Trials@uspto.gov
Tel: 571-272-7822

Paper No. 7
Entered: June 20, 2018

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

INITIATIVE FOR MEDICINES, ACCESS & KNOWLEDGE (I-MAK), INC.,
Petitioner

v.

GILEAD PHARMASSET LLC
Patent Owner

Case IPR2018-00211
Patent 9,393,256 B2

Before LORA M. GREEN, GRACE KARAFFA OBERMANN, and RICHARD J. SMITH, *Administrative Patent Judges.*

SMITH, *Administrative Patent Judge*.

DECISION
Denying Institution of *Inter Partes* Review
35 U.S.C. § 314(a)

I. INTRODUCTION

Initiative for Medicines, Access & Knowledge (I-MAK), Inc. ("Petitioner") filed a Petition (Paper 2, "Pet.") to institute an *inter partes* review of claims 1–4 of U.S. Patent 9,393,256 B2 (the "'256 patent"). 35 U.S.C. § 311. Gilead Pharmasset LLC ("Patent Owner") filed a Preliminary Response to the Petition. Paper 6 ("Prelim. Resp.").

We have authority to determine whether to institute an *inter partes* review under 35 U.S.C. § 314. To institute an *inter partes* review, we must determine that the information presented in the Petition shows "a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition." 35 U.S.C. § 314(a). For the reasons set forth below, we conclude that Petitioner has not established a reasonable likelihood that it would prevail in showing the unpatentability of any challenged claim of the '256 patent. Therefore, we do not institute an *inter partes* review for any challenged claim of the '256 patent.

A. Related Proceedings

Petitioner has also filed two petitions for *inter partes* review of U.S. Patent No. 7,964,580 (Case Nos. IPR2018-00119 and IPR2018-00120); two petitions for *inter partes* review of U.S. Patent No. 8,334,270 (Case Nos. IPR2018-00121 and IPR2018-00122); one petition for *inter partes* review of U.S. Patent No. 7,429,572 (Case No. IPR2018-00103); one petition for *inter partes* review of U.S. Patent No. 8,633,309 (Case No. IPR2018-00125); and one petition for *inter partes* review of U.S. Patent No. 9,284,342 (Case No. IPR2018-00126). Paper 3, 2.

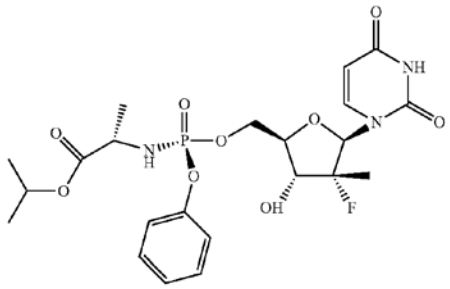
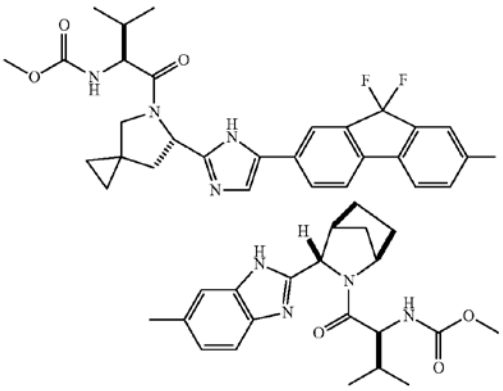
B. The '256 Patent

The '256 patent relates to compositions and therapeutic methods useful for treating viral infections, such as hepatitis C virus (HCV). Ex. 1001, 2:63–65. For

example, the ’256 patent discloses a method of treating an HCV infection in a human comprising administering two or more compounds selected from a group that includes Compound 6 and Compound 10 (*see* claim 1 below). *Id.* at 3:11–15; 139: l. 6–140: l. 21. The ’256 patent indicates that compound 10 is an NS5B nucleoside prodrug and compound 6 is an NS5A inhibitor. *Id.* at 133:55–61; 134:24–35. The ’256 patent also states that the disclosed methods “are beneficial because they provide treatments for a wide range of HCV genotypes and . . . cause fewer or less serious side effects than current HCV therapies.” *Id.* at 4:55–58.

C. Illustrative Claim

Petitioner challenges claims 1–4 of the ’256 patent, of which claim 1 is the only independent claim. Claim 1 is reproduced below:

> 1. A method of treating an HCV infection in a human, comprising administering to the human: 1) compound 10 having the structure:
>
> 
>
> or a pharmaceutically acceptable salt thereof and 2) compound 6 having the structure:
>
> 

or a pharmaceutically acceptable salt thereof, wherein the method does not include administering interferon.

Ex. 1001, 139: l. 6–140: l. 21.

Claims 2–4 depend directly from claim 1.[1] *Id.* at 140:22–27.

D. The Asserted Grounds of Unpatentability

Petitioner contends that the challenged claims are unpatentable under 35 U.S.C. §§ 102 and 103 based on the following grounds. Pet. 3.

Reference[s]	**Basis**	**Claims challenged**
Legrand-Abravanel[2]	§§ 102(b) and 103(a)	1–4
Delaney[3]	§ 102(e)	1–4
Sofia '634[4] and Guo[5]	§103(a)	1–4

Petitioner also relies on the Declaration of Joseph M. Fortunak, Ph.D. Ex. 1012.

[1] For example, claim 4 recites "[t]he method of claim 1 further comprising administering ribavirin to the human." Ex. 1001, 140:26–27.
[2] F. Legrand-Abravanel et al., *New NS5B polymerase inhibitors for hepatitis C*, Expert Opinion Investigational Drugs 19(8), 963–75 (2010) ("Legrand-Abravanel"). Ex. 1005.
[3] Delaney, IV et al., US 2011/0306541 A1, published Dec. 15, 2011 ("Delaney"). Ex. 1010.
[4] Sofia et al., WO 2008/121634 A2, published Oct. 9, 2008 ("Sofia '634"). Ex. 1004.
[5] Guo et al., WO 2010/132601 A1, published Nov. 18, 2010 ("Guo"). Ex. 1011.

II. ANALYSIS

A. Person of Ordinary Skill in the Art

Petitioner asserts that a person of ordinary skill in the art would have either "(1) a Ph.D. in chemistry or a closely related field with some experience in an academic or industrial laboratory focusing on drug discovery or development, and would also have some familiarity with antiviral drugs and their design and mechanism of action," or "(2) a Bachelor's or Master's degree in chemistry or a closely related field with significant experience in an academic or industrial laboratory focusing on drug discovery and/or development for the treatment of viral diseases." Pet. 6.

Patent Owner "takes no position on Petitioner's proposed definition of a" person of ordinary skill in the art ("POSA"), but indicates that "a POSA also would include, or would have access to, an individual with an M.D. who has experience developing or researching antiviral treatment methods, such as treatment for HCV, or experience treating viral infections such as HCV." Prelim. Resp. 10.

On this record, for purposes of this Decision, we accept Petitioner's definition without the clarification advanced by Patent Owner. Specifically, based in the information presented, we find that a person of ordinary skill in the art would have either (1) a Ph.D. in chemistry or a closely related field with some experience in an academic or industrial laboratory focusing on drug discovery or development, and would also have some familiarity with antiviral drugs and their design and mechanism of action, or (2) a Bachelor's or Master's degree in chemistry or a closely related field with significant experience in an academic or industrial laboratory focusing on drug discovery and/or development for the treatment of viral diseases. On that point, however, we agree with Patent Owner

that the outcome of this Decision would be the same "regardless of which definition applies." Prelim. Resp. 10.

We further note that the prior art itself demonstrates the level of skill in the art at the time of the invention. *See Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001) (explaining that specific findings regarding ordinary skill level are not required "where the prior art itself reflects an appropriate level and a need for testimony is not shown") (quoting *Litton Indus. Prods., Inc. v. Solid State Sys. Corp.*, 755 F.2d 158, 163 (Fed. Cir. 1985)).

B. Claim Construction

In an *inter partes* review, the Board interprets claim terms in an unexpired patent according to the broadest reasonable construction in light of the specification of the patent in which they appear. 37 C.F.R. § 100(b); *Cuozzo Speed Techs., LLC v. Lee*, 136 S. Ct. 2131, 2142 (2016) (affirming applicability of broadest reasonable construction standard to *inter partes* review proceedings). Under that standard, and absent any special definitions, we generally give claim terms their ordinary and customary meaning, as would be understood by one of ordinary skill in the art at the time of the invention. *See In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007). Any special definitions for claim terms must be set forth with reasonable clarity, deliberateness, and precision. *See In re Paulsen*, 30 F.3d 1475, 1480 (Fed. Cir. 1994).

Neither Petitioner nor Patent Owner raises any claim construction issues or proposed constructions, and both acknowledge that the claim terms should be given their ordinary and customary meaning. Pet. 6–7; Prelim. Resp. 10–11. Accordingly, we apply the ordinary and customary meaning to the claims at issue. *See Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co. Ltd.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) ("[W]e need only construe terms 'that are in controversy,

and only to the extent necessary to resolve the controversy'" (quoting *Vivid Techs., Inc. v. Am. Sci. & Eng'g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999))).

C. Principles of Law

Anticipation requires that "each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *In re Robertson*, 169 F.3d 743, 745 (Fed. Cir. 1999) (citation omitted). "To establish inherency, the extrinsic evidence 'must make clear that the missing descriptive matter is necessarily present in the thing described in the reference.'" *Id.* (quoting *Continental Can Co. v. Monsanto Co.*, 948 F.2d 1264, 1268 (Fed. Cir. 1991)).

Obviousness "requires a suggestion of all limitations in a claim." *CFMT, Inc. v. Yieldup Int'l Corp*., 349 F.3d 1333, 1342 (Fed. Cir. 2003) (citing *In re Royka*, 490 F.2d 981, 985 (CCPA 1974)). "In determining whether obviousness is established by combining the teachings of the prior art, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art." *In re GPAC Inc.*, 57 F.3d 1573, 1581 (Fed. Cir. 1995) (internal quotations omitted).

"An obviousness determination requires finding both 'that a skilled artisan would have been motivated to combine the teachings of the prior art . . . and that the skilled artisan would have had a reasonable expectation of success in doing so.'" *In re Stepan Co.*, 868 F.3d 1342, 1345–46 (Fed. Cir. 2017) (quoting *Intelligent Bio-Sys., Inc. v. Illumina Cambridge Ltd.*, 821 F.3d 1359, 1367–68 (Fed. Cir. 2016)).

A conclusion of obviousness "cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." *KSR Int'l Co. v.*

Teleflex Inc., 550 U.S. 398, 418 (2007) (quoting *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006)).

We analyze the asserted grounds of unpatentability in accordance with the above-stated principles.

D. Anticipation by and obviousness over Legrand-Abravanel

Petitioner asserts that claims 1–4 are anticipated by, and obvious over, Legrand-Abravanel. Pet. 19–22. On this record, we determine that Petitioner has not established a reasonable likelihood that it would prevail in showing that any of claims 1–4 are anticipated by, or obvious over, Legrand-Abravanel.

1. Legrand-Abravanel (Ex. 1005)

Legrand-Abravanel relates to new NS5B polymerase inhibitors for hepatitis C, and states that "NS5B polymerase inhibitors will form an integral part of more effective anti-HCV therapy, in combination with interferon or with other directly acting antiviral agents." Ex. 1005, 1. Legrand-Abravanel identifies a number of new inhibitors of the HCV polymerase by drug name, including PSI-7851. *Id.* at 3 (Table 1). Legrand-Abravanel also states that "[s]everal new antiviral compounds are in development and could be associated with polymerase inhibitors," and identifies "NS5A inhibitors" among several classes of compounds. *Id.* at 9.

2. Analysis

Petitioner argues that Compound 10 was already known and that Legrand-Abravanel "discloses Compound 10 when referring to the compound names PSI-7851 and PSI-7977." Pet. 21. Furthermore, Petitioner argues that "NS5A inhibitors (the class of compound which Compound 6 falls within) were also known to be useful for treating HCV in combination with other antiviral agents

such as nucleotide inhibitors of NS5B polymerase. See Serrano-Wu (EX1007), Simmen (EX1008) and Pockros (EX1009); EX1012 ¶71."[6] Pet. 21.

Petitioner further asserts that Legrand Abravanel "taught that NS5B polymerase inhibitors will form an integral part of more effective anti-HCV therapy, in combination with interferon *or* with other directly acting antiviral agents," and "highlighted that nucleos(t)ide inhibitors PS-7851and PSI-7977 (Compound 10 in the '256 patent) had been selected for further clinical development." *Id.* at 21–22, citing Ex. 1005, 1, 4–5 and Ex. 1012 ¶¶ 72, 73.

Based on the foregoing, Petitioner concludes that

> due to the resistant mutations of HCV to nucleos(tide) analogues, Legrand-Abravanel taught that combination therapy with small molecule inhibitors and without IFN (interferon) was the ultimate goal and should be studied early with innovative drug development approaches. EX1012 ¶74. Legrand-Abravanel further suggested that several new antiviral compounds were in development and could be associated with polymerase inhibitors, including NS5A inhibitors. EX1005 at 9; EX1012 ¶74.
>
> Taking into account the background knowledge in the art and the teachings of Legrand-Abravanel, claims 1-4 of '256 were anticipated and obvious. EX1012 ¶75. In particular, Legrand-Abravanel taught, or at least suggested, combination therapies to treat HCV without administering interferon, and which may or may not include ribavirin. *Id*. Moreover, Legrand-Abravanel inherently taught the combination of NS5A inhibitors, such as Compound 6, with polymerase inhibitors such as Compound 10. *Id*. Legrand-Abravanel, therefore, anticipated claims 1-4 of the '256 patent, or at minimum rendered them obvious. *Id*.

Pet. 22.

[6] Citations to Exhibit 1012 are to paragraphs of the Fortunak Declaration that restate the allegations in the Petition without citation to any additional evidentiary support.

Patent Owner responds that Legrand-Abravanel does not expressly or inherently disclose compounds 6 and 10, or their combination without interferon (Prelim. Resp. 18–24), and that Petitioner "does not address key claim limitations missing from the prior art and provides no reason, motivation, or reasonable expectation of success in arriving at the claimed interferon-free combination therapy for HCV" (*id.* at 24–32).

We separately address Petitioner's challenges based on anticipation and obviousness.

Anticipation

Petitioner's anticipation challenge is based on the contention that Legrand-Abravanel's disclosure of compounds named PS-7851and PSI-7977 is a disclosure of claimed compound 10 (a nucleotide inhibitor of NS5B polymerase), and that the disclosed NS5B polymerase inhibitors may be combined with an NS5A inhibitor, the class of compounds that includes compound 6, without administering interferon. Pet. 21–22. Moreover, according to Petitioner, "Legrand-Abravanel inherently taught the combination of NS5A inhibitors, such as Compound 6, with polymerase inhibitors such as Compound 10." *Id.* at 22.

Assuming that Legrand-Abravanel discloses the combination of an NS5B inhibitor, such as compound 10, with another antiviral agent (without interferon), the issue remains whether Legrand-Abravanel discloses compound 6 as that other antiviral agent, as well as disclosing the combination of compound 6 with compound 10. *See Robertson*, 169 F.3d at 745. Petitioner supports its assertion that Legrand-Abravanel discloses compound 6 by asserting that compound 6 is an NS5A inhibitor and pointing to the statement in Legrand-Abravanel that "[s]everal new antiviral compounds are in development and could be associated with polymerase inhibitors: NS3 protease inhibitors [], NS3 helicase inhibitors [], p7

inhibitors [], NS5A inhibitors [], cyclophilin inhibitors [], and immunomodulators []. This represents a huge field for investigation." Ex. 1005, 9 (cited at Pet. 22).

Patent Owner argues that to establish anticipation of a species by a generic disclosure in the prior art, a POSA must "'at once envisage' the claimed arrangement or combination" upon review of that prior art. Prelim. Resp. 19 (citing *Kennametal, Inc. v. Ingersoll Cutting Tool Co.*, 780 F.3d 1376, 1381 (Fed. Cir. 2015) (citation omitted)). Patent Owner further contends that a POSA could not "at once envisage" compound 6 from the disclosure of Legrand-Abravanel. *Id.*

"[A] disclosed genus may anticipate a claimed species when the genus is so small that one of ordinary skill in the art would 'at once envisage each member of this limited class.'" *Wasica Fin. GmbH v. Continental Auto. Sys., Inc.*, 853 F.3d 1272, 1285 (Fed. Cir. 2017) (quoting *AbbVie Inc. v. Mathilda & Terence Kennedy Inst. of Rheumatology Tr.*, 764 F.3d 1366, 1379 (Fed. Cir. 2014)). Here, Legrand-Abravanel discloses a genus comprising the combination of an NS5B inhibitor (*such as* compound 10) and a compound within a group of classes of compounds, that mentions NS5A inhibitors as one class of compounds. Ex. 1005, 9.

Petitioner states that "Legrand-Abravanel inherently taught the combination of NS5A inhibitors, such as Compound 6, with polymerase inhibitors such as Compound 10" (Pet. 22), but does not address whether or how a person of ordinary skill in the art would at once envisage each member of the genus disclosed by Legrand-Abravanel, including the combination of compound 10 and compound 6 without interferon. For example, Petitioner does not identify the size of any genus or the specific species that fall with that genus, other than the conclusory statement that Legrand-Abravanel "inherently" taught the combination of compounds 6 and 10. That is not sufficient. *See Wasica*, 853 F.3d 1285–86 (discussing the failure of the IPR petition to set forth the factual components regarding the genus/species

anticipation analysis). Furthermore, we agree with Patent Owner that the mere mention of "NS5A inhibitors" in Legrand-Abravanel does not establish that a POSA would at once envisage compound 6 or that compound 6 is "necessarily present" in Legrand-Abravanel. Prelim. Resp. 19–20; *see Robertson*, 169 F.3d at 745. Moreover, "anticipation is not proven by 'multiple, distinct teachings that the artisan might somehow combine to achieve the claimed invention.'" *Microsoft Corp. v. Biscotti, Inc.*, 878 F.3d 1052, 1069 (Fed. Cir. 2017) (affirming that the quoted statement by the Board was correct). Petitioner, thus, fails to establish sufficiently that Legrand-Abravanel discloses compound 6, or the combination of compound 6 with compound 10.

Therefore, Petitioner fails to show sufficiently that Legrand-Abravanel discloses each and every element of claim 1, either expressly or inherently. *See Robertson*, 169 F.3d at 745. Accordingly, we determine that Petitioner has not shown a reasonable likelihood that it would prevail on its assertion that claim 1 (and dependent claims 2–4, which include the limitations of claim 1) are anticipated by Legrand-Abravanel.

Obviousness

Petitioner relies on the same arguments advanced in connection with the anticipation challenge for the challenge of claims 1–4 as obvious over Legrand-Abravanel. Pet. 19–22. As to specific statements regarding obviousness based on Legrand-Abravanel, Petitioner argues that "[c]laims 1–4 were also obvious over Legrand-Abravanel because a POSA would have been motivated to take the teachings in Legrand-Abravanel and arrive at the combination of anti-viral agents for treating HCV claimed in the '256 patent," "claims 1–4 of '256 were . . . obvious," and "Legrand-Abravanel . . . at minimum rendered [claims 1–4] obvious." Pet. 19–20, 22. The Petition also includes an introductory paragraph

prior to addressing the alleged grounds of unpatentability wherein Petitioner states that "a POSA would have been motivated to modify the references as discussed below and had a reasonable expectation of success of arriving at the claims of the '256 patent." Pet. 19. That sentence cites to a paragraph of the Fortunak Declaration which repeats the same statement without citing any evidentiary support. *See* Ex. 1012 ¶ 66.

Patent Owner argues, in part, that "Petitioner's tacked-on obviousness challenge relies on conclusory statements, rather than any actual obviousness analysis, and fails to show why a POSA would have arrived at the claimed interferon-free combination from Legrand-Abravanel's teachings, with a reasonable expectation of success." Prelim. Resp. 17. In further regard to the reasonable expectation of success requirement, Patent Owner argues that "Legrand-Abravanel only generally suggests thousands of possible combinations to explore, without any teaching or guidance as to which one, if any, would result in a successful HCV treatment." *Id.* at 29.

Among other requirements, an obviousness determination requires a showing that a skilled artisan "would have had a reasonable expectation of success" in combining the teachings of the prior art.[7] *Stepan,* 868 F.3d at 1346. Moreover, this requirement refers to whether the skilled artisan would have had a reasonable expectation of success in combining the teachings of the prior art "to achieve the claimed invention." *Intelligent Bio-Sys.,* 821 F.3d at 1367–68 (citing cases).

[7] The requirement to establish a reasonable expectation of success is also applicable where there is a single prior art reference. *Stepan,* 868 F.3d at 1346, n1.

Here, Petitioner provides no analysis of the reasonable expectation requirement, and relies solely on conclusory statements that are insufficient to establish obviousness. *See KSR*, 550 U.S. at 418. The argument that "a POSA would have been motivated to take the teachings in Legrand-Abravanel and arrive at the combination of anti-viral agents for treating HCV claimed in the '256 patent" (Pet. 19–20) is not sufficient because reasonable expectation of success and motivation to combine are two different legal concepts. *See Intelligent Bio-Sys.*, 821 F.3d at 1367. Furthermore, we find that Legrand-Abravenel's statement that "[s]everal new antiviral compounds are in development and could be associated with polymerase inhibitors," followed by a list of multiple *classes* of compounds and the statement "[t]his represents a huge field for investigation," teaches (at most) a general approach and guidance to a field of experimentation that is thus insufficient to establish a reasonable expectation of success. *See Medichem, S.A. v. Rolabo, S.L.*, 437 F.3d 1157, 1165 (Fed. Cir. 2006) ("prior art fails to provide the requisite 'reasonable expectation' of success where it teaches merely to pursue a 'general approach that seemed to be a promising field of experimentation, where the prior art gave only general guidance as to the particular form of the claimed invention or how to achieve it.'") (quoting *In re O'Farrell*, 853 F.2d 894, 903 (Fed. Cir. 1988)).

On this record, we find that Petitioner has failed to show sufficiently whether or why a skilled artisan would have had a reasonable expectation of success in combining the teachings of Legrand-Abravanel to achieve the invention of claim 1 of the '256 patent. Accordingly, we determine that Petitioner has not shown a reasonable likelihood that it would prevail on its assertion that claim 1, and, thus, dependent claims 2–4, which include the limitations of claim 1, are unpatentable as obvious over Legrand-Abravanel. *See In re Fine*, 837 F.2d 1071,

1076 (Fed. Cir. 1988) ("Dependent claims are nonobvious under section 103 if the independent claims from which they depend are nonobvious.").

E. Anticipation by Delaney

Petitioner contends that claims 1–4 are anticipated by Delaney. Pet. 22–26. On this record, we determine that Petitioner has not established a reasonable likelihood that it would prevail in showing that any of claims 1–4 are anticipated by Delaney.

1. Delaney (Ex. 1010)

Delaney teaches "a dosing regimen for the treatment of HCV comprising: administering one or more anti-HCV compound or a pharmaceutically acceptable salt thereof; and ribavirin, but not one or more interferon." Ex. 1010 ¶ 12. Delaney further teaches that

> non-limiting examples of suitable combinations include combinations of one or more compounds with one or more additional therapeutic for HCV treatment including HCV NS3 protease inhibitors, alpha-glucosidase 1 inhibitors, hepatoprotectants, nucleoside or nucleotide inhibitors of HCV NS5B polymerase, non-nucleoside inhibitors of HCV NS5B polymerase, HCV NS5A inhibitors, TLR-7 agonists, cyclophillin inhibitors, HCV IRES inhibitors, pharmacokinetic enhancers, as well as other drugs for treating HCV.

Id. ¶ 74. Delaney specifically identifies PSI-7851 and PSI-7977 among a list of compounds that may be included in those groups of compounds. *Id.* Delaney discloses several examples of its anti-HCV compounds, including compound 16, which corresponds to compound 6 as claimed. *Id.* at 49; Prelim. Resp. 34. Delaney was cited during prosecution of the '256 patent. Ex. 1001, 3.

2. Analysis

Petitioner argues that compound 10 was already known, and that "Delaney

specifically taught that one or more of its compounds may be combined with one or more compounds selected from a group including the nucleos(t)ide inhibitors of HCV NS5B polymerase, PSI-7851 and PSI-7977 (Compound 10 in '256)." Pet. 25, citing Ex. 1010 ¶¶ 74, 75 and Ex. 1012 ¶82.[8] Petitioner also argues that "one of the compounds taught in Delaney that could be combined with PSI-7851 or PSI-7977 is [Compound 6]." *Id.* at 25–26. Petitioner concludes that:

> Delaney thus taught the combination of Compound 10 with Compound 6 wherein the dosage regimen for the method of treatment of HCV did not include interferon, but could include the administration of ribavirin. EX1012 ¶84. Delaney further taught non-limited examples of suitable combinations included combinations of one or more compounds with one or more additional therapeutic [agents] for HCV treatment including nucleos(t)ide inhibitors of HCV NS5B polymerase and NS5A inhibitors, but which implicitly could exclude ribavirin. *Id*. Therefore, Delaney anticipated claims 1-4 of the '256 patent. *Id*.

Id. at 26.

Patent Owner asserts that "Delaney does not disclose the specific combination of compounds 6 and 10 as claimed," and reasserts its argument, advanced with respect to Legrand-Abravanel, that a patent challenger must prove that a POSA would "at once envisage" the claimed arrangement or combination for a generic disclosure in the prior art to anticipate a specific combination. Prelim. Resp. 32–36.

Our analysis with respect to the anticipation challenge based on Legrand-Abravanel is equally applicable here, and we adopt that analysis as to the

[8] As stated above in connection with the challenge based on Legrand-Abravanel, all of the citations to Ex. 1012 are to paragraphs of the Fortunak Declaration that restate the allegations in the Petition without citation to any additional evidentiary support.

anticipation challenge based on Delaney. Although Petitioner describes Delaney's broad generic disclosure of numerous combinations of compounds (*such as* compound 6) with other compounds, Petitioner does not explain whether or how a person of ordinary skill would at once envisage each member of that large genus, including the combination of compound 10 and compound 6 without interferon. *See Wasica*, 853 F.3d 1285–86. Rather, Petitioner simply concludes that "Delaney . . . taught the combination of Compound 10 with Compound 6 . . . [that] did not include interferon." Pet. 26. That bare argument is not sufficient to establish anticipation. *See Microsoft*, 878 F.3d at 1069.

Thus, Petitioner fails to show sufficiently that Delaney discloses each and every element of claim 1, either expressly or inherently. *See Robertson*, 169 F.3d at 745. Accordingly, we determine that Petitioner has not shown a reasonable likelihood that it would prevail on its assertion that claim 1 (and dependent claims 2–4, which include the limitations of claim 1) are anticipated by Delaney.

F. Obviousness over Sofia '634 and Guo

Petitioner contends that claims 1–4 are obvious over Sofia '634 and Guo. Pet. 26–30. On this record, we determine that Petitioner has not established a reasonable likelihood that it would prevail in showing that any of claims 1–4 are obvious over Sofia '634 and Guo.

1. Sofia '634 (Ex. 1004)

Sofia '634 describes nucleoside phosphoramidates and their use as agents for treating viral diseases, such as hepatitis C virus (HCV) infection. Ex. 1004, 2:15–21. For example, compound 25 of Sofia '634 is claimed compound 10. *Id.* at 696; Prelim. Resp. 15. Sofia '634 teaches a method of treatment comprising administering a described nucleoside phosphoramidate and another antiviral agent.

Id. at 666. Sofia '634 was cited during prosecution of the '256 patent. Ex. 1001, 4.

2. Guo (Ex. 1011)

Guo teaches "pharmaceutical compositions comprising a compound of the present invention . . . in combination with at least one additional therapeutic agent selected from the group consisting of" an extensive list of compounds that includes PSI-6130. Ex. 1011, 29. One of the NS5A inhibitor compounds taught by Guo is Compound 6. *Id.* at 673, 984. Guo was cited during prosecution of the '256 patent. Ex. 1001, 4.

3. Analysis

Petitioner argues that Sofia '634 taught claimed compound 10, that nucleotide NS5B polymerase inhibitors "could be directed to a method of treatment in combination with another antiviral agent," and that examples of another antiviral agent included NS5A inhibitors. Pet. 28. Petitioner also argues that Guo taught NS5A inhibitor compounds, including claimed compound 6, and that compounds of its invention could be combined with nucleos(t)ide inhibitors of HCV NS5B polymerase, such as PSI-6130. *Id.* at 29. Petitioner concludes that:

> A POSA would have been motivated by the teachings of Sofia '634 and Guo, along with the existing background knowledge in the art, to combine the respective compounds claimed therein for treating HCV. EX1012 ¶94. A POSA would have also been motivated to test such compound combinations with or without an interferon and ribavirin for the purpose of assessing antiviral effectiveness and any viral resistance. *Id*. Accordingly, given the extensive knowledge in the art around direct-acting antiviral compounds for treating HCV, and the teachings of Sofia '634 and Guo, it would have been obvious to a POSA to arrive

> at claims 1-4 of the '256 patent. *Id*. Therefore, Sofia '634 and Guo rendered claims 1-4 of the '256 patent obvious. *Id*.[9]

Id. at 29–30.

Patent Owner argues that "Petitioner fails to identify in the prior art any teaching of the claim limitation requiring interferon-free treatment of HCV infection in a human," and that Petitioner has failed to provide a sufficient explanation of "why a POSA would have had a reasonable expectation of success" in combining Sofia '634 and Guo to achieve the claimed invention. Prelim. Resp. 37–38. In regard to the reasonable expectation of success requirement, Patent Owner asserts that "Petitioner's Ground 3 obviousness challenge never even contends that a POSA would have had a reasonable expectation of success in achieving the claimed invention," and that "[t]he only mention of expectation of success in the entire Petition is a boilerplate sentence in an introductory paragraph" to the grounds of alleged unpatentability.[10] *Id.* at 42.

We agree with Patent Owner that Petitioner fails to show sufficiently that the claim limitation of "wherein the method does not include administering interferon" is suggested by Sofia '634 or Guo, alone or in combination. *See CFMT,* 349 F.3d at 1342; *GPAC*, 57 F.3d at 1581. The conclusory statement that "[a] POSA would have also been motivated to test such compound combinations with or without an interferon" is insufficient to render that claim limitation obvious. *See KSR,* 550 U.S. at 418. Moreover, as addressed above in connection with the obviousness challenge based on Legrand-Abravanel, Petitioner also fails to address the

[9] Cited paragraph 94 of the Fortunak Declaration restates Petitioner's conclusions without citation to any evidentiary support. Ex. 1012 ¶ 94.
[10] That sentence is included in the above discussion regarding the obviousness challenge based on Legrand-Abravanel.

requirement of a reasonable expectation of success in combining the teachings of Sofia '634 and Guo to achieve the claimed invention. *See Stepan*, 868 F.3d at 1346; *Intelligent Bio-Sys.*, 821 F.3d at 1367–68; *Medichem*, 437 F.3d at 1165.

Thus, on this record, we find that Petitioner has failed to show sufficiently that Sofia '634 and Guo, alone or in combination, taught or suggested all of the limitations in claim 1. We also find that Petitioner has failed to show sufficiently whether or why a skilled artisan would have had a reasonable expectation of success in combining the teachings of Sofia '634 and Guo to achieve the invention of claim 1 of the '256 patent. Accordingly, we determine that Petitioner has not shown a reasonable likelihood that it would prevail on its assertion that claim 1, and, thus, dependent claims 2–4, which include the limitations of claim 1, are unpatentable as obvious over Sofia '634 and Guo. *See Fine*, 837 F.2d at 1076.

III. CONCLUSION

For the foregoing reasons, we conclude that Petitioner has not established a reasonable likelihood of prevailing on its assertion that any of claims 1–4 of the '256 patent are unpatentable.

IV. ORDER

In consideration of the foregoing, it is hereby ORDERED that the Petition is *denied*.

PETITIONER:

Daniel B. Ravicher
Ravicher Law Firm PLLC
dan@ravicher.com

PATENT OWNER:

David L. Cavanaugh
Emily R. Whelan
david.cavanaugh@wilmerhale.com
emily.whelan@wilmerhale.com

Dorothy P. Whelan
Michael J. Kane
W. Chad Shear
PTABInbound@fr.com
whelan@fr.com
Kane@fr.com
shear@fr.com