than more recent evidence. The Board should deny
12 CVC’s request to exclude the interview.

13 **II. CONCLUSION**

14 ToolGen requests CVC’s Miscellaneous Motion 5 Motion to Exclude be denied.

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Respectfully submitted,

17 Dated: October 8, 2021

/Timothy J. Heverin/

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APPENDIX 1: LIST OF EXHIBITS CITED

Ex. No.	Description
1101	Paper 877, Decision on Motions 37 C.F.R. § 41.125(a), Interference 106,115, September 10, 2020.
1283	Dana Carroll, <i>Issues in CRISPR-Cas Editing</i> , YOUTUBE, 32:42–32:57 (Nov. 4, 2017), https://www.youtube.com/watch?v=5bHKz142FHs .
1570	Deposition Transcript of Jennifer Doudna, Ph.D., The Regents of the University of California v. ToolGen, Inc., Interference No. 106,127, July 8, 2021.
1593	Jennifer Doudna Interview, “I have to be true to who I am as a scientist.” The Guardian, July 2, 2017.
1614	Innovative Genomics Institute, https://innovativegenomics.org/jennifer-doudna/
1615	Opening Screen of Ex. 1283 (Dana Carroll, <i>Issues in CRISPR-Cas Editing</i> , YOUTUBE, 32:42–32:57 (Nov. 4, 2017), https://www.youtube.com/watch?v=5bHKz142FHs).
2024	<i>Curriculum Vitae</i> of Jennifer Doudna, Ph.D.
2032	Pandika, <i>Rising Stars: Jennifer Doudna, CRISPR Code Killer</i> , OZY (Jan. 7, 2014) (Ex. 2230), http://ozy.com/rising-stars/jennifer-doudna-crispr-codekiller/4690 .
2033	Jinek, <i>et al.</i> , <i>RNA-programmed genome editing in human cells</i> , eLife 2:e00471, 1–9 (2013).
2279	<i>The CRISPR Revolution</i> , CATALYST MAGAZINE, College of Chemistry, University of California, Berkeley, http://catalyst.berkeley.edu/slideshow/the-crispr-revolution/[19/12/2014 12:40:53] (July 9, 2014).
2335	Paper 893, Decision on Motions 37 C.F.R. § 41.125(a), Patent Interference No. 106,048, February 15, 2017.

1 **Response: Admitted that ToolGen did not ask Dr. Carroll about Exhibit 1283 during**
2 **his deposition, but denied that the Exhibit is not properly authenticated. Exhibit 1283 is**
3 **properly authenticated, as explained in this Opposition.**

4 6. There is no evidence in the record regarding who posted this video (Ex. 1283), when it was
5 posted, who extracted it to make it an exhibit, when it was extracted, whether it was edited, and
6 whether it accurately reflects Dr. Carroll’s statements and understanding.

7 **Response: Denied.**

8 **Senior Party ToolGen’s Additional Material Facts 7–19**

9 7. The portion of Exhibit 1283 that CVC seeks to exclude accurately depicts a portion of a lecture
10 given by Dr. Dana Carroll. Ex. 1283.

11 8. Dr. Carroll can be seen and heard throughout the almost hour-long video giving a lecture on
12 “Issues in CRISPR-Cas Editing” and discussing various aspects of the CRISPR-Cas system. Ex.
13 1283.

14 9. The video was uploaded to YouTube by the Innovative Genomics Institute, an initiative
15 between UC Berkley and UC San Francisco, that was founded by Dr. Jennifer Doudna. Ex. 1283;
16 Ex. 1614; Ex. 1615; Ex. 2024.

17 10. Dr. Doudna is a party opponent.

18 11. The asserted statement includes Dr. Doudna saying: “People have asked me over and over
19 again: ‘Did you know it was going to work?’ But until you do an experiment you don’t know —
20 that’s science.” Ex. 1593.

21 12. Dr. Doudna confirmed twice during her deposition that Exhibit 1593 was an article written
22 from her interview with journalist Hannah Devlin. Ex. 1570 (Doudna Tr.), 198:22–199:4 (“Q:
23 Okay. So you gave an interview to Hannah Devlin for The Guardian, correct? A: Well, it states

1 that there. Q: Do you have any reason to doubt that? A: I don't."), 210:20–211:5 (“Q: Okay. I’m
2 asking you whether this reflects an interview with you done by Hannah Devlin? A: I believe it
3 reflects an interview that was conducted by Hannah Devlin.”).

4 13. Exhibit 1593 represents only one of many instances of Dr. Doudna expressing the doubts she
5 and her team experienced in the summer of 2012. *See, e.g.*, Ex. 2279 (“Our 2012 paper [Jinek
6 2012] was a big success, but there was a problem. We weren’t sure if CRISPR/Cas9 would work
7 in eukaryotes—plant and animal cells.”); Ex. 2032 (“[I]f the system could be made to work in
8 human cells, it would be a really profound discovery.”); Ex. 2033 (“These findings suggested the
9 exciting possibility that Cas9:sgRNA complexes might constitute a simple and versatile RNA-
10 directed system for generating DSBs that could facilitate site-specific genome editing. However,
11 it was not known whether such a bacterial system would function in eukaryotic cells.”).

12 14. Dr. Doudna has not made any corrections to her statements in Exhibit 1593 in the four years
13 since it was published, which was July 2017.

14 15. During her deposition, Dr. Doudna was asked about and did not disavow any of her statements
15 in Exhibit 1593.

16 16. CVC all but admits that the interview accurately reflects Dr. Doudna’s responses, given that it
17 includes “bracketed text within Dr. Doudna’s responses,” Mot. at 3, indicating that the author took
18 care to reflect Dr. Doudna’s responses and to make clear where the author added content.

19 17. The interview, Exhibit 1593, is highly probative of Dr. Doudna’s contemporaneous thoughts
20 regarding the doubts she had that CRISPR-Cas9 could be adapted for use in eukaryotic cells.

21 18. CVC’s arguments against Exhibit 1593 ignore the Board’s expressed view that
22 contemporaneous statements are more reliable than testimony prepared for litigation. *See* Ex. 2335
23 (’048 Decision on Motions) at 14:3–15 (“We pay particular attention to the statements made

1 contemporaneously . . . because where such statements conflict with testimony prepared for
2 litigation, contemporaneous statements have been considered to be stronger evidence of a
3 particular situation.”).

4 19. CVC attempts to rewrite the contemporaneous record, which demonstrates time and time again
5 the shared doubts of the CVC inventors and the field at large.

CERTIFICATE OF SERVICE

I hereby certify that the foregoing **ToolGen Opposition to CVC Miscellaneous Motion 5 (motion to exclude)** was filed via the Interference Web Portal on October 8, 2021, and thereby served on the attorneys of record for the Junior Party pursuant to ¶ 105.3 of the Standing Order. Pursuant to agreement of the parties, service copies are being sent by email to counsel for Junior Party as follows:

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