UNITED STATES DISTRICT COURT

NORTHERN DISTRICT OF CALIFORNIA

PLEXXIKON INC.,

Plaintiff,

v.

NOVARTIS PHARMACEUTICALS CORPORATION,

Defendant.

Case No. 17-cv-04405-HSG

ORDER DENYING DEFENDANT'S MOTION FOR SUMMARY JUDGMENT

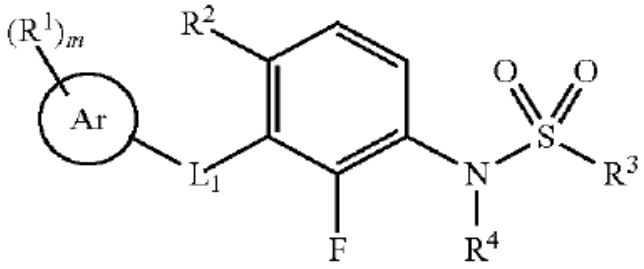
Re: Dkt. No. 177

Pending before the Court is Defendant Novartis Pharmaceuticals Corporation's motion for partial summary judgment that certain claims of U.S. Patent Nos. 9,469,640 (the "'640 Patent") and 9,844,539 (the "'539 Patent") (together, the "Asserted Patents") are invalid as anticipated under 35 U.S.C. § 102.[1] The dispute, as briefed by the parties, centers on the priority date of the Asserted Patents. For the reasons stated below, the Court finds that genuine disputes of fact regarding that priority date remain and therefore **DENIES** the motion for summary judgment.

I. BACKGROUND

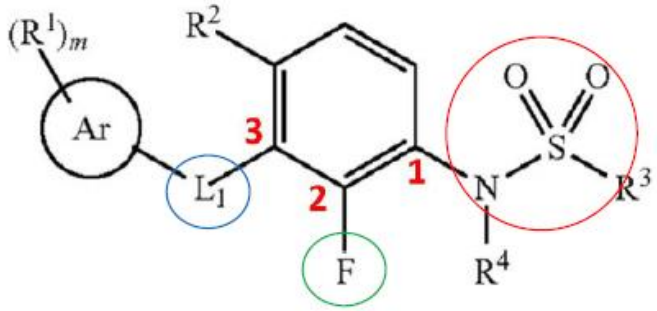
Plaintiff Plexxikon Inc. ("Plexxikon") brings this patent infringement action against Novartis Pharmaceuticals Corporation ("Novartis") for infringement of the '640 and '539 Patents. Plexxikon accuses Novartis' melanoma cancer drug Tafinlar, which treats melanoma by inhibiting a protein called B-Raf kinase. The Asserted Patents cover a class of molecular compounds having the following molecular structure:

[1] Dkt. No. 177 ("MSJ"); *see also* Dkt. Nos. 212 ("Opp."), 233 ("Reply"). The Court held a hearing on this motion. *See* Dkt. No. 337.



Dkt. No. 177-16 ('640 Patent) at claim 1; Dkt. No. 210-17 ('539 Patent) at claim 1.

As analyzed by Plexxikon's expert, Dr. Michael Metzker, the claimed molecular structure has a "1,2,3-substituted" pattern of sulfonamide, fluorine, and a monocyclic heteroaryl. *See* Dkt. No. 399-2 ("Metzker Report") ¶ 30. Specifically, as illustrated by Plexxikon below, the claimed structure has a phenyl ring (shown as a hexagon) having a sulfonamide (circled in red) at the "1" position, followed by a fluorine (circled in green) at the "2" position, and a linker L_1 (circled in blue) connecting a monocyclic heteroaryl at the "3" position. Dkt. No. 393-2 ("Metzker Depo.") at 192:18-23; Metzker Report ¶ 28. [2]



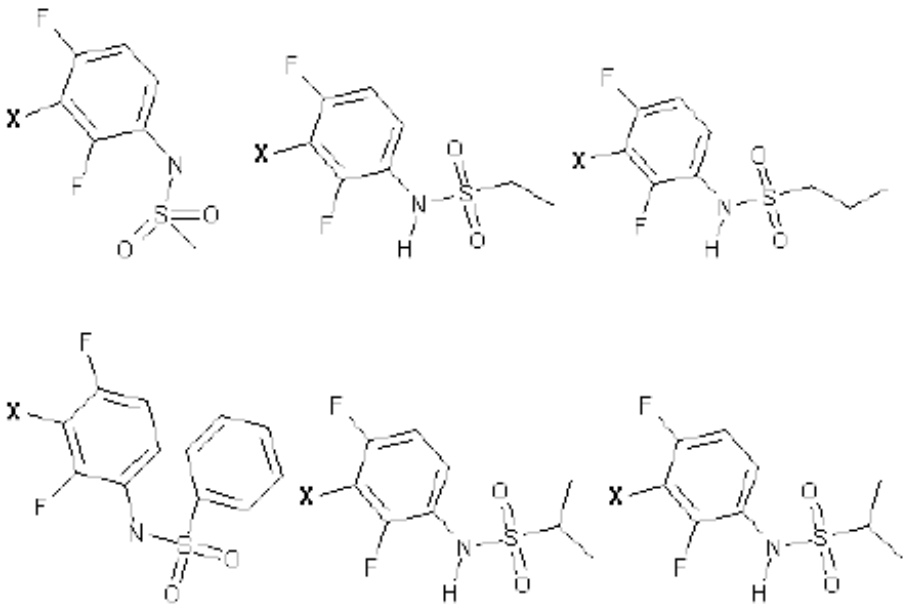
Dr. Metzker refers to this combination as a "scaffold." *Id.* In addition to the scaffold, the claimed molecular structure also includes a number of variables, marked as R^1, R^2, R^3, R^4, and *m*. Some of these variables, including R^1, R^2, and R^3, are not part of the scaffold. *See* Dkt. No. 177-2 ("Baran Decl.") ¶ 14. Instead, the variables may be one of a number of alternative elements. For instance, R^1 may be an optionally substituted lower alkyl or heteroaryl, while R^3 may be an optionally substituted lower alkyl or aryl. '640 Patent at claim 1; '539 Patent at claim 1. R^2 is a

[2] Dkt. No. 167 ("Plexxikon MSJ") at 5. Dr. Metzker does not provide the figure shown by Plexxikon, but confirmed a similar analysis in his deposition. *See* Metzker Depo. at 192:18-23; *cf.* Dkt. No. 397-1 ("Baran Depo.") at 83:3-13. Novartis adopts Plexxikon's scaffold characterization in its motion.

hydrogen or halogen. *Id*. The linker L_1 may also be eliminated for a direct bond. *Id*.

Plexxikon claims a priority date of March 2005.[3] *See* Dkt. No. 179-6 at 8. Although the provisional application for the Asserted Patents was not filed until July 17, 2007, Plexxikon argues that the claimed inventions were conceived on March 14, 2005. Metzker Report ¶ 23. As support, Plexxikon cites an email with the subject line "new scaffold" sent by James Tsai, a co-inventor of the patents, on March 15, 2005, stating as follows:

> Hi
>
> To follow-up with our discussions on Chao's idea of novel scaffold discovery along 3204
>
> **Chao's ideas**
>
> 1. The Phe(2F)-N-SO2-Z of 3204 series should be considered as a scaffold, making interactions with the DFG-activation loop region and move a few amino acids substantially.
> 2. These interactions are novel, and we should consider modifications at X and abandon azaindole altogether.
> 3. Chao's first suggestion at X is a Pyr, similar to gleevec
> 4. The ketone linker, making hydrophilic interaction with water to stabilize the overall structure, does not need to stay
> 5. I asked Yong to model this and other possible modifications at X



Dkt. No. 212-4 ("March 2005 Email").

Dr. Metzker opines that the March 2005 email discloses the claimed scaffold. Metzker

[3] Plexxikon also argues, in the alternative, that the patents are entitled to a priority date of February 2, 2007. However, the Court granted the motion to strike expert testimony supporting that priority date, which disposes of that priority theory. *See* Dkt. No. 416.

Report ¶¶ 29-33. In particular, the email shows five compounds that have a phenyl ring with a sulfonamide at the "1" position, a fluorine at the "2" position, and an "X" in the "3" position. *Id.* ¶ 30. The "X" is a variable. *Id.* The email states that "Chao's first suggestion at X is a Pyr," which the inventors interpreted as a pyridine—a monocyclic heteroaryl. *Id.* ¶¶ 32, 44, 46. In addition, the email describes a variable "Z" attached to the sulfonamide, which the drawings show as certain alkyl and phenyl groups. *Id.* ¶ 31; *see also* Dkt. No. 219 ("Ibrahim Decl.") ¶ 5.

Jiazhong Zhang, another named inventor of the Asserted Patents, synthesized a compound as "proof of concept" of the ideas in the March 2005 email, which Plexxikon designated P-0001, between March 16 and March 18, 2005. Metzker Report ¶ 35. Plexxikon synthesized two other compounds, designated P-0007 and P-0012, in December 2006 and January 2007, respectively. *Id.* Dr. Metzker opines that each of these compounds falls within the scope of the claims, but does not provide any details regarding their implementation. *Id.*

II. LEGAL STANDARD

A. Summary Judgment

A motion for summary judgment should be granted where there is no genuine issue of material fact and the movant is entitled to judgment as a matter of law. Fed. R. Civ. P. 56; *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 247–48 (1986). The purpose of summary judgment "is to isolate and dispose of factually unsupported claims or defenses." *Celotex v. Catrett*, 477 U.S. 317, 323–24 (1986). The moving party has the initial burden of informing the Court of the basis for the motion and identifying those portions of the pleadings, depositions, answers to interrogatories, admissions, or affidavits which demonstrate the absence of a triable issue of material fact. *Id.* at 323.

If the moving party meets its initial burden, the burden shifts to the non-moving party to present facts showing a genuine issue of material fact for trial. Fed. R. Civ. P. 56; *Celotex*, 477 U.S. at 324. The Court must view the evidence in the light most favorable to the nonmovant, drawing all reasonable inferences in its favor. *T.W. Elec. Serv., Inc. v. Pac. Elec. Contractors Ass'n*, 809 F.2d 626, 630–31 (9th Cir. 1987). Summary judgment is not appropriate if the nonmoving party presents evidence from which a reasonable jury could resolve the disputed issue

of material fact in the nonmovant's favor. *Anderson*, 477 U.S. at 248. Nonetheless, "[w]here the record taken as a whole could not lead a rational trier of fact to find for the non-moving party, there is no genuine issue for trial." *Matsushita Elec. Indus. Co. v. Zenith Radio*, 475 U.S. 574, 587 (1986) (internal quotation mark omitted).

III. DISCUSSION

Novartis argues that certain compounds synthesized in 2007 anticipate some claims of the Asserted Patents. Plexxikon does not directly dispute that these compounds fall within the scope of the claims. Instead, Plexxikon argues that the compounds are not prior art for two reasons. First, Plexxikon argues, citing Rule 131 case law, that the compounds were obvious variations of Plexxikon's own inventions in the form of the P-0001, P-0007, and P-0012 compounds. Second, Plexxikon claims entitlement to an earlier priority date based on conception of the species shown in the March 2005 email. Novartis responds that Plexxikon's evidence is not sufficient to support these arguments, and that even if it was, conception of a species cannot establish priority for a claimed genus absent evidence of "generic applicability."

As explained further below, the Court finds that Rule 131 law does not apply to the current dispute. The Court therefore considers only (1) whether Plexxikon has produced enough evidence to show prior conception of a claimed species, and (2) whether such evidence may suffice to establish priority for the claims as a matter of law.

A. Legal Standard

1. Establishing Priority

Under 35 U.S.C. § 102(g), a patent is invalid if "before such person's invention thereof, the invention was made in this country by another inventor who had not abandoned, suppressed, or concealed it."[4] "The invention date is the date of conception." *Allergan, Inc. v. Apotex Inc.*, 754 F.3d 952, 967 (Fed. Cir. 2014). Conception is "the formation in the mind of the inventor, of a

[4] The America Invents Act ("AIA") eliminated section 102(g) and applies to patents having an effective filing date on or after March 16, 2013. *See Solvay S.A. v. Honeywell Int'l Inc.*, 742 F.3d 998, 1000 n.1 (Fed. Cir. 2014). Novartis disputes that Plexxikon is entitled to a priority date before that time, but assumes that the pre-AIA statute applies for purposes of its motion.

definite and permanent idea of the complete and operative invention, as it is hereafter to be applied in practice." *Id.* at 967 (citation omitted). Conception is definite when the inventors have "a specific, settled idea" and a "particular solution to the problem at hand." *Dawson v. Dawson*, 710 F.3d 1347, 1352 (Fed. Cir. 2013) (quoting *Burroughs Wellcome Co. v. Barr Labs., Inc.*, 40 F.3d 1223, 1228 (Fed. Cir. 1994)). Conception is complete when "the idea is so clearly defined in the inventor's mind that only ordinary skill would be necessary to reduce the invention to practice, without extensive research or experimentation." *Id*. For chemical inventions, conception requires both "(1) the idea of the structure of the chemical compound, and (2) possession of an operative method of making it." *Oka v. Youssefyeh*, 849 F.2d 581, 583 (Fed. Cir. 1998).

It is well-established that conception must include each claimed limitation. *See REG Synthetic Fuels, LLC v. Neste Oil Oyj*, 841 F.3d 954, 962 (Fed. Cir. 2016) ("Conception must include every feature or limitation of the claimed invention."); *Cumberland Pharma. Inc. v. Mylan Inst. LLC*, 846 F.3d 1213, 1218 (Fed. Cir. 2017) ("Conception is keyed to the *claimed* invention: 'A conception must encompass all limitations of the claimed invention.'" (emphasis in original) (citation omitted)); *Taurus IP, LLC v. DaimlerChrysler Corp.*, 726 F.3d 1306, 1323 (Fed. Cir. 2013) (rejecting conception for failure to demonstrate the evidence "satisfie[d] all the limitations, as necessary to demonstrate conception"). For inventions of chemical compounds, the compound must be conceived "with all of [its] component substituents." *Bd. of Edu. ex rel. Bd. of Tr. of Fla. State Univ. v. Am. Bioscience, Inc.*, 333 F.3d 1330, 1340 (Fed. Cir. 2003).[5]

Where a patent claims a genus, conception of a species *may* constitute conception of a genus. *Jolley*, 308 F.3d at 1322 & n.2; *Oka*, 849 F.2d at 584; *In re Taub*, 348 F.2d 556, 562 (C.C.P.A. 1965). The Federal Circuit has never expressly held that it does. *Jolley*, 308 F.3d at 1322 n.2.[6] However, the Board of Patent Appeals and Interferences has so held, and the Federal

[5] Plexxikon argues otherwise, Opp. at 12:12-12:16, but concedes this requirement in its proposed jury instructions. *See* Dkt. No. 357 at 78:21-22. *In re Jolley* does not address the issue; it merely discusses the particularity required to show conception of one limitation. 308 F.3d 1317, 1325 (Fed. Cir. 2002) (agreeing there was no conception where "there is no evidence in the record that all of the elements of the count resided in the inventor's mind").

[6] In *Jolley*, the court found that conception of a species sufficed because the parties expressly conceded the argument. 308 F.3d at 1322 n.2.

Circuit has repeatedly suggested as much. *Id.*; *see Oka*, 849 F.2d at 584 (citing the rule with approval but finding that patentee did not establish conception); *Taub*, 348 F.2d at 562 (noting in dicta that "one may establish priority for a generic claim on the basis of a showing that [the patentee] was prior as to a single species"). Moreover, the Federal Circuit has held that reduction to practice of a species suffices to show priority for a genus. *See Frazer v. Schlegel*, 498 F.3d 1283, 1287, 1289 (Fed. Cir. 2007); *see also Miller v. Walker*, 214 U.S.P.Q. 845 (B.P.A.I. 1982) (citing reduction to practice cases in concluding that conception of a species suffices to establish priority for a genus).[7]

Assuming that conception of a species suffices, the species still must be described with particularity to show invention. *See Burroughs*, 40 F.3d at 1228 (noting that "[t]he conception analysis necessarily turns on the inventor's ability to describe his invention with particularity"); *see also Amgen, Inc. v. Chugai Pharma. Co., Ltd.*, 927 F.2d 1200, 1206 (Fed. Cir. 1991) (requiring conception of a chemical compound to be so "definite" as to "distinguish it from other materials"). Where evidence of conception discloses compounds broader than the invention, the evidence must "fairly suggest to one of ordinary skill the subject matter of the [claim], without the need for extensive experimentation to ascertain whether the matter encompassed by the disclosure suggests that desirable features of compositions belonging to the [claim]." *Jolley*, 308 F.3d at 1323; *see also Prutton v. Fuller*, 230 F.2d 459, 463 (C.C.P.A. 1956) (considering "the indication or lack of indication of a preference for the [claimed] composition" among broader disclosure). This is a "fact-intensive inquiry." *Jolley*, 308 F.3d at 1323.

In *Jolley*, a party in an interference proceeding claimed a "two-component system" comprising (1) a refrigerant, and (2) certain esters.[8] 308 F.3d at 1319. Another party attempted to

[7] Under the somewhat complex rules of pre-AIA priority, reduction to practice demonstrates invention (because it necessarily shows conception) unless the other party can establish an earlier conception combined with reasonable diligence in reducing to practice. *See E.I. du Point de Nemours & Co. v. Unifrax I LLC*, 921 F.3d 1060, 1075 (Fed. Cir. 2019).

[8] An interference proceeding was a pre-AIA administrative mechanism to "determin[e] which of competing applicants is the first inventor of the common subject matter." *Capon v. Eshhar*, 418 F.3d 1349, 1351 (Fed. Cir. 2005). A "count" in an interference proceeding is similar to a patent claim. *See Mycogen Plant Sci. v. Monsato Co.*, 243 F.3d 1316, 1332 (Fed. Cir. 2001).

show conception using an email that disclosed each of these components, except that the esters were broader than those claimed. *Id*. at 1321. Thus, some of the esters fell within the scope of the count, while others did not. *Id.* at 1322. The Federal Circuit affirmed conception based on that email because other evidence showed that the inventors held "particular interest" in esters falling within the count. *Id*. at 1325-26. Specifically, the inventors' company already manufactured esters falling within the count and turned to them first when testing the invention. *Id*. at 1325. Moreover, the inventors did not engage in extensive experimentation with esters outside the scope of the count. *Id*. The court thus concluded that a "reasonable mind might accept as adequate [this] evidence" of conception. *Id*. at 1326.

In *Bosies v. Benedict*, on the other hand, the Federal Circuit found that the party failed to meet its burden to show conception. 27 F.3d 539, 544 (Fed. Cir. 1994). There, the claims recited a chemical compound having an "A" group with a hydrocarbon chain of two to eight carbons. *Id.* at 540. A party attempted to establish priority by introducing a laboratory notebook that showed the same compound, but that had a variable "n" for the number of carbons. *Id*. at 541. The Federal Circuit found that the notebook did not establish conception because there was insufficient evidence that the inventors considered appropriate values for "n." *Id*. at 542; *see also Prutton*, 230 F.2d at 464 (rejecting conception where the evidence contained "disclosures of a scope which embraces the specific compositions recited by the claims" among others, but did not "fairly suggest any preference for the claimed compositions").

Because conception is a mental act, an inventor's testimony alone is insufficient to prove conception absent corroboration. *NFC Tech., LLC v. Matal*, 871 F.3d 1367, 1371 (Fed. Cir. 2017). "There is no particular formula that an inventor must follow in providing corroboration," which is evaluated under a flexible "rule of reason" that considers "all pertinent evidence." *Singh v. Brake*, 317 F.3d 1334, 1341 (Fed. Cir. 2003). Under that rule, corroborating evidence need not support every limitation exactly as claimed. For instance, in *Unifrax*, the court found conception sufficiently corroborated, even though no document showed conception of the claimed material ranges (e.g., "a dry areal weight of 15 to 50 gsm"), because the documents showed broad testing of elements within the claimed range. 921 F.3d at 1076-78. The court noted that "our case law

does not require that evidence have a source independent of the inventors on every aspect of conception and reduction to practice," because such a rule would be "the antithesis of the rule of reason." *Id*. at 1077 (citation omitted). *But see Jolley*, 308 F.3d at 1323 ("[A] preference for particular subject matter . . . must also be established on the basis of objective evidence.").

A party challenging patent validity has the burden to prove by clear and convincing evidence that an invalidating reference is prior art. *Allergan*, 754 F.3d at 967. However, the burden of production may shift in the course of that determination. *See id.* Thus, where a party makes a prima facie case of invalidity, the burden of production shifts to the patentee to provide evidence and argument supporting an earlier priority date. *Tech. Licensing Corp. v. Videotek, Inc.*, 545 F.3d 1316, 1327 (Fed. Cir. 2008). Once that showing is made, the burden shifts back to the party challenging validity to "convince the court that [the patentee] is not entitled to the benefit of the earlier [priority] date." *Id.* at 1328. The ultimate burden of persuasion—and thus the "risk of decisional uncertainty"—never shifts from the party challenging validity. *Id*. at 1327.[9]

2. Rule 131 Cases

Notwithstanding the clear standard set out above, both parties attempt to import additional requirements from Rule 131 of the Patent and Trademark Office ("PTO"). *See* Opp. at 8:2-11:3; Reply at 9:16-10:10.[10] Rule 131, codified in the federal register, states:

> When any claim of an application or a patent under reexamination is rejected, the applicant or patent owner may submit an appropriate oath or declaration to establish invention of the subject matter of the rejected claim prior to the effective date of the reference or activity on which the rejection is based.

37 C.F.R. § 1.131(a). This rule has been described as a "swearing back" or "swearing behind"

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[9] Novartis argues that Plexxikon has the burden to prove an earlier priority date, but cites only administrative cases for that proposition. *See ATI Techs. ULC v. Iancu*, 920 F.3d 1362, 1370 (Fed. Cir. 2019); *In re Mangum Oil Tools Int'l, Ltd*., 829 F.3d 1364, 1376 (Fed. Cir. 2016).

[10] Plexxikon cites Rule 131 cases to argue that its compounds "antedate" the compounds at issue because its own inventions render the compounds obvious. *See In re Scheiber*, 587 F.2d 59, 61–62 (C.C.P.A. 1978); *In re Schaub*, 537 F.2d 509, 512 (C.C.P.A. 1976). Novartis cites Rule 131 cases to argue that conception of a species does not suffice to establish priority of a genus unless the patentee "considered the invention to be a generic one" and provides a "reasonable basis" to infer generic applicability. *In re Walsh*, 424 F.2d 1105, 1107 (C.C.P.A. 1970); *In re Rainer*, 390 F.2d 771, 774 (C.C.P.A. 1968); *In re DaFano*, 392 F.2d 280, 284 (C.C.P.A. 1968); *In re Clarke*, 356 F.2d 987, 992 (C.C.P.A. 1966).

provision because it allows a patentee to antedate prior art by "swearing" in an affidavit that its invention occurred earlier. *Iancu*, 920 F.3d at 1369. In contrast to modern conception law, the predecessor court to the Federal Circuit required a Rule 131 affidavit to show priority "with respect to only so much of the claimed invention as the references disclose" or "only so much as to render the claimed invention obvious." *See Scheiber*, 587 F.2d at 61-62 (citations omitted). The PTO continues to apply this standard, but the Federal Circuit apparently has not approved it and still requires Rule 131 affidavits to show conception of the "complete and operative invention." *See In re Steed*, 802 F.3d 1311, 1320 (Fed. Cir. 2015).[11]

Neither party establishes that Rule 131 cases apply to the current proceedings, and multiple factors suggest they should not. First, Rule 131 is an administrative rule that, on its face, applies only to reexaminations. Reexamination proceedings do not generally determine priority. *See Slip Track Sys., Inc. v. Metal Lite, Inc.*, 159 F.3d 1337, 1340 (Fed. Cir. 1998). Moreover, courts routinely reject any applicability of PTO proceeding decisions to district court litigation, and vice versa, given the different burdens and presumptions of validity. *See In re Baxter Int'l, Inc.*, 678 F.3d 1357, 1364 (Fed. Cir. 2012) ("[T]he PTO in reexamination proceedings and the court system in patent infringement actions 'take different approaches in determining validity and on the same evidence could correctly come to different conclusions.'") (quoting *Ethicon, Inc. v. Quigg*, 849 F.2d 1422, 1428 (Fed. Cir. 1998)); *In re Swanson*, 540 F.3d 1368, 1377 (Fed. Cir. 2008) ("PTO examination procedures have distinctly different standards, parties, purposes, and outcomes compared to civil litigation.").

Second, the predecessor court to the Federal Circuit stated that "[t]he purpose of filing a 131 affidavit is not to demonstrate prior invention per se, but merely to antedate the effective date of the reference." *In re Eickmeyer*, 602 F.2d 974, 978 (CCPA 1979). Under that standard, the court construed Rule 131 "liberally" and "in one respect contrary to its express terms" in order to assure

[11] In *Steed*, the court stated that "[w]hen the issue of priority concerns antedating of a reference, the applicant is required to demonstrate . . . that the applicant was in possession *of the later claimed invention* before the effective date of the reference." 802 F.3d at 1316 (emphasis added). Nothing in *Steed* suggests the comparative approach urged by the parties here, which makes conception relative to the prior art. Nor do cases arising from district court litigation suggest that anything less than full conception suffices. *See Unifrax*, 921 F.3d at 1075-76 (discussing antedating a reference in litigation); *Taurus*, 726 F.3d at 1322-24 (same).

patentees their rights. *See In re Mulder*, 716 F.2d 1542, 1545-46 (Fed. Cir. 1983). However, it expressly rejected any similarity between this liberal construction and the substantive standards for conception and reduction to practice under 35 U.S.C. § 102(g). *See In re Moore*, 444 F.2d 572, 580 (C.C.P.A. 1971) (characterizing any parallel as "one of convenience rather than of necessity").[12]

Third, even if Rule 131 applied, it might not change the analysis. Each of the cases cited by the parties stems from the seminal decision in *In re Stempel*, 241 F.2d 755 (C.C.P.A. 1957), which held that a patent applicant may overcome a reference as to generic claims by showing priority to the species shown in that reference. The broad language of *Stempel* was later clarified in *In re Tanczyn*, 347 F.2d 830 (C.C.P.A. 1965), which stated:

> We never intended by the language used in Stempel to authorize the overcoming of references by affidavits showing that the applicant had invented, prior to the reference date, a part, some parts, or even a combination of parts, used to create an embodiment of his claimed invention, where the part or parts are not within the scope of the claims being sought, as the species of Stempel shown by the reference was within his generic claims.

Id. at 833; *see Isco Int'l, Inc. v. Conductus, Inc.*, 279 F. Supp. 2d 489, 495 n.3 (D. Del. 2003).

In other words, the Rule 131 cases still require a patentee to show conception of a species of the invention—not some compound outside the claims that merely renders the invention obvious.[13] This interpretation is confirmed by recent decisions that analyze the cases cited by the parties. *See Pernix Ireland Pain DAC v. Alvogen Malta Op. Ltd.*, No. 16-139-WCB, 2018 WL 2225113, at *16 (D.

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[12] *Moore* distinguished interference proceedings under 35 U.S.C. § 102(g)(1), not prior art determinations under 35 U.S.C. § 102(g)(2), but the statutory standard is the same. *Compare* 35 U.S.C. § 102(g)(1) ("another inventor involved [in an interference] establishes . . . that before such person's invention thereof the invention was made by such other inventor and not abandoned, suppressed, or concealed"), *with id.* § 102(g)(2) ("before such person's invention thereof, the invention was made in this country by another inventor who had not abandoned, suppressed, or concealed it").

[13] The Court recognizes contrary authority in *In re Spiller*, where the predecessor court of the Federal Circuit allowed a Rule 131 affidavit that did not show possession of one limitation. 500 F.2d 1170, 1177 (C.C.P.A. 1974). *Spiller* has been described as "plainly inconsistent" with other holdings by that court. R. Carl Moy, 2 Moy's Walker on Patents § 8.134 (4th ed. Dec. 2020); *see In re Goddard*, 2009 WL 2807704 (B.P.A.I. 2009). *Spiller* also appears to have been implicitly overruled by *Burroughs*, which rejected conception based on other inventions that render the claims obvious. *See* 40 F.3d at 1231-32.

Del. May 15, 2018) (interpreting the cited cases to require showing "that the inventors possessed knowledge of the species contained in both the reference and the patent"); *Abbott GMBH & Co., KG v. Centocor Ortho Biotech, Inc.*, 870 F. Supp. 2d 206, 245 (D. Mass. 2012) (same) (finding disputes of fact as to whether patentee invented a claimed species).

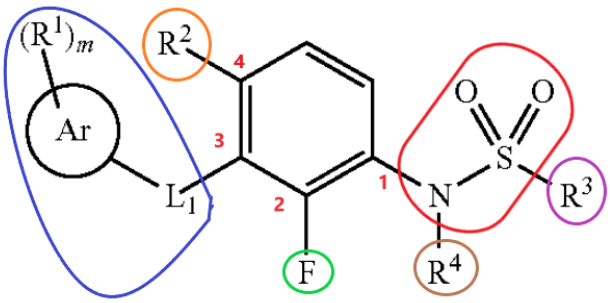
Under *Jolley* and the cases analyzed above, conception of a species may suffice to establish conception for a genus. Rule 131 imposes the same standard, but potentially adds requirements for generic applicability or prior art obviousness. *Pernix*, 2018 WL 2225113, at *14. The Court interprets these additional requirements as persuasive authority, but finds them not binding for the reasons stated above. Accordingly, Rule 131 case law does not directly apply to this litigation.[14]

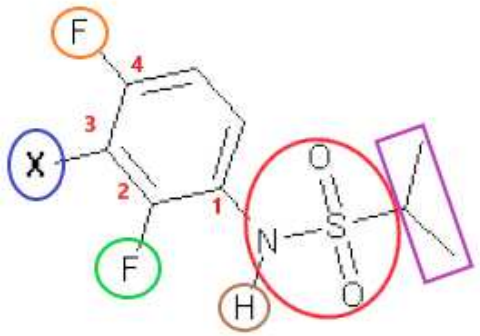
B. Analysis

1. Conception of a Species

Turning to the merits, the Court first considers whether Plexxikon submits sufficient evidence that its inventors conceived a species of the claims before 2007. Plexxikon relies primarily on the March 2005 email to argue that they did. The Court has created the following graphic to illustrate the differences between the email figures and the claimed compounds. *See* Ibrahim Decl. ¶¶ 7-9 (mapping email to claim limitations).

Claim 1 of the Asserted Patents	**March 2005 Email Final Drawing**





[14] For this reason, the Court does not consider whether Plexxikon's synthesis of P-0001, P-0007, and P-0012 compounds render the compounds at issue obvious. There is insufficient evidence that the former compounds fall within the scope of the claims. To the extent that they do, Plexxikon may presumably establish priority based on reduction to practice, regardless of the obviousness of other compounds. *See Unifrax*, 921 F.3d at 1075.

As shown above, Novartis does not dispute that the email shows a phenyl ring attached to a sulfonamide at the "1" position and a fluorine in the "2" position.[15] *See* MSJ at 7:2-28; *see also* Dkt. No. 393-39 ("Baran Reply Decl.") ¶ 2. Novartis also does not dispute that the drawings show a hydrogen as R^4. *Id.* Novartis argues, however, that the email does not show conception of the monocyclic heteroaryl group, which is shown generically as "X," or the remaining variables. The issue thus centers on whether the evidence "fairly suggests" appropriate values for those elements. *Jolley*, 308 F.3d at 1323.

With respect to "X," the inventors testified that they conceived "X" to include "any moiety that could interact with the hinge region of the kinase." Metzker Report ¶ 32 (citing testimony). Plexxikon proffers declarations attesting that this includes all groups corresponding to L_1-Ar-$(R^1)_m$. Ibrahim Decl. ¶ 7; Dkt. No. 218 ("Spevak Decl.") ¶ 6; Dkt. No. 220 ("Zhang Decl.") ¶ 8.[16] Plexxikon submits corroborating evidence that the inventors considered elements within the scope of the claims to be particularly desirable. For instance, the March 2005 email states that "Chao's first suggestion at X is a Pyr"—a pyridine—which Dr. Metzker states is a monocyclic heteroaryl. *See* Metzker Report ¶¶ 44-46. Although Dr. Metzker does not directly opine that the resulting compound satisfies the claims, Novartis' expert, Dr. Baran, does not dispute that a pyridine satisfies the claimed Ar group. *See* Baran Reply Decl.[17] Moreover, with respect to the linker L_1, Dr. Metzker points out that the fourth bullet point of email states that the ketone linker "does not need to stay," which may suggest a direct bond. *See* Metzker Report ¶ 46.

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[15] Novartis argues that Plexxikon's "email" theory was not disclosed in discovery. The Court disagrees. Plexxikon's interrogatory responses disclosed the exact figures that it now relies on to support conception. *See* Dkt. No. 393-37 at 12-14.

[16] The breadth of the purported conception of "X" may cut both ways. In *Jolley*, the court suggested that an overgeneralized disclosure, such as "esters," would not show conception of the claimed ester groups with particularity, even though they would be encompassed within the disclosure. *See* 308 F.3d at 1322. Thus, it is not enough that X encompasses the claimed groups: the evidence must show a "preference" or "desirability" of the claimed groups compared to other moieties that "interact with the hinge region of the kinase" (or that the class of such moieties is sufficiently small, comparable to a "two ester" group). *See id.* at 1322-23, 1325.

[17] Novartis argues that the March 2005 email must be interpreted from the perspective of one of ordinary skill in the art. The inventors in this case (as well as Dr. Baran) appear to have such skill.

With respect to the variables, Dr. Baran does not apparently dispute that the email shows elements that correspond to the limitations.[18] For instance, with respect to R^2, the email shows a fluorine, which Dr. Baran concedes satisfies the claims, even if it does not show possession of other halogens or a hydrogen. Baran Reply Decl. ¶ 2 (sub-¶ 50). With respect to R^3, Dr. Baran similarly does not dispute that the five "Z" groups satisfy the element, and opines only that they do not show possession of the trillions of other allowed moieties. *Id.* ¶ 2 (sub-¶ 51). Neither party addresses the R^1 or *m* variables. Accordingly, a reasonable jury could find that the March 2005 email shows conception of species that expressly meet most claim limitations and that show a "preference" for X groups falling within the scope of the claims.

Novartis separately argues that even if Plexxikon conceived the structure, it lacked an operative method for making the compounds where L_1 is a direct bond. *See Oka*, 849 F.3d at 583. Plexxikon proffers expert opinion, however, that methods for doing so were a matter of "routine knowledge," which obviates the need for such evidence. *Id.*; Dkt. No. 399-5 ("Winkler Report") ¶¶ 124-29, 201.[19] Although Novartis suggests that these methods may not be sufficient for *all* claimed compounds, *see* Dkt. No. 393-4 ("Bridges Depo.") at 99:11-101:10, it does not tie this argument to the March 2005 email—i.e., it does not show that the method was insufficient for the five species shown in the email. *See Oka*, 849 F.2d at 584 (considering this requirement on a species-by-species basis). This evidence therefore does not defeat Plexxikon's showing.

Accordingly, the Court finds that Plexxikon meets its burden of production to show conception of a species by proffering the March 2005 email, and Novartis has not shown the evidence to be insufficient for this purpose.

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[18] Novartis relies heavily on a purported admission by Dr. Metzker that Plexxikon conceived the "scaffold" in 2005. Metzker Depo. at 192:15-23. The Court agrees with Plexxikon that this statement does not unambiguously suggest that other elements were not conceived.

[19] Novartis' cited authorities are inapposite. *Creative Compounds, LLC v. Starmark Laboratories*, 651 F.3d 1303, 1313 (Fed. Cir. 2011), involved a lack of expert support, and *Falana v. Kent State University*, 669 F.3d 1349, 1358 (Fed. Cir. 2012), expressly involved a "method that requires more than exercise of ordinary skill."

2. Priority for the Genus

Novartis argues, however, that conception of a species cannot show conception of the claimed genus in this case. Novartis cites Rule 131 reduction to practice cases stemming from *Clarke*, 356 F.2d at 992, to argue that the evidence must also suggest "generic applicability." *See DaFano*, 392 F.2d at 284. In *Clarke*, the court found that reduction to practice of two species having methyl and phenyl R groups was insufficient to establish priority for a genus where R could be a large number of alternative elements. *See* 356 F.2d at 988-89, 992-93. Contrary to Novartis' suggestion, *Clarke* expressly recognizes that "in an appropriate case[,] a single species could be sufficient" for antedation, even for broad claims. *Id*. at 992; *see id*. ("Claims do define 'the invention,' but in a given case may be of varying scope while still defining the same invention."). However, in that case, the inventors themselves did not appear to consider any elements besides methyl to be appropriate R groups having equivalent properties. *Id*. at 992-93.[20]

Although *Clarke* is a reduction to practice and Rule 131 case, its basic principle accords with modern conception law. As explained above, conception must be "complete" to establish priority, and this requirement is defeated where "extensive research or experimentation" is required to reduce the invention to practice. *Dawson*, 710 F.3d at 1352. Moreover, excessive experimentation, particularly "experimental failures," could "undermine[] the specificity of the inventor's idea" and thus show a lack of definiteness. *Burroughs*, 40 F.3d at 1229. The Court therefore agrees that where more than "ordinary skill" would be required to determine the full scope of the claims or the equivalence of alternative elements, conception is not established. *See Dawson*, 710 F.3d at 1353 (no conception without definite idea of a concentration range).

Novartis has not, however, shown this to be the case here. According to Dr. Metzker, the key feature of the claimed compounds that distinguishes it from other B-Raf inhibitors lies in the

[20] Specifically, the inventors did not consider the phenyl species to be part of the invention, which left only the methyl species to show priority. *Clarke*, 356 F.2d at 993. Although methyl is "structurally equivalent" to other alkyls, the evidence did not show the inventors considered other alkyls to be equivalent. *Id*. at 992-93. The court noted, however, that reduction to practice of "diverse" species could support priority by showing that the invention is "relatively independent of the nature of the R substituent." *Id*. at 993.

use of a monocyclic heteroaryl, in place of an azaindole, for the scaffold. *See* Metzker Report ¶¶ 26-28. Plexxikon introduces evidence that the inventors conceived of this feature in March 2005, including, for example, in a "weekly summary report" that proposed "to use [a] single ring to replace the azaindole." *Id.* ¶ 28. This evidence plausibly suggests the inventors had a "specific, settled idea" and "particular solution" at the time. *Dawson*, 710 F.3d at 1352; *see also Amgen*, 927 F.2d at 1206 (requiring conception to define a compound through "whatever characteristics sufficiently distinguish it"). As for the other variables, Novartis has not shown that more than ordinary skill would be required to determine the equivalence of additional halogens and hydrogens for R^2 or other lower alkyl or aryl groups for R^3.

Accordingly, on this record, the Court cannot conclude that Plexxikon's conception of a species is insufficient to show conception of the claimed genus. *Cf. DaFano*, 392 F.2d at 284 (finding of single species sufficient for antedation where the inventors appreciated that "other resin-soluble copper salts would behave similarly").[21] Novartis' motion is therefore denied.

IV. CONCLUSION

For the foregoing reasons, the Court **DENIES** Novartis' motion for summary judgment of anticipation based on remaining disputes over the priority date of the Asserted Patents.

IT IS SO ORDERED.

Dated: 3/15/2021

HAYWOOD S. GILLIAM, JR.
United States District Judge

[21] Plexxikon relies on *Takeda Pharmaceutical Co. v. Two Pharmaceuticals, Inc.*, to argue that conception of a species suffices. 87 F. Supp. 3d 1263 (N.D. Cal. 2015). There, Judge Koh cited *Jolley* to deny summary judgment where the claims required "at least 10% more" of an element, and the evidence showed conception of "at least 100% more." *Id.* at 1276-77. As explained in this Order, the Court agrees that conception of a species may establish priority for a genus in appropriate circumstances. *See Jolley*, 308 F.3d at 1322 n.2. Here, the Court notes only that this may not be the case where "extensive experimentation" belonging to the department of "creation," rather than "construction," would be required to determine the full scope of the claims. *See Dawson*, 710 F.3d at 1352.