

Filed on behalf of: **Senior Party, Broad**

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

(Applications 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.

**THE BROAD INSTITUTE, INC., MASSACHUSETTS INSTITUTE OF
TECHNOLOGY, and PRESIDENT AND FELLOWS OF HARVARD
COLLEGE,**
Senior Party

(Patents 8,697,359; 8,771,945; 8,795,965; 8,865,406; 8,871,445; 8,889,356;
8,895,308; 8,906,616; 8,932,814; 8,945,839; 8,993,233; 8,999,641; and
9,840,713; and Application 14/704,551).

Patent Interference No. 106,115 (DK)
(Technology Center 1600)

BROAD OPPOSITION 3

TABLE OF CONTENTS

	Page
I. INTRODUCTION	1
II. PRECISE RELIEF REQUESTED.....	1
III. DESCRIPTION OF APPENDICES	1
IV. SUMMARY OF ARGUMENT	1
V. ARGUMENT	4
A. CVC has not satisfied its burden to prove error with respect to inventorship.....	4
1. Bailey’s declaration is impermissible expert testimony	4
2. CVC’s inventorship analysis was flawed from the start.....	6
3. CVC offers no inventorship analysis	7
4. CVC both relies on and rejects Kowalski’s inventorship analysis	10
5. CVC offers no support for its assumption that the Kowalski declaration is conclusive as to the involved patents and application.....	12
6. Conclusion on inventorship	13
B. Broad did not intentionally omit inventors for an improper purpose.	13
C. Even if the PTAB determines that, through error, Broad did not name all inventors, the appropriate remedy is correction of inventorship.	15
VI. CONCLUSION.....	16
Appendix A (Exhibit List)	A-1
Appendix B (Material Facts)	B-1

TABLE OF AUTHORITIES

Cases	Page(s)
<i>Astellas Inst. for Regenerative Med. v. ImStem Biotech., Inc.</i> , 2021 WL 406440 (D. Mass. Feb. 5, 2021)	8
<i>Barnes v. Owens-Corning Fiberglas Corp.</i> , 201 F.3d 815 (6th Cir. 2000)	12
<i>Egenera, Inc. v Cisco Sys., Inc.</i> , 972 F.3d 1367 (Fed. Cir. 2020).....	3, 7, 13, 15
<i>Eli Lilly & Co. v. Aradigm Corp.</i> , 376 F.3d 1352 (Fed. Cir. 2004).....	7, 8
<i>Ethicon, Inc. v. U.S. Surgical Corp.</i> , 135 F.3d 1456 (Fed. Cir. 1998).....	6
<i>Fina Oil & Chem. Co. v. Ewen</i> , 123 F.3d 1466 (Fed. Cir. 1997).....	7, 8
<i>Fordson Eng’g Corp., In re</i> , 25 B.R. 506 (Bankr. E.D. Mich. 1982).....	12
<i>Glick v. White Motor Co.</i> , 458 F.2d 1287 (3d Cir. 1972).....	3
<i>Israel Bio-Eng’g Project v. Amgen, Inc.</i> , 475 F.3d 1256 (Fed. Cir. 2007).....	8
<i>Karim v. Jobson</i> , Int. 105,376, Paper No. 99 (PTAB Feb. 28, 2007)	15
<i>MacDonald v. Gen. Motors Corp.</i> , 110 F.3d 337 (6th Cir. 1997)	12, 13
<i>Nartron Corp. v. Schukra U.S.A., Inc.</i> , 558 F.3d 1352 (Fed. Cir. 2009).....	6
<i>Oscanyan v. Arms Co.</i> , 103 U.S. 261 (1880).....	12, 13
<i>Pannu v. Iolab Corp.</i> , 155 F.3d 1344 (Fed. Cir. 1998).....	8
<i>Roger Miller Music, Inc. v. Sony/ATV Publ’g, LLC</i> , 477 F.3d 383 (6th Cir. 2007)	13

<i>Trovan, Ltd. v. Sokymat SA</i> , 299 F.3d 1292 (Fed. Cir. 2002).....	5, 6, 7
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Statutes and Rules

35 U.S.C. § 102(f).....	3, 15
35 U.S.C. § 116.....	1, 3, 15
35 U.S.C. § 256.....	1, 3, 15, 16

Other Authorities

37 C.F.R. § 41.121(b)	12, 13
37 C.F.R. § 41.204(b)	14
SO ¶ 158.1.2.....	4
SO ¶ 204.....	14

1 **I. INTRODUCTION**

2 CVC Substantive Motion 3 asserts a failure to name inventors on the involved patents
3 and application. There has been no such failure, and CVC has not met its burden to establish
4 otherwise. Further, if there were individuals who should have been named as inventors, but were
5 not, Broad’s Contingent Responsive Motion 6 proves that the only appropriate remedy would be
6 correction of inventorship under 35 U.S.C. §§ 116 and 256.

7 **II. PRECISE RELIEF REQUESTED**

8 CVC’s Motion 3 should be denied outright. If, however, the motion is granted, even in
9 part, the PTAB should then take up Broad’s Contingent Responsive Motion 6 and apply the
10 appropriate remedy: correction of inventorship.

11 **III. DESCRIPTION OF APPENDICES**

12 Appendix A is an Exhibit List; Appendix B sets forth Broad’s Responses to CVC’s
13 Material Facts as well as Broad’s Material Facts.

14 **IV. SUMMARY OF ARGUMENT**

15 Every aspect of CVC’s Substantive Motion 3 overreaches. The motion purports to seek
16 “judgment that all of Broad’s involved patents and application are invalid . . . for failure to name
17 all inventors” (Motion at 1:2-4), yet gives only glancing mention to the legal test for
18 inventorship. CVC never bothers to apply that test for even a single involved claim, let alone for
19 all the claims CVC asserts in its motion.

20 Instead, CVC opts for an inappropriate shortcut. CVC treats as dispositive a declaration
21 of Thomas J. Kowalski, then one of Broad’s prosecuting attorneys, regarding the conclusions he
22 reached in determining inventorship of Broad’s PCT applications, that was submitted to the
23 European Patent Office in connection with an Opposition Proceeding. The PCT applications that
24 were the subject of that declaration are not involved in this interference. They have different

1 claim sets with claims of different scope as compared to the involved patents and application.
2 Treating that factually inapposite declaration as dispositive here, CVC then engages in a word-
3 search exercise, locating words in the PCT applications that match words in the involved claims.
4 Having located common terms, CVC argues, without any analysis of claim scope, that the
5 inventors for claims including matching words, no matter how ubiquitous (“eukaryotes” for
6 example), must be the same. It should go without saying that CVC’s novel approach is no
7 substitute for a legally proper inventorship analysis based on the facts. It certainly does not
8 satisfy CVC’s burden to show missing inventors.

9 The apparent real purpose of CVC’s Motion is revealed at pages 14-15, *i.e.*, an argument
10 that none of the individuals who might be inventors now or in the future on any Broad patent can
11 be corroborators because they are interested parties. This is legally incorrect, and indeed is not
12 even properly part of CVC’s motion.¹ Another overreach.

13 No support is provided for CVC’s illogical and irresponsible accusation that Broad
14 intentionally omitted inventors so that it could keep in reserve a greater pool of corroborators for
15 this Interference. To accept that notion, you would have to believe that, beginning in 2013, when
16 Broad filed the first U.S. application at issue here, its focus and that of its prosecuting attorneys
17 was not on procuring valid patent claims, but rather eight years into the future to some imagined
18 interference where Broad would want to rely on certain individuals for corroboration to help
19 establish priority. If that proposition sounds far-fetched, it’s because it is.

¹ CVC’s List of Intended Motions did not include a request to exclude the testimony of
“interested parties.” *See* Paper 19 at 11:3–15:14.

1 Based on its own flawed analysis and nothing more, CVC then accuses Broad and its
2 prosecuting attorneys of “misconduct” and alleges without any basis that Broad and its attorneys
3 listed the inventors for the involved patents and application with deceptive intent, violating their
4 “duty of candor.” Motion at 15-18. There was no failure to name the proper inventors, and
5 certainly no premeditated, intentional failure. Nor have Broad’s attorneys committed any
6 misconduct or violated their duties before the USPTO. Such serious allegations must rest on
7 evidence, not rank speculation; CVC’s spurious assertions should be rejected in the strongest
8 possible terms.

9 CVC overreaches with respect to remedy as well. The Patent Act contains savings
10 provisions, 35 U.S.C. § 256 (for patents) and 35 U.S.C. § 116 (for applications), that mandate
11 correction of inventorship for patents that erroneously fail to name the correct set of inventors.
12 The Federal Circuit has repeatedly held, and clearly so in a decision issued shortly before CVC
13 filed its motion (but not acknowledged by CVC), that once the requirements of § 256 are met,
14 inventorship must be corrected and a ruling of unpatentability under § 102(f) is improper.
15 *Egenera, Inc. v Cisco Sys., Inc.*, 972 F.3d 1367, 1376-77 (Fed. Cir. 2020).

16 One would think that if Broad erroneously failed to attribute inventorship to certain
17 individuals, those individuals would be clamoring to file motions of their own seeking to be
18 named co-inventors on these important patent claims. Yet, it is telling that not one of the so-
19 called missing inventors claims to be a co-inventor with Zhang on any of the involved patents or
20 application.

21 For all the reasons discussed in this Opposition, the PTAB should deny CVC’s sideshow
22 motion. If, however, PTAB determines that there are any missing inventors, it should grant

1 Broad's Contingent Responsive Motion 6 and correct inventorship to reflect any such
2 determination.

3 **V. ARGUMENT**

4 CVC fails to prove that there are any missing inventors. In any event, if inventorship
5 were determined to be incorrect, the proper remedy is to correct inventorship.

6 **A. CVC has not satisfied its burden to prove error with respect to inventorship.**

7 As the movant, CVC has the burden of showing that there are missing inventors. CVC
8 utterly fails to do so. CVC's motion relies almost wholly on attorney arguments; the only
9 "evidence" that CVC even purports to offer is the Declaration of Scott Bailey. Ex. 4341. But, for
10 a number of reasons, Bailey's declaration is not probative and does not come close to carrying
11 CVC's burden.

12 **1. Bailey's declaration is impermissible expert testimony**

13 Bailey's opinions should be seen for what they are: impermissible testimony on patent
14 law to which the PTAB should accord little, if any, weight. SO ¶ 158.1.2.²

15 Bailey is not qualified to speak to the subject matter of his purported opinions. Bailey is a
16 scientist, not a lawyer; he testified that his expertise lies in "[m]olecular biology and genetic
17 engineering." MF 49, 51; Ex. 6208, Bailey Tr. 17:9-15. And, no fewer than sixteen times during
18 his deposition he admitted that he had no legal training or understanding of the legal principles
19 upon which his opinion on the legal issue of inventorship was to be based. MF 50; Ex. 6208 at

² At Time Period 15, Broad may file a Motion to Exclude the Bailey Declaration as Broad timely objected to the declaration. In any event, even if the declaration remains as part of the record, it does not carry CVC's burden.

1 17:16-18:3; 28:15-17; 29:17-19; 30:19-21; 32:18-21; 35:16; 36:21-37:1; 37:11-18; 40:15-19;
2 44:6-11; 45:10-13; 46:2-3; 47:9-12; 49:13-17; 55:11-16; 63:4-7; 66:20-67:1.

3 Bailey admitted that he has never conducted an inventorship analysis:

4 Q. Have you ever conducted an inventorship analysis for purposes of patents or
5 applications filed in the United States Patent and Trademark Office?

6 A. I have not.

7 MF 52; Ex. 6208, Bailey Tr. 18:7-11. He also confirmed that he did not conduct an independent
8 investigation into inventorship by reviewing and analyzing the underlying facts. “I’m not a
9 lawyer, so I’m not providing an inventive analysis.” MF 53; Ex. 6208, Bailey Tr. at 46:3-4 “I
10 didn’t myself perform an inventorship analysis. MF 53; Ex. 6208, Bailey Tr. at 47:9-12. Instead,
11 Bailey based his opinions solely on the opinions stated in the Kowalski declaration and a review
12 of PCT applications:

13 Q. You didn’t do any investigation regarding inventorship other than a review of
14 the Kowalski declaration and the PCT applications and involved patents; correct?

15 A. That’s correct.

16 MF 53; Ex. 6208, Bailey Tr. 50:2-7 (objection omitted). Bailey didn’t know whether it mattered
17 to inventorship that an individual was only contributing prior art concepts. MF 55; Ex. 6208,
18 Bailey Tr. 32:8-33:17. He also indicated that he was not familiar with “conception” as an aspect
19 of inventorship, yet he professed confidence that his lack of familiarity with conception did not
20 affect his inventorship opinions. MF 56; Ex. 6208, Bailey Tr. 41:22-42:6. Bailey’s lack of
21 knowledge extended to not knowing whether inventorship of two claims could be different when
22 one claim contained a feature that made it separately patentable over another claim. MF 57; Ex.
23 6208, Bailey Tr. 47:1-12.

24 In addition, Bailey’s entire opinion is based on the idea that overlapping subject matter is
25 enough to show inventorship, an idea that the Federal Circuit has rejected. *See Trovan, Ltd. v.*

1 *Sokymat SA*, 299 F.3d 1292, 1303 (Fed. Cir. 2002) (showing that “patents contain ‘overlapping
2 subject matter,’ [] alone is insufficient” to show inventorship). Moreover, Bailey did not even
3 require that there be overlapping subject matter. For example, when Bailey opined on claims
4 containing limitations to various Cas9 orthologs, the identity of the claimed orthologs did not
5 matter to his analysis. Bailey merely assumed that a skilled artisan—not the PTAB assessing
6 inventorship—would conclude that an inventor of a claim to one ortholog must also be an
7 inventor of every other claim that included any ortholog:

8 Q. Did the fact that the listing of organisms is not identical between the ’691 PCT
9 and the ’233 patent affect your opinion at all?

10 A. It did not, again, because a skilled artisan would have viewed both those -- the
11 corresponding claims as ortholog design.

12 MF 58; Ex. 6208, Bailey Tr. 98:7-12.

13 Given his admitted lack of knowledge on the legal standards applied to inventorship and
14 his lack of investigation of the underlying relevant facts, it is hard to imagine that CVC could
15 have found someone less qualified than Bailey to support its motion.

16 **2. CVC’s inventorship analysis was flawed from the start**

17 To satisfy its burden to prove that Broad’s involved patents and application have missing
18 inventors, CVC was required to provide more than Bailey’s unsupported and improper scientist’s
19 legal interpretation of statements from Kowalski’s declaration regarding the inventorship of
20 different patent applications.

21 “Inventorship is a question of law.” *Nartron Corp. v. Schukra U.S.A., Inc.*, 558 F.3d
22 1352, 1356 (Fed. Cir. 2009) (citing *Ethicon, Inc. v. U.S. Surgical Corp.*, 135 F.3d 1456, 1460
23 (Fed. Cir. 1998)). A proper inventorship analysis involves two steps:

24 [A]n inventorship analysis . . . begins as a first step with a construction of each
25 asserted claim to determine the subject matter encompassed thereby. [] The
26 second step is then to compare the alleged contributions of each asserted co-

1 inventor with the subject matter of the properly construed claim to then determine
2 whether the correct inventors were named.

3 *Trovan, Ltd.*, 299 F.3d at 1302; *see also Egenera, Inc.*, 972 F.3d at 1376 (“inventorship is a legal
4 conclusion premised on underlying factual findings, and one that depends on claim
5 construction”).

6 Neither of those steps took place here. There was no claim construction and there was no
7 comparison of the contributions of the purported inventors with the subject matter of the claims.
8 MF 53-54, 57.

9 Moreover, CVC must prove omitted inventors with corroborated evidence that the
10 omitted individual was actually an inventor. *Eli Lilly & Co. v. Aradigm Corp.*, 376 F.3d 1352,
11 1358 (Fed. Cir. 2004) (a party alleging non-joinder of inventors bears the burden of proving its
12 case); *see also Fina Oil & Chem. Co. v. Ewen*, 123 F.3d 1466, 1474 (Fed. Cir. 1997) (“every
13 putative inventor must nonetheless provide corroborating evidence of any asserted contributions
14 to the conception of the invention.”).

15 **3. CVC offers no inventorship analysis**

16 CVC offered zero inventorship analysis with respect to the involved patents and
17 application. In fact, the appropriate legal test for inventorship barely makes a cameo appearance
18 in CVC’s motion—if you blink you’d miss it.

19 CVC states that “a person must be listed as a joint inventor if [they] made a contribution
20 to the conception of the claimed invention that is not insignificant in quality, when that
21 contribution is measured against the dimension of the full invention.” Motion at 10:8-12, citing
22 *Fina Oil*, 123 F.3d at 1473. CVC’s *pro forma* recitation of the *Fina* inquiry is accurate; but CVC
23 is putting the inventorship cart before the claim construction horse.

1 As noted above, “the legal scope of a claim must be known before the contributions of an
2 alleged co-inventor can be compared to that claim to determine whether the correct inventors
3 were named.” *Eli Lilly & Co.*, 376 F.3d at 1360. That claim construction analysis has not
4 occurred here and, for that reason alone, CVC’s Motion should be denied.

5 Moreover, performing an inventorship analysis is a fact-intensive exercise. *See Fina Oil*
6 *& Chem. Co.*, 123 F.3d at 1473 (“The determination of whether a person is a joint inventor is
7 fact specific, and no bright-line standard will suffice in every case.”); *see also* Ex. 3309, *Astellas*
8 *Inst. for Regenerative Med. v. ImStem Biotech., Inc.*, 2021 WL 406440, at *8 (D. Mass. Feb. 5,
9 2021) (making fact-intensive determinations whether modifications to scientific protocols made
10 by alleged joint inventors “were inventive or obvious and already known in the art.”). Yet,
11 Bailey made no effort to find any of the necessary facts.

12 The proper inquiry, as alluded to above, is whether any of the alleged joint inventors “(1)
13 contribute[d] in some significant manner to the conception or reduction to practice of the
14 invention, (2) ma[de] a contribution to the claimed invention that [was] not insignificant in
15 quality, when that contribution is measured against the dimension of the full invention, and (3)
16 d[id] more than merely explain to the real inventors well-known concepts and/or the current state
17 of the art.” *Israel Bio-Eng’g Project v. Amgen, Inc.*, 475 F.3d 1256, 1263-64 (Fed. Cir. 2007)
18 (quoting *Pannu v. Iolab Corp.*, 155 F.3d 1344, 1351 (Fed. Cir. 1998)). Without this factual
19 support, CVC cannot meet its burden to prove non-joinder.

20 In lieu of providing any actual support for a proper inventorship analysis of the subject
21 matters of the involved claims based on evidence of inventor contributions to that subject matter,
22 CVC relies solely on Bailey’s misguided and overbroad interpretations of statements made in
23 Kowalski’s declaration. But, the Kowalski declaration related only to the question of why certain

1 individuals were named as inventors on Broad’s various PCT applications; it does not relate to
2 the claim sets of the involved patents and application. MF 80; Ex. 4295 at ¶17. When Broad filed
3 the U.S. applications leading to the involved claims, some claimed priority through PCT
4 applications and some did not, including the application for the 359 patent (claim 18 of which is
5 the first half of Count 1) that was filed before the PCT applications were filed and claims priority
6 only from the provisional applications, including Zhang B1. MF 59-61, 63-73, 75, 77.

7 Broad divided the claim sets in a different manner in its U.S. applications than it had with
8 the PCT applications. MF 76, 78; *See* Exs. 3040; 4363; 4364; 4387; 4388; 4389; 4390; 4391;
9 4392; 4393; 3011; 3015; 3027; 3017; 3029; 3016; 3013; 3014; 3037; 3022; 3024; 3047; 3043;
10 3050. The difference in claim sets and claim scope alone means that Kowalski’s inventorship
11 analysis of the PCT applications has little, if any, applicability to CVC’s missing inventorship
12 analysis of the involved patents and application. Bailey’s assumptions based on the Kowalski
13 declaration have even less applicability to the issue of inventorship of the involved patents and
14 application.

15 Without a claim-by-claim, element-by-element comparison—which CVC and Bailey did
16 not bother to do—there is no support for CVC’s motion. Bailey’s excuse, as noted in his
17 deposition, for not doing such a comparison was that it would have been a “mammoth task to
18 compare every claim against every claim.” MF 54; Ex. 6208, Bailey Tr. 54:17-55:5.

19 Mammoth task or not, when seeking via motion to invalidate all of the involved patents
20 and application, it was CVC’s burden to undertake that task in order to prove that there are
21 missing inventors. CVC did not perform a proper inventorship analysis on even one claim in the
22 involved patents and application, let alone an analysis of claims in all of the involved patents and
23 application. The analysis needed to support CVC’s request for relief would have had to include

1 construction of the claims and identification of evidence showing how the allegedly omitted
2 inventors made a not insignificant contribution to the conception to each of the claimed
3 inventions, when that contribution is measured against the dimension of the full inventions. None
4 of that appears in CVC’s motion; and, of course, CVC cannot use its reply to this opposition to
5 augment proofs that needed to be in its motion. CVC chose to argue that naming inventors on
6 PCT applications somehow required those same persons to be named as inventors on different
7 U.S. applications with different claim sets of different claims with different scopes—an
8 unsupportable proposition. They do not get a chance to revisit that choice.

9 **4. CVC both relies on and rejects Kowalski’s inventorship analysis**

10 Bailey’s and CVC’s reliance on the Kowalski declaration is also inconsistent, at best.
11 CVC purports to accept as true all that is in the Kowalski declaration on inventorship (Motion at
12 9:7-12; Exs. 4341, Bailey Dec. at ¶8; 6208, Bailey Tr. 66:9-16); but, actually, CVC and Bailey
13 both discount much of the Kowalski declaration that provides the context for his analysis and
14 ignore portions of Kowalski’s analysis that negates their arguments.

15 To cite one example, Kowalski’s declaration states that Feng Zhang is the sole inventor
16 of the 743 PCT application. MF 62; Ex. 4295, Kowalski Dec. at ¶17(e). But, neither Bailey nor
17 CVC’s word-search method account for that determination, and CVC and Bailey never compare
18 the claims of the 743 PCT with, for example, the claims of the involved 359 patent, also the sole
19 invention of Feng Zhang. MF 62; Exs. 4388 at 151, 3011 at 1. Additionally, the 743 PCT is a
20 continuation of the application that led to the 359 patent with similar, but not identical, claim
21 sets, and so it makes sense that the inventorship of the 743 PCT is the same as of the 359 patent.
22 MF 61; Ex. 4388 at 152. Without a comparison of the scope of the claims of the 359 patent with
23 those of the 743 PCT application, there is no basis, even following CVC’s word search “logic”
24 based on the Kowalski declaration, to conclude that inventorship is improper.

1 That example makes clear why CVC did not conduct a patent-by-patent and claim-by-
2 claim analysis—and it is not just because it is a “mammoth task.” It is also because an analysis
3 of inventorship—based on actual facts and evidence—shows that there is no error. In any event,
4 it was CVC’s task to undertake if it wanted evidentiary support for its motion, and the
5 consequence of CVC’s failure to do so must be denial of its motion.

6 There are other reasons why it is futile to try to assess inventorship solely by comparing
7 the claims of the involved patents and application to the claims of the ten PCT applications
8 referenced in Kowalski’s declaration. Out of the thirteen Broad patents and one application in
9 this proceeding, only three, the 641 patent, the 713 patent, and the 551 application, were filed
10 claiming priority to PCT applications, here as continuations of PCT applications (the 736 PCT,
11 the 611 PCT and the 819 PCT, respectively). MF 59-61, 63-73, 75, 77. Drilling down further, in
12 two of the instances where there are direct relationships between the involved patents and
13 application on the one hand and the PCT applications on the other, the named inventors are the
14 same. MF 62, 74. As noted above, the 359 patent and its continuation, the 743 PCT, both name
15 Feng Zhang as sole inventor. MF 62; Exs. 4388 at 151, 3011 at 1. In addition, the 551
16 application that came from the 819 PCT both name Feng Zhang, Le Cong, Patrick Hsu, and Fei
17 Ran as the inventors. MF 74: Exs. 3050 at 156-61, 4392 at 165-66. Therefore, as to the instances
18 where the applications are formally related and the named inventors are the same, it seems, under
19 CVC’s theory, there can be no missing inventors.

20 For the instances where there are direct relationships of priority, CVC never matched up
21 the claims of the involved patents and the PCT applications. The reason CVC did not do so is
22 apparent; the claim sets are dissimilar, and one could not, based solely on assessment of
23 overlapping claim scope (even if legally permissible), reasonably conclude that they must have

1 the same inventors. *See* MF 76, 78; Exs. 3047 at 129-30, 4387 at 105-09, 3043 at 340-41, 3040 at
2 173-78.

3 Ill-fated as such an analysis would have been, it does not relieve CVC of its burden to
4 establish a factual record to prove that it is entitled to the relief sought. 37 C.F.R. § 41.121(b).
5 CVC has not done so here.

6 **5. CVC offers no support for its assumption that the Kowalski**
7 **declaration is conclusive as to the involved patents and application**

8 There is another flaw in CVC’s analysis, such as it is. Although the entire weight of
9 CVC’s motion rests on Kowalski’s declaration, CVC offers no legal theory for why the
10 declaration would be conclusive of inventorship for the involved patents and application.³
11 Without saying so, CVC is treating Kowalski’s declaration as a judicial admission.

12 It doesn’t work that way. Judicial admissions are formal statements of fact made in
13 judicial proceedings that have the effect of deeming facts conclusively established, eliminating
14 the need for proof. *See Barnes v. Owens-Corning Fiberglas Corp.*, 201 F.3d 815, 829 (6th Cir.
15 2000) (“Judicial admissions are formal admissions in the pleadings which have the effect of
16 withdrawing a fact from issue and dispensing wholly with the need for proof of the fact.”)
17 (quoting *In re Fordson Eng’g Corp.*, 25 B.R. 506, 509 (Bankr. E.D. Mich. 1982)). That doctrine,
18 however, does not apply here for several reasons:

- 19 • a judicial admission must be clear, deliberate, and unequivocal. *MacDonald v. Gen. Motors*
20 *Corp.*, 110 F.3d 337, 340 (6th Cir. 1997) (citing *Oscanyan v. Arms Co.*, 103 U.S. 261, 263

³ CVC concedes that the Kowalski “declaration does not specify precisely to which systems and methods of use in eukaryotes” certain of the PCT inventors contributed, which CVC takes as license to “assume” that their contributions are reflected in all of the claims. Motion at 10:22-25.

1 (1880)); *see also Glick v. White Motor Co.*, 458 F.2d 1287, 1291 (3d Cir. 1972) (“to be
2 binding, judicial admissions must be unequivocal”). Here, the Kowalski declaration was
3 submitted in a proceeding not involving the patents and application at issue in this
4 interference, which CVC concedes (Motion at 2 and Appx. 2 ¶1); and his statements could
5 not, and did not, clearly and unequivocally admit inventorship with respect to the involved
6 patents and application. MF 80; Ex. 4295 at ¶17.

- 7 ● a judicial admission must be a deliberate waiver of the right to present evidence. *See*
8 *MacDonald*, 110 F.3d at 340. It should go without saying that Kowalski’s 2016 declaration
9 in a different forum and different proceeding in connection with different applications was
10 not a deliberate waiver.
- 11 ● statements concerning “opinions and legal conclusions” are rarely treated as binding judicial
12 admissions. *Roger Miller Music, Inc. v. Sony/ATV Publ’g, LLC*, 477 F.3d 383, 394 (6th Cir.
13 2007) (citing *MacDonald*, 110 F.3d at 341).

14 For at least these reasons, Kowalski’s declaration is not conclusive of anything in this
15 interference.

16 6. Conclusion on inventorship

17 As the movant, CVC bears the burden of proving its entitlement to the relief requested.
18 *See* 37 C.F.R. § 41.121(b). Inventorship is a “complex legal conclusion.” *Egenera, Inc.*, 972 F.3d
19 at 1379. CVC cannot satisfy its burden of establishing inventorship here by shirking the
20 appropriate test and analysis and offering in its stead a shortcut that cobbles together word-
21 matching exercises with prohibited legal testimony from a non-attorney.

22 B. Broad did not intentionally omit inventors for an improper purpose.

23 At pages 15-18, CVC’s motion accuses Broad of intentionally omitting inventors in the
24 involved patents and application for an improper purpose. This argument is meritless.

1 Even if one assumes improper inventorship, which, as discussed above, CVC has not
2 established and cannot establish, CVC’s attribution of an improper motive is unwarranted. No
3 evidence supports CVC’s accusation that Broad intentionally omitted inventors from its
4 applications beginning in 2013 apparently for the sole purpose of expanding the possible roster
5 of corroborators in some potential interference far into the future. Instead, CVC offers only rank
6 speculation and its own say-so. CVC has lodged serious allegations of impropriety, yet cites only
7 Bailey’s naked “expert” opinion as purported support. This does not come close to justifying
8 CVC’s salacious accusations.

9 In filing the U.S. applications, Broad used the same system to determine what
10 contributions the various individuals in the Zhang Lab made to the inventions reflected in the
11 claim sets in the various U.S. applications as it did for the PCT applications—assessment of
12 information regarding the contributions of the applicable individuals.

13 At pages 14-15, CVC asks PTAB to limit the corroborative weight of certain individuals’
14 testimony, and that appears to be the true motive for CVC’s motion. Broad responds that it is not
15 a proper request, in the context of this inventorship motion, to ask the PTAB to veer off and
16 determine who can and cannot provide corroborating testimony. MF 79; Paper 19 at 11:3-15:14.
17 If CVC thought it deserves such a ruling, it should have requested authorization from the PTAB
18 to file a motion to that effect as required by SO ¶ 204 and 37 C.F.R. §41.204(b). CVC has, in
19 contravention of the rules, improperly snuck into its inventorship motion arguments that seek the
20 entirely separate relief of limiting the corroborative weight of any of Broad’s witnesses.

1 **C. Even if the PTAB determines that, through error, Broad did not name all**
2 **inventors, the appropriate remedy is correction of inventorship.**

3 As noted above, CVC seeks “judgment that all of Broad’s involved patents and
4 application are invalid.” Motion at 1:2.⁴ CVC expands upon this at pages 15-18, asserting that if
5 the PTAB determines that there are missing inventors, the PTAB should “cancel the claims as
6 invalid.” The response is that CVC’s argument on remedy is as mistaken and overreaching as its
7 argument on inventorship.

8 CVC’s argument ignores clear-cut Federal Circuit precedent (explained in detail in
9 Broad’s Contingent Responsive Motion 6 but omitted from CVC’s motion), that 35 U.S.C. § 256
10 (and its analogue for applications, 35 U.S.C. § 116) is a savings provision that mandates
11 correction of inventorship where possible. Once the requirements of § 256 are met, inventorship
12 must be corrected and a determination under § 102(f) of invalidity or unpatentability is improper.
13 *Egenera, Inc.*, 972 F.3d at 1376.

⁴ Broad recognizes that the PTAB in an Interference may address the issue of patentability, not validity. *See* Ex. 3310, *Karim v. Jobson*, Int. 105,376, Paper No. 99, 12 n.6 (PTAB Feb. 28, 2007) (stating that when a movant fails to use “suitable statutory language” (invalidity instead of patentability) confusion may ensue, and “[m]aybe we could better make our point if the next time a party files a motion for judgment based on a claim being ‘invalid’ we either (1) dismiss the motion as not authorized or (2) hold the moving party to clear and convincing proofs.”). The Order authorizing CVC’s Motion 3 correctly noted that CVC’s request was for a motion to argue “that Broad’s involved claims are unpatentable...” and not for a judgment of invalidity as CVC now seeks in Motion 3. Paper 880 at 2:19-20.

1 *Egenera* is particularly noteworthy because it explicitly holds that even where (unlike
2 here) there is a deliberate omission of inventors (and even if accompanied by deceptive intent),
3 the appropriate remedy under 35 U.S.C. § 256 is still correction of inventorship. *Id.* at 1377. That
4 recent, on-point Federal Circuit precedent (that predated CVC’s motion) should have precluded
5 CVC from arguing for a judgment of invalidity even if it had established (1) an omission of
6 inventors and (2) deceptive intent. Of course, it established neither, and so the only appropriate
7 outcome is denial of CVC’s motion.

8 **VI. CONCLUSION**

9 For the foregoing reasons, CVC Substantive Motion 3 should be denied.

10 Dated: March 26, 2021

Respectfully submitted,

11
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APPENDIX A – EXHIBIT LIST

Exhibit	Description
3001	U.S. Application 61/736,527, Zhang et al., December 12, 2012.
3011	U.S. Patent No. 8,697,359, issued on April 15, 2014, to Feng Zhang (“the 359 Patent”).
3013	U.S. Patent No. 8,895,308, issued on November 25, 2014, to Feng Zhang and Fei Ran (“the 308 Patent”)
3014	U.S. Patent No. 8,906,616, issued on December 9, 2014, to Feng Zhang et al. (“the 616 Patent”)
3015	U.S. Patent No. 8,771,945, issued on July 8, 2014, to Feng Zhang (“the 945 Patent”)
3016	U.S. Patent No. 8,889,356, issued on November 18, 2014, to Feng Zhang (“the 356 Patent”)
3017	U.S. Patent No. 8,865,406, issued on October 21, 2014, to Feng Zhang and Fei Ran (“the 406 Patent”)
3022	U.S. Patent No. 8,945,839, issued on February 3, 2015, to Feng Zhang (“the 839 Patent”)
3024	U.S. Patent No. 8,993,233, issued on March 31, 2015 to Feng Zhang et al. (“the 233 Patent”)
3027	U.S. Patent No. 8,795,965, issued on August 5, 2014, to Feng Zhang (“the 965 Patent”)
3029	U.S. Patent No. 8,871,445, issued on October 28, 2014, to Le Cong and Feng Zhang (“the 445 Patent”)
3037	U.S. Patent No. 8,932,814, issued on January 13, 2015, to Le Cong and Feng Zhang (“the 814 Patent”)
3040	International PCT Application PCT/US2013/74611, filed on December 12, 2013
3043	U.S. Patent 9,840,713, issued on December 12, 2017 to Feng Zhang (“the 713 Patent”)
3047	U.S. Patent No. 8,999,641, issued on April 7, 2015 to Feng Zhang et al. (“the 641 Patent”)
3050	U.S. Patent Application No. 14/704,551, filed on May 5, 2015 to Feng Zhang et al. (“the ‘551 Application”)
3309	<i>Astellas Inst. for Regenerative Med. v. ImStem Biotech., Inc.</i> , 2021 WL 406440 (D. Mass. Feb. 5, 2021).
3310	<i>Karim v. Jobson</i> , Int. 105,376, Paper No. 99 (Feb. 28, 2007).
4295	Thomas Kowalski Declaration filed in Opposition of European Patent No. EP 2771468, executed on June 15, 2016, 16 pages
4309	File History for U.S. Provisional Application No. 61/748,427
4310	File History for U.S. Provisional Application No. 61/791,409
4311	U.S. Provisional Application No. 61/835,931
4313	The Broad Institute, Inc.; Massachusetts Institute of Technology; President and Fellows of Harvard College, Submission in opposition proceedings, Opposition of European Patent No. EP 2771468, filed June 30, 2016, 3 pages
4314	European Patent Office Decision Revoking European Patent No. EP 2771468, filed March 26, 2018, 40 pages
4323	File History for U.S. Pat. Appl. No. 14/324,960

4341	Declaration of Scott Bailey, Ph.D.
4363	International PCT Application No. PCT/US2013/074667
4364	International PCT Application No. PCT/US2013/074691
4387	International PCT Application No. PCT/US2013/074736
4388	International PCT Application No. PCT/US2013/074743
4389	International PCT Application No. PCT/US2013/074790
4390	International PCT Application No. PCT/US2013/074800
4391	International PCT Application No. PCT/US2013/074812
4392	International PCT Application No. PCT/US2013/074819
4393	International PCT Application No. PCT/US2013/074825
5127	U.S. Provisional Application No. 61/836,101
5137	U.S. Provisional Application No. 61/836,123
5138	U.S. Provisional Application No. 61/847,537
6208	Deposition Transcript of Scott Bailey, Ph.D., January 19, 2021

1 **APPENDIX B – MATERIAL FACTS**

2 **Broad’s Responses to CVC’s Material Facts:**

3 1. On June 30, 2016, Broad submitted a sworn declaration by its attorney, Thomas J.
4 Kowalski, in opposition proceedings involving its European Patent No. EP 2771468. Ex. 4295 at
5 ¶¶ 1, 19; Ex. 4313, June 30, 2016 Broad Letter at 2.

6 **RESPONSE:** Admitted.

7 2. The Kowalski Declaration, executed on June 15, 2016, represents that Mr. Kowalski is a
8 U.S. Registered Patent Attorney who filed: PCT/US2013/074611; PCT/US2013/074667;
9 PCT/US2013/074691; PCT/US2013/074736; PCT/US2013/074743; PCT/US2013/074790;
10 PCT/US2013/074800; PCT/US2013/074812; PCT/US2013/074819; and PCT/US2013/074825.
11 Ex. 4295 at ¶¶ 1, 19.

12 **RESPONSE:** Admitted.

13 3. Mr. Kowalski states in his declaration that he was retained by Broad Institute of MIT and
14 Harvard in 2012 and was asked by Ellen Law, Broad’s in-house counsel, in mid-January 2013 to
15 “take over representation of certain CRISPR matters originating from Dr. Feng Zhang’s
16 laboratory.” Ex. 4295 at ¶ 11.

17 **RESPONSE:** Admitted.

18 4. Mr. Kowalski states that his declaration “explain[s] the inventorship study [he] undertook
19 to ensure that inventors and applicants were correctly named pursuant to US Law” on Broad’s
20 PCT applications that were filed with the USPTO as the Receiving Office. Ex. 4295 at ¶ 1.

21 **RESPONSE:** Admitted that the words in the partial, cropped quote appear in Exhibit
22 4295; otherwise, denied.

23 5. In his declaration, Mr. Kowalski identifies his duty of candor and good faith under 37
24 C.F.R. § 1.56 in making the statements contained in his declaration. Ex. 4295 at ¶ 4.

1 **RESPONSE:** Admitted

2 **6.** Mr. Kowalski explains in his declaration that his assessment of inventorship of Broad’s
3 PCT applications reflects the inventorship standards under U.S. law. Ex. 4295 at ¶¶ 5-10, 15.

4 **RESPONSE:** Admitted.

5 **7.** Mr. Kowalski explains in his declaration that his inventorship study included
6 interviewing the relevant individuals to determine his or her contributions to any subject matter
7 or claim features. Ex. 4295 at ¶ 9.

8 **RESPONSE:** Admitted.

9 **8.** Mr. Kowalski states in his declaration that “[v]arious inventions were identified from the
10 disclosures of the provisional applications,” including from BP1, to which Broad’s PCT
11 applications each claim a right of priority. Ex. 4295 at ¶¶ 13-14.

12 **RESPONSE:** Admitted that the words in the partial, cropped quote appear in Exhibit
13 4295; otherwise, denied.

14 **9.** Mr. Kowalski states in his declaration that, based on his inventorship study, he concluded
15 that Dr. Feng Zhang “contributed in a not insubstantial manner to both general and specific
16 aspects of claims of [Broad’s PCT applications]” and “Dr. Zhang is therefore named as an
17 inventor and applicant on all of [them].” Ex. 4295 at ¶ 16.

18 **RESPONSE:** Admitted that the words in the partial, cropped quote appear in Exhibit
19 4295; otherwise, denied.

20 **10.** Mr. Kowalski states in his declaration that, based on his inventorship study, he concluded
21 that Dr. Le Cong “contributed in a not insubstantial manner to the following inventions” of “co-
22 delivery to the nucleus...and the CRISPR-Cas9 system adapted in for uses in eukaryotic cells
23 [and] Dr. Cong was therefore named as an inventor and applicant on PCT/US2013/074790...and

1 PCT/US2013/074611, respectively.” Ex. 4295 at ¶ 16.

2 **RESPONSE:** Admitted that the words in the partial, cropped quote appear in Exhibit
3 4295; otherwise, denied.

4 **11.** Mr. Kowalski states in his declaration that, based on his inventorship study, he concluded
5 that Dr. Patrick Hsu “contributed in a not insubstantial manner to the following inventions” of
6 “the CRISPR-Cas9 system for certain uses in eukaryotic cells [and] Dr. Hsu was therefore
7 named as an inventor and applicant on...PCT/US2013/074611.” Ex. 4295 at ¶ 16.

8 **RESPONSE:** Admitted that the words in the partial, cropped quote appear in Exhibit
9 4295; otherwise, denied.

10 **12.** Mr. Kowalski states in his declaration that, based on his inventorship study, he concluded
11 that Dr. Fei Ran “contributed in a not insubstantial manner to the following inventions” of “co-
12 delivery to the nucleus, *in vivo* applications,...ortholog design, and the CRISPR-Cas9 system for
13 certain uses in eukaryotic cells [and] Dr. Ran was therefore named as an inventor and applicant
14 on...PCT/US2013/074790, PCT/US2013/074667,... PCT/US2013/074691 and
15 PCT/US2013/074611 respectively.” Ex. 4295 at ¶ 16.

16 **RESPONSE:** Admitted that the words in the partial, cropped quote appear in Exhibit
17 4295; otherwise, denied.

18 **13.** Mr. Kowalski states in his declaration that, based on his inventorship study, he concluded
19 that Mr. Shuailiang Lin “contributed in a not insubstantial manner to the following inventions”
20 of “certain methods of using CRISPR-Cas9 systems in eukaryotic cells and was therefore named
21 as an inventor and applicant on PCT/US2013/074611.” Ex. 4295 at ¶ 16.

22 **RESPONSE:** Admitted that the words in the partial, cropped quote appear in Exhibit
23 4295; otherwise, denied.

1 **14.** Mr. Kowalski states in his declaration that, based on his inventorship study, he concluded
2 that Dr. Randall Platt “contributed in a not insubstantial manner to the following inventions” of
3 “methods of using CRISPR-Cas9 systems in eukaryotic cells [and] was therefore named as an
4 inventor and applicant on PCT/US2013/074611...” Ex. 4295 at ¶ 16.

5 **RESPONSE:** Admitted that the words in the partial, cropped quote appear in Exhibit
6 4295; otherwise, denied.

7 **15.** Mr. Kowalski states in his declaration that, based on his inventorship study, he concluded
8 that Dr. Ophir Shalem “contributed in a not insubstantial manner to the following inventions” of
9 “ortholog design [and] was therefore named as an inventor and applicant on
10 PCT/US2013/074691...” Ex. 4295 at ¶ 16.

11 **RESPONSE:** Admitted that the words in the partial, cropped quote appear in Exhibit
12 4295; otherwise, denied.

13 **16.** Mr. Kowalski states in his declaration that, based on his inventorship study, he concluded
14 that Dr. Matthias Heidenreich and Dr. Lukasz Swiech “contributed in a not insubstantial manner
15 to the following inventions” of “*in vivo* applications and were therefore both named as inventors
16 and applicants on PCT/US2013/074667.” Ex. 4295 at ¶ 16.

17 **RESPONSE:** Admitted that the words in the partial, cropped quote appear in Exhibit
18 4295; otherwise, denied.

19 **17.** Mr. Kowalski states in his declaration that Ran, Hsu, and Lin made inventive
20 contributions to “certain” uses of or methods of using the CRISPR-Cas9 systems in eukaryotic
21 cells, but Mr. Kowalski does not explain what “certain” means. Ex. 4295 at ¶ 16.

22 **RESPONSE:** Admitted that the words in the partial, cropped quote appear in Exhibit
23 4295; otherwise, denied.

1 **18.** Mr. Kowalski states in his declaration that, pursuant to an inventorship study as described
2 in his declaration, Broad named the appropriate inventors for each of its PCT applications and
3 corresponding EP patent applications. Ex. 4295 at ¶ 17.

4 **RESPONSE:** Admitted that the words in the partial, cropped quote appear in Exhibit
5 4295; otherwise, denied.

6 **19.** Broad’s PCT applications were filed on December 12, 2013. Ex. 3040 at 2; Ex. 4363 at
7 448; Ex. 4364 at 260; Ex. 4387 at 165; Ex. 4388 at 150; Ex. 4389 at 300; Ex. 4390 at 347; Ex.
8 4391 at 181; Ex. 4392 at 164; Ex. 4393 at 167.

9 **RESPONSE:** Admitted that Ex. 3040 at 2; Ex. 4363 at 448; Ex. 4364 at 260; Ex. 4387
10 at 165; Ex. 4388 at 150; Ex. 4389 at 300; Ex. 4390 at 347; Ex. 4391 at 181; Ex. 4392 at 164; Ex.
11 4393 at 167 include an international filing date of December 12, 2013; otherwise, denied.

12 **20.** Ellen Law, in-house counsel for Broad, submitted a sworn declaration dated August 4,
13 2014 in the file of U.S. Application No. 14/324,960 which states that “Broad TWICE conducted
14 an inventorship study” in 2013 regarding the claims of the CRISPR portfolio, including those
15 that claim a lineage back to U.S. provisional application BP1. Ex. 4323 at 335-36.

16 **RESPONSE:** Admitted that the words in the partial, cropped quote appear in Exhibit
17 4323; otherwise, denied.

18 **21.** Ms. Law, in her August 4, 2014 declaration, further explains: “[a]fter the filing of US
19 Provisional applications 61/736,527 and 61/788,427 [sic, 61/748,427], I had Mr. Kowalski
20 investigate inventorship of the claims of the CRISPR portfolio. I understand that the inventorship
21 investigation included reviewing all documents provided by all individuals involved in any
22 aspect of the CRISPR portfolio, and also Mr. Kowalski interviewing each of these individuals.”
23 Ex. 4323 at 335-36.

1 **RESPONSE:** Admitted that the words in the partial, cropped quote appear in Exhibit
2 4323; otherwise, denied.

3 **22.** U.S. Application No. 14/324,960 is a now-abandoned continuation of the applications
4 that issued as Broad’s involved ’945 and ’359 patents and, like those patents, claims priority to
5 BP1. Ex. 4323 at 4. The ’960 application was filed by Lucianno Marraffini and Rockefeller
6 University to challenge Broad’s assertion that only Feng Zheng is an inventor of the claims that
7 issued in those patents. Broad identified Dr. Marraffini as an inventor when it filed BP1 (MF 42),
8 but removed him and all others except Zhang before the ’945 and ’359 patents issued. The ’960
9 application went abandoned before the Patent Office could assess inventorship. Ex. 4323 at
10 1169.

11 **RESPONSE:** Admitted that U.S. Application No. 14/324,960 is a now-abandoned
12 continuation of the applications that issued as Broad’s involved ’945 and ’359 patents; U.S.
13 Application No. 14/324,960 and Broad’s involved ’945 and ’359 patents claim priority to BP1;
14 the ’960 application was filed by Lucianno Marraffini and Rockefeller University; Dr. Marraffini
15 was named as an inventor on BP1; Dr. Marraffini is not an inventor on the ’945 and ’359 patents;
16 otherwise, denied.

17 **23.** Mr. Kowalski was the prosecuting attorney for the ’713 patent until July 2018 and he was
18 the prosecuting attorney for the remaining Broad involved patents and application until April
19 2016. Exs. 3011, 3013-3017, 3022, 3024, 3027, 3029, 3037, 3043, 3047, 3050 at 1.

20 **RESPONSE:** Denied.

21 **24.** A skilled artisan would have understood that the alleged inventive contribution of using
22 CRISPR-Cas9 systems in eukaryotic cells, as identified in the Kowalski Declaration and claimed
23 in PCT/US2013/074611, is also claimed in Broad’s involved patents and application. Ex. 4341 at

1 ¶¶ 30-35; Ex. 4295 at ¶ 16.

2 **RESPONSE:** Denied.

3 **25.** A skilled artisan would have understood that the alleged inventive contribution of “co-
4 delivery to the nucleus,” as identified in the Kowalski Declaration and claimed in
5 PCT/US2013/074790, is also claimed in U.S. Patent Nos. 8,697,359; 8,945,839; 8,865,406;
6 8,895,308; and 9,840,713. Ex. 4341 at ¶¶ 37-41; Ex. 4295 at ¶ 16.

7 **RESPONSE:** Denied.

8 **26.** A skilled artisan would have understood that *in vivo* applications of CRISPR in
9 organisms, as identified in the Kowalski Declaration and claimed in PCT/US2013/074667, is
10 also claimed in U.S. Patent No. 9,840,713. Ex. 4341 at ¶¶ 43-47; Ex. 4295 at ¶ 16.

11 **RESPONSE:** Denied.

12 **27.** A skilled artisan would have understood that Cas9 “ortholog design,” as identified in the
13 Kowalski Declaration and claimed in PCT/US2013/074691, is also claimed in U.S. Patent No.
14 8,993,233. Ex. 4341 at ¶¶ 49-53; Ex. 4295 at ¶ 16.

15 **RESPONSE:** Denied.

16 **28.** U.S. Patent No. 8,697,359 was filed on October 15, 2013, issued on April 15, 2014, and
17 names only Zhang as an inventor. Ex. 3011 at 1.

18 **RESPONSE:** Admitted.

19 **29.** U.S. Patent No. 8,771,945 was filed on February 18, 2014, issued on July 8, 2014, and
20 names only Zhang as an inventor. Ex. 3015 at 1.

21 **RESPONSE:** Admitted.

22 **30.** U.S. Patent No. 8,795,965 was filed on February 18, 2014, issued on August 5, 2014, and
23 names only Zhang as an inventor. Ex. 3027 at 1.

1 **RESPONSE:** Admitted.

2 **31.** U.S. Patent No. 8,945,839 was filed on April 18, 2014, issued on February 3, 2015, and
3 names only Zhang and Ran as inventors. Ex. 3022 at 1.

4 **RESPONSE:** Denied that Ran is an inventor on U.S. Patent No. 8,945,839; otherwise,
5 admitted.

6 **32.** U.S. Patent No. 8,865,406 was filed on March 24, 2014, issued on October 21, 2014, and
7 names only Zhang and Ran as inventors. Ex. 3017 at 1.

8 **RESPONSE:** Admitted.

9 **33.** U.S. Patent No. 8,895,308 was filed on June 2, 2014, issued on November 25, 2014, and
10 names only Zhang and Ran as inventors. Ex. 3013 at 1.

11 **RESPONSE:** Admitted.

12 **34.** U.S. Patent No. 8,906,616 was filed on May 29, 2014, issued on December 9, 2014, and
13 names only Zhang, Cong, Hsu, and Ran as inventors. Ex. 3014 at 1.

14 **RESPONSE:** Admitted.

15 **35.** U.S. Patent Application No. 14/704,551 was filed on May 5, 2015 and names only
16 Zhang, Cong, Hsu, and Ran as inventors. Ex. 3050 at 156-159.

17 **RESPONSE:** Admitted.

18 **36.** U.S. Patent No. 9,840,713 was filed on October 24, 2014, issued on December 12, 2017,
19 and names only Zhang as an inventor. Ex. 3043 at 1.

20 **RESPONSE:** Admitted.

21 **37.** U.S. Patent No. 8,993,233 was filed on December 12, 2013, issued on March 31, 2015,
22 and names only Zhang, Cong, Platt, Sanjana, and Ran as inventors. Ex. 3024 at 1.

23 **RESPONSE:** Admitted.

1 **38.** U.S. Patent No. 8,871,445 was filed on April 23, 2014, issued on October 28, 2014, and
2 names only Zhang and Cong as inventors. Ex. 3029 at 1.

3 **RESPONSE:** Admitted.

4 **39.** U.S. Patent No. 8,999,641 was filed on March 26, 2014, issued on April 7, 2015, and
5 names only Zhang, Cong, Platt, and Sanjana as inventors. Ex. 3047 at 1.

6 **RESPONSE:** Admitted.

7 **40.** U.S. Patent No. 8,932,814 was filed on April 22, 2014, issued on January 13, 2015, and
8 names only Zhang and Cong as inventors. Ex. 3037 at 1.

9 **RESPONSE:** Admitted.

10 **41.** U.S. Patent No. 8,889,356 was filed on February 18, 2014, issued on November 14, 2018,
11 and names only Zhang as an inventor. Ex. 3016 at 1.

12 **RESPONSE:** Denied that U.S. Patent No. 8,889,356 issued on November 14, 2018;
13 otherwise, admitted.

14 **42.** Broad's involved patents and application all claim priority to provisional application
15 61/736,527 ("BP1"), which names Zhang, Cong, Ran, Hsu, Cox, Lin, Habib, and Marraffini as
16 inventors. Ex. 3001 at 350; Exs. 3011, 3013-3017, 3022, 3024, 3027, 3029, 3037, 3043, 3047 at
17 1; Ex. 3050 at 3; Paper 269, Broad Substantive Motion 4 at 2-3; Paper 12, Broad's July 8, 2019
18 Notice of Related Proceedings.

19 **RESPONSE:** Admitted.

20 **43.** Broad's involved patents and application all claim priority to provisional application
21 61/748,427, which names Zhang, Cong, Habib, Marraffini, Cox, Hsu, Lin, and Ran as inventors.
22 Ex. 4309 at 364; Exs. 3011, 3013-3017, 3022, 3024, 3027, 3029, 3037, 3043, 3047 at 1; Ex.
23 3050 at 3.

1 **RESPONSE:** Admitted.

2 **44.** Broad's involved patents and application all claim priority to provisional application
3 61/791,409, which names Zhang, Cong, Habib, Marraffini, Cox, Hsu, Lin, Ran, Bikard, and
4 Jiang as inventors. Ex. 4310 at 433-34; Exs. 3011, 3013-3017, 3022, 3024, 3027, 3029, 3037,
5 3043, 3047 at 1; Ex. 3050 at 3.

6 **RESPONSE:** Denied.

7 **45.** Broad's involved patents and application all claim priority to provisional application
8 61/835,931, which names Zhang, Marraffini, Cong, Cox, Hsu, Lin, Platt, Ran, and Sanjana as
9 inventors. Ex. 4311 at 2; Exs. 3011, 3013-3017, 3022, 3024, 3027, 3029, 3037, 3043, 3047 at 1;
10 Ex. 3050 at 3.

11 **RESPONSE:** Denied.

12 **46.** Broad's provisional application 61/836,101 names Zhang, Ran, and Shalem as inventors.
13 Ex. 5127 at 1.

14 **RESPONSE:** Admitted.

15 **47.** Broad's provisional applications 61/836,123 and 61/847,537 both name Zhang, Ran,
16 Heidenreich, and Swiech as inventors. Ex. 5137 at 2; Ex. 5138 at 2.

17 **RESPONSE:** Admitted.

18 **48.** On March 26, 2018, the European Patent Office Opposition Division revoked Broad's EP
19 2771468, which claimed priority to the BP1 provisional application. Ex. 4314 at 40.

20 **RESPONSE:** Admitted.

21

1 **Broad's Material Facts**

2 **49.** Bailey is not a lawyer. Ex. 6208, Bailey Tr. 17:16-18:3; 28:15-17; 29:17-19; 30:19-21;
3 32:18-21; 35:16; 36:21-37:1; 37:11-18; 40:15-19; 44:6-11; 45:10-13; 46:2-3; 47:9-12; 49:13-17;
4 55:11-16; 63:4-7; 66:20-67:1.

5 **50.** Bailey has no legal training. Ex. 6208, Bailey Tr. 17:16-18:3; 28:15-17; 29:17-19; 30:19-
6 21; 32:18-21; 35:16; 36:21-37:1; 37:11-18; 40:15-19; 44:6-11; 45:10-13; 46:2-3; 47:9-12; 49:13-
7 17; 55:11-16; 63:4-7; 66:20-67:1.

8 **51.** Bailey testified that his expertise lies in “[m]olecular biology and genetic engineering.”
9 Ex. 6208, Bailey Tr. 17:9-15.

10 **52.** Bailey has never conducted an inventorship analysis as he testified,

11 Q. Have you ever conducted an inventorship analysis for purposes of patents or
12 applications filed in the United States Patent and Trademark Office?

13 A. I have not.

14 Ex. 6208, Bailey Tr. 18:7-11.

15 **53.** As he testified, Bailey did not perform his own inventorship analysis here. “I’m not a
16 lawyer, so I’m not providing an inventive analysis.” Ex. 6208, Bailey Tr. at 46:3-4 “I didn’t
17 myself perform an inventorship analysis.: *Id.* at 47:9-12; *see also* 50:2-7.

18 **54.** Bailey did not assess inventorship on a claim-by-claim basis. Ex. 6208, Bailey Tr. 54:17-
19 55:5.

20 **55.** Bailey did not know whether it mattered to inventorship that an individual was only
21 contributing prior art concepts. Ex. 6208, Bailey Tr. 32:8-33:17.

22 **56.** When asked in his deposition, “[d]o you have any understanding, aside from what’s in
23 that sentence [“Rather, inventorship generally equates to the conception of an idea to achieve the
24 desired goal in sufficient detail so that all remains to bring the invention into physical existence

1 is the application of ordinary skill.” Ex. 4341, Bailey Dec. at ¶18], of what the terminology
2 ‘conception of an idea’ refers to,” Bailey responded, “[n]o, I’m not – I’m not familiar with that
3 concept, but that doesn’t affect the analysis that I did for my declaration.” Ex. 6208, Bailey Tr.
4 41:13-42:6.

5 **57.** Bailey didn’t know whether inventorship of two claims could be different when one
6 claim contained a feature that made it separately patentable over another claim. Ex. 6208, Bailey
7 Tr. 47:1-12.

8 **58.** When asked “[d]id the fact that the listing of organisms is not identical between the ’691
9 PCT and the ’233 patent affect your opinion at all?” Bailey responded, “[i]t did not, again,
10 because a skilled artisan would have viewed both those -- the corresponding claims as ortholog
11 design.” Ex. 6208, Bailey Tr. 98:7-12.

12 **59.** U.S. Patent No. 8,697,359 is neither a continuation of nor claims priority to any of the
13 following PCT Applications: PCT/US2013/074611; PCT/US2013/074667;
14 PCT/US2013/074691; PCT/US2013/074736; PCT/US2013/074743; PCT/US2013/074790;
15 PCT/US2013/074800; PCT/US2013/074812; PCT/US2013/074819; and PCT/US2013/074825.
16 Ex. 3011 at 1.

17 **60.** U.S. Patent Application No. 14/054,414, that issued as U.S. Patent No. 8,697,359, was
18 filed prior to the filing of any of the following PCT Applications: PCT/US2013/074611;
19 PCT/US2013/074667; PCT/US2013/074691; PCT/US2013/074736; PCT/US2013/074743;
20 PCT/US2013/074790; PCT/US2013/074800; PCT/US2013/074812; PCT/US2013/074819; and
21 PCT/US2013/074825. Exs. 3011; 3040 at 2; 4363 at 448; 4364 at 260; 4387 at 165; 4388 at 150;
22 4389 at 300; 4390 at 347; 4391 at 181; 4392 at 164; and 4393 at 167.

23 **61.** PCT/US2013/074743 is a continuation of U.S. Patent Application No. 14/054,414, that

1 issued as U.S. Patent No. 8,697,359. Ex. 4388 at 152.

2 **62.** Feng Zhang is named as the sole inventor on both PCT/US2013/074743 and U.S. Patent
3 No. 8,697,359. Exs. 4388 at 151; 3011 at 1; 4295, Kowalski Dec. at ¶17(e).

4 **63.** U.S. Patent No. 8,771,945 is neither a continuation of nor claims priority to any of the
5 following PCT Applications: PCT/US2013/074611; PCT/US2013/074667;
6 PCT/US2013/074691; PCT/US2013/074736; PCT/US2013/074743; PCT/US2013/074790;
7 PCT/US2013/074800; PCT/US2013/074812; PCT/US2013/074819; and PCT/US2013/074825.
8 Ex. 3015 at 1.

9 **64.** U.S. Patent No. 8,795,965 is neither a continuation of nor claims priority to any of the
10 following PCT Applications: PCT/US2013/074611; PCT/US2013/074667;
11 PCT/US2013/074691; PCT/US2013/074736; PCT/US2013/074743; PCT/US2013/074790;
12 PCT/US2013/074800; PCT/US2013/074812; PCT/US2013/074819; and PCT/US2013/074825.
13 Ex. 3027 at 1.

14 **65.** U.S. Patent No. 8,865,406 is neither a continuation of nor claims priority to any of the
15 following PCT Applications: PCT/US2013/074611; PCT/US2013/074667;
16 PCT/US2013/074691; PCT/US2013/074736; PCT/US2013/074743; PCT/US2013/074790;
17 PCT/US2013/074800; PCT/US2013/074812; PCT/US2013/074819; and PCT/US2013/074825.
18 Ex. 3017 at 1.

19 **66.** U.S. Patent No. 8,871,445 is neither a continuation of nor claims priority to any of the
20 following PCT Applications: PCT/US2013/074611; PCT/US2013/074667;
21 PCT/US2013/074691; PCT/US2013/074736; PCT/US2013/074743; PCT/US2013/074790;
22 PCT/US2013/074800; PCT/US2013/074812; PCT/US2013/074819; and PCT/US2013/074825.
23 Ex. 3029 at 1.

1 **67.** U.S. Patent No. 8,889,356 is neither a continuation of nor claims priority to any of the
2 following PCT Applications: PCT/US2013/074611; PCT/US2013/074667;
3 PCT/US2013/074691; PCT/US2013/074736; PCT/US2013/074743; PCT/US2013/074790;
4 PCT/US2013/074800; PCT/US2013/074812; PCT/US2013/074819; and PCT/US2013/074825.
5 Ex. 3016 at 1.

6 **68.** U.S. Patent No. 8,895,308 is neither a continuation of nor claims priority to any of the
7 following PCT Applications: PCT/US2013/074611; PCT/US2013/074667;
8 PCT/US2013/074691; PCT/US2013/074736; PCT/US2013/074743; PCT/US2013/074790;
9 PCT/US2013/074800; PCT/US2013/074812; PCT/US2013/074819; and PCT/US2013/074825.
10 Ex. 3013 at 1.

11 **69.** U.S. Patent No. 8,906,616 is neither a continuation of nor claims priority to any of the
12 following PCT Applications: PCT/US2013/074611; PCT/US2013/074667;
13 PCT/US2013/074691; PCT/US2013/074736; PCT/US2013/074743; PCT/US2013/074790;
14 PCT/US2013/074800; PCT/US2013/074812; PCT/US2013/074819; and PCT/US2013/074825.
15 Ex. 3014 at 1.

16 **70.** U.S. Patent No. 8,932,814 is neither a continuation of nor claims priority to any of the
17 following PCT Applications: PCT/US2013/074611; PCT/US2013/074667;
18 PCT/US2013/074691; PCT/US2013/074736; PCT/US2013/074743; PCT/US2013/074790;
19 PCT/US2013/074800; PCT/US2013/074812; PCT/US2013/074819; and PCT/US2013/074825.
20 Ex. 3037 at 1.

21 **71.** U.S. Patent No. 8,945,839 is neither a continuation of nor claims priority to any of the
22 following PCT Applications: PCT/US2013/074611; PCT/US2013/074667;
23 PCT/US2013/074691; PCT/US2013/074736; PCT/US2013/074743; PCT/US2013/074790;

1 PCT/US2013/074800; PCT/US2013/074812; PCT/US2013/074819; and PCT/US2013/074825.

2 Ex. 3022 at 1.

3 **72.** U.S. Patent No. 8,993,233 is neither a continuation of nor claims priority to any of the

4 following PCT Applications: PCT/US2013/074611; PCT/US2013/074667;

5 PCT/US2013/074691; PCT/US2013/074736; PCT/US2013/074743; PCT/US2013/074790;

6 PCT/US2013/074800; PCT/US2013/074812; PCT/US2013/074819; and PCT/US2013/074825.

7 Ex. 3024 at 1.

8 **73.** U.S. Application No. 14/704,551 is a continuation of PCT/US2013/074819. Ex. 3050 at

9 162.

10 **74.** Both U.S. Application No. 14/704,551 and PCT/US2013/074819 name only Feng Zhang,

11 Le Cong, Patrick Hsu, and Fei Ran as inventors. Exs. 3050 at 156-61; 4392 at 165-66.

12 **75.** U.S. Patent No. 8,999,641 is a continuation of PCT/US2013/074736. Ex. 3047 at 1.

13 **76.** The claim scope between U.S. Patent No. 8,999,641 and PCT/US2013/074736 is not the

14 same, and therefore, the claims do not cover the same inventive concept(s). Exs. 3047 at 129-30;

15 4387 at 105-09.

16 **77.** U.S. Patent No. 9,840,713 is a continuation of PCT/US2013/074611. Ex. 3043 at 1.

17 **78.** The scope of the claims between U.S. Patent No. 9,840,713 and PCT/US2013/074611 is

18 not the same, and therefore, the claims do not cover the same inventive concept(s). Exs. 3043 at

19 340-41; 3040 at 173-78.

20 **79.** CVC's List of Intended Motions did not include a request to exclude the testimony of

21 "interested parties." Paper 19 at 11:3–15:14.

22 **80.** Kowalski's declaration set out applicants in the 10 PCT filings (PCT/US2013/074611;

23 PCT/US2013/074667; PCT/US2013/074691; PCT/US2013/074736; PCT/US2013/074743;

- 1 PCT/US2013/074790; PCT/US2013/074800; PCT/US2013/074812; PCT/US2013/074819; and
- 2 PCT/US2013/074825), but not for the involved patents and application in this proceeding. Ex.
- 3 4295 at ¶17.

CERTIFICATE OF FILING AND SERVICE

I hereby certify that on March 26, 2021 a true and complete copy of the foregoing **BROAD OPPOSITION 3** is being filed by 8:00 pm ET via the Interference Web Portal. (SO ¶ 105.3). Pursuant to agreement of the parties and the Updated Notices of Lead and Backup Counsel, service copies are being sent by email by 11:00 pm ET, to counsel for Junior Party as follows:

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