

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SYNGENTA CROP PROTECTION AG,
Petitioner,

v.

UPL LTD.,
Patent Owner.

PGR2023-00017
Patent 11,445,727 B2

Before SUSAN L. C. MITCHELL, ZHENYU YANG, and
MICHAEL A. VALEK, *Administrative Patent Judges*.

YANG, *Administrative Patent Judge*.

DECISION
Granting Institution of Post-Grant Review
35 U.S.C. § 324(a)

I. INTRODUCTION

Syngenta Crop Protection AG (“Petitioner”) filed a Petition (Paper 2, “Pet.”), requesting a post-grant review of claims 1–10 of U.S. Patent No. 11,445,727 B2 (Ex. 1001, “the ’727 patent”). UPL Ltd. (“Patent Owner”) filed a Patent Owner Preliminary Response. Paper 6 (“Prelim. Resp.”).

We review the Petition under 35 U.S.C. § 324, which provides that a post-grant review may not be instituted unless “it is more likely than not that at least 1 of the claims challenged in the petition is unpatentable.” 35 U.S.C. § 324(a).

For the reasons provided below, we determine Petitioner has satisfied the threshold requirement set forth in 35 U.S.C. § 324(a). Accordingly, we institute a post-grant review of all challenged claims based on all grounds raised in the Petition. *See SAS Inst., Inc. v. Iancu*, 138 S. Ct. 1348, 1359–60 (2018); PTAB Consolidated Trial Practice Guide (“Practice Guide”),¹ 5–6 (Nov. 2019).

A. *Related Matters*

According to Patent Owner, the ’727 patent is not involved in any related litigation matters. Paper 4, 1.

The parties identify certain U.S. patent applications and foreign post-grant oppositions as related to the ’727 patent. *Id.*; Pet. 4–5.

B. *The ’727 Patent and Related Background*

The ’727 patent relates to a combination of fungicides. Ex. 1001, 1:14–15. The ’727 patent explains that fungicides are important to control

¹ Available at <https://www.uspto.gov/sites/default/files/documents/tpgnov.pdf>.

diseases and to improve yields and quality of the crops. *Id.* at 1:22–24. Various fungicides were developed over the years, including succinate dehydrogenase inhibitor (SDHI) fungicides, a family of broad-spectrum fungicides with a high potency. *Id.* at 1:24–30. Benzovindiflupyr was a known SDHI fungicide. *Id.* at 3:56–4:15.

According to the '727 patent, prior art taught mixing other classes of fungicides, such as quinone outside inhibitors, ergosterol-biosynthesis inhibitors, and fungicides that act on multiple sites, with SDHI fungicides to achieve a broad spectrum of disease control. *Id.* at 1:37–48. The '727 patent states:

Dithiocarbamate are known in the art as multi-site fungicides. These fungicides are used for broad-spectrum disease control in more than 70 crops. Mancozeb is especially important for controlling devastating and fast spreading diseases such as *Phytophthora infestans*, *Venturia inaequalis* etc. Dithiocarbamate fungicides, especially mancozeb, are particularly useful for disease control because of their broad spectrum of activity, high tolerance by crop plants, and general usefulness for controlling fungal plant diseases not controlled by active compounds that act on only a single target site in the fungus.

Id. at 1:50–60.

The '727 patent acknowledges that mancozeb had been combined with various SDHI fungicides for disease control. *Id.* at 1:61–62. It, however, states that there was “a need in the art to improve on the disease spectrum provided by these combinations.” *Id.* at 1:62–64.

The '727 patent also asserts that prior art did not teach the use of ternary or more combinations of SDHI fungicides. *Id.* at 1:48–49. The purported invention of the '727 patent provides a fungicidal combination,

combining at least one SDHI fungicide, at least one dithiocarbamate fungicide, and at least another fungicide. *Id.* at 2:30–33.

According to the '727 patent, the addition of a dithiocarbamate fungicide to the combinations of SDHI with at least another fungicide “resulted in surprising and unexpected advantages,” including “an enhancement of the efficacy, and a surprising reduction in fungal disease incidence.” *Id.* at 3:11–32.

C. Illustrative Claim

Independent claim 1 is illustrative of the claimed subject matter and is reproduced below.

1. A fungicidal combination consisting of benzovindiflupyr, mancozeb, and at least another fungicide selected from an ergosterol biosynthesis inhibitor fungicide, and a quinone outside inhibitor fungicide,

wherein the ergosterol biosynthesis inhibitor is selected from azaconazole, bitertanol, bromuconazole, cyproconazole, difenoconazole, diniconazole, epoxiconazole, etaconazole, fenbuconazole, fluquinconazole, flusilazole, flutriafol, hexaconazole, imibenconazole, ipconazole, metconazole, myclobutanil, penconazole, propiconazole, simeconazole, tebuconazole, tetraconazole, triadimefon, triadimenol, triticonazole, prothioconazole, imazalil, oxpoconazole, pefurazoate, prochloraz, triflumizole, fenarimol, nuarimol, pyrifenox, pyrisoxazole, triforine, and mixtures thereof; and

wherein the quinone outside inhibitor fungicide is selected from azoxystrobin, coumoxystrobin, enoxastrobin, flufenoxystrobin, picoxystrobin, pyraoxystrobin, mandestrobin, pyraclostrobin, pyrametostrobin, triclopyricarb, kresoxim-methyl, dimoxystrobin, fenaminostrobin, metominostrobin, trifloxystrobin, famoxadone, fluoxastrobin, fenamidone, pyribencarb, and mixtures thereof.

Id. at 21:40–62.

D. Asserted Challenges to Patentability

Petitioner asserts the following challenges to patentability:

Claims Challenged	35 U.S.C. §	Reference(s)/Basis
1, 3–5, 7, 9, 10	102(a)(1)	Godoy ²
1, 3–10	102(a)(1)	Tobler ³
1–10	103	Tobler
1–10	103	Tobler, Godoy
1–10	103	De Oliveira ⁴
1–10	103	De Oliveira, Wiglesworth, ⁵ Tobler, Godoy
1–10	112	Written Description
1–10	112	Enablement

In addition to other evidence, Petitioner relies on the declarations of Phillip M. Brannen, Ph.D. (Ex. 1003) and Sylvia Hall-Ellis, Ph.D. (Ex. 1019) as support for its Petition.

II. ANALYSIS

A. Eligibility for Post-Grant Review

The post-grant review provisions apply only to a patent that contains a claim with an effective filing date on or after March 16, 2013. *See* America Invents Act (“AIA”), Pub. L. No. 112-29, 125 Stat. 284 (2011), §§ 3(n)(1),

² Godoy et al., Eficiência de fungicidas multissítios no controle da ferrugem-asiática da soja, *Phakopsora pachyrhizi*, na safra 2015/16: resultados sumarizados dos ensaios cooperativos, Londrina, PR August 2016 (Embrapa Soja, Circular Técnica, 121) (Ex. 1004). We refer to the certified English translation (Ex. 1005, “Godoy”).

³ U.S. Patent No. 9,314,022, issued April 19, 2016 (Ex. 1006, “Tobler”).

⁴ WO Application Pub. No. 2015/079334, published June 4, 2015 (Ex. 1007, “De Oliveira”).

⁵ Wiglesworth et al., Solatenol™ fungicide – a new SDHI fungicide from Syngenta, *Phytopathology* 105(Supl. 2): S2.11(2015) (Ex. 1008, “Wiglesworth”).

6(f)(2)(A). Petitioner asserts that the effective filing date of all challenged claims is no earlier than November 4, 2016. Pet. 15; *see also* Ex. 1001, code (30) (showing November 4, 2016 as the earliest priority date). Thus, we agree with Petitioner, and Patent Owner does not dispute, that the '727 patent is eligible for post-grant review. *See* Pet. 15–16.

B. Discretionary denial

Patent Owner asks us to exercise our discretion and deny the Petition under 35 U.S.C. § 324(a) and § 325(d). Prelim. Resp. 45–50. We decline to do so.

1. § 324(a)

According to Patent Owner, under § 324(a), “[d]iscretionary denial is warranted here based on the futility of Petitioner’s multitudinous grounds.” *Id.* at 45.

We disagree. It is unclear which aspect of the Petition that Patent Owner takes issue with. If it is the “multitudinous grounds” presented in the Petition, Patent Owner points to no authority that permits us to deny institution merely because a petition presents numerous grounds. In any event, on the facts of this case, we do not view eight grounds asserted in the Petition to be excessive.⁶

To the extent Patent Owner urges that we should deny institution because Petitioner’s grounds are “futil[e],” we understand that to be an argument on the merits, and not related to our discretion. *See* Prelim.

⁶ The Petition presents five grounds. *See generally* Pet. We agree with Patent Owner, however, the ground based on Tobler, in fact, encompasses three grounds, and the ground based on De Oliveira, in fact, encompasses two grounds. *See* Prelim. Resp. 2.

Resp. 45. As explained below, we find Petitioner has established that it is more likely than not that claims 1–10 of the ’727 patent are unpatentable over Tobler. *See infra* Section II.D.2. Because the grounds based on Tobler apply to all challenged claims,⁷ at least these grounds are not, as Patent Owner asserts, futile. Thus, we decline to exercise discretion to deny the Petition under § 324(a).

2. § 325(d)

Under § 325(d), in determining whether to institute a post-grant review, we “may take into account whether, and reject the petition or request because, the same or substantially the same prior art or arguments previously were presented to the Office.” Our § 325(d) analysis employs a two-prong framework: (1) whether the arguments presented in the petition are the same or substantially the same as those previously presented to the Office; and (2) if so, whether the petitioner has demonstrated a material error by the Office in its prior consideration of those arguments. *Advanced Bionics, LLC v.*

⁷ The cases Patent Owner cites do not support its argument on discretionary denial under § 324(a). *See* Prelim. Resp. 45–46. In those cases, the Board exercised discretion to deny institution because the petitions only met the threshold requirement for institution with regard to a small percentage of the challenged claims. *See Chevron Oronite Co. LLC v. Infineum USA L.P.*, IPR2018-00923, Paper 9, 11 (PTAB Nov. 7, 2018) (stating “instituting a trial with respect to all twenty claims based on evidence and arguments directed to dependent claims 3 and 4 is not an efficient use of the Board’s time and resources”); *Deeper, UAB v. Vexilar, Inc.*, IPR2018-01310, Paper 7, 2 (PTAB Jan. 24, 2019) (denying institution because the petitioner only “demonstrated a reasonable likelihood of prevailing with respect to only two of twenty-three challenged claims as to only one of four asserted grounds of unpatentability”).

MED-EL Electromedizinische Geräte GmbH, IPR2019-01469, Paper 6 (“*Advanced Bionics*”), 8 (PTAB Feb. 13, 2020) (precedential).

The parties agree that, during prosecution, the relevant disclosure in Tobler was before the Examiner in U.S. Patent Application Publication 2010/0216640, which was cited in an Information Disclosure Statement (“IDS”). Pet. 12; Prelim. Resp. 46. In other words, the first prong of the *Advanced Bionics* analysis is satisfied. Thus, we must determine whether Petitioner has shown a material error by the Office. We find Petitioner has met its burden on this issue.

Petitioner contends that, although Tobler was previously presented to the Office, we should not deny the Petition because the anticipation and obviousness arguments based on Tobler were “not raised by the Examiner.” *Id.* at 3.

We agree with Petitioner. As explained below, we find Petitioner has established that it is more likely than not that claims 1–10 of the ’727 patent are unpatentable over Tobler. *See infra* Section II.D.2. Yet, although Tobler was cited in an IDS, the examiner did not reject the claims over that reference, or even discuss it in any manner. *See* Pet. 3. Thus, we find Petitioner has met its burden in demonstrating a material error by the Office in its prior consideration of Tobler.⁸ *See Advanced Bionics* at 8 n.9 (“An example of a material error may include misapprehending or overlooking specific teachings of the relevant prior art where those teachings impact patentability of the challenged claims.”).

⁸ Although Patent Owner asserts that Petitioner has not established a material error, Patent Owner’s argument focuses on De Oliveria, and does not address Tobler. *See* Prelim. Resp. 48–49.

Patent Owner also contends that other asserted references and patentability challenges were previously considered by the examiner or are cumulative to what was considered during prosecution. Prelim. Resp. 46–48. We do not need to resolve those issues because under *SAS*, we must institute trial to review all challenged claims based on all grounds raised in the Petition. *See SAS*, 138 S. Ct. at 1355; Practice Guide 5 (“The Board will not institute on fewer than all claims or all challenges in a petition.”).

Thus, under the circumstances of this case, we decline to deny the Petition under 35 U.S.C. § 325(d).

C. Claim Construction

In a post-grant review, we construe a claim term “using the same claim construction standard that would be used to construe the claim in a civil action under 35 U.S.C. [§] 282(b).” 37 C.F.R. § 42.200(b). Under this standard, we construe the claim “in accordance with the ordinary and customary meaning of such claim as understood by one of ordinary skill in the art and the prosecution history pertaining to the patent.” *Id.*; *see also Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–13 (Fed. Cir. 2005) (en banc) (holding that the words of a claim “are generally given their ordinary and customary meaning,” which is “the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention, i.e., as of the effective filing date of the patent application”).

The parties agree that, for purposes of this Decision, all claim terms should be given their plain and ordinary meaning. Pet. 18; Prelim. Resp. 13.

Claim terms need only be construed to the extent necessary to resolve the controversy. *Wellman, Inc. v. Eastman Chem. Co.*, 642 F.3d 1355, 1361

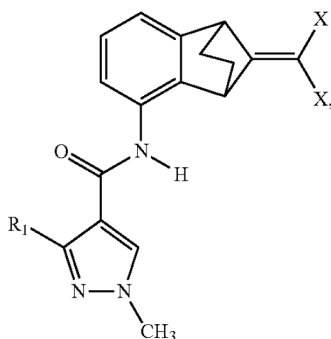
(Fed. Cir. 2011). On this record and for purposes of this Decision, we see no need to address the construction of any claim term.

D. Alleged Anticipation by and Obviousness over Tobler

Petitioner contends that Tobler anticipates claims 1 and 3–10 and renders obvious claims 1–10. Pet. 27–50. Based on this record, and for at least the following reasons, we determine Petitioner has established it is more likely than not that at least claim 1 is unpatentable over Tobler.

1. Disclosure of Tobler

Tobler states that, to meet the “needs of agricultural practice for increased crop tolerance and/or increased activity against phytopathogenic fungi, such as *Phakopsora pachyrhizi*,” its invention provides a novel composition suitable for control of diseases caused by phytopathogens. Ex. 1006, 1:34–39. Tobler discloses its composition to comprise (A) a compound of formula I, as depicted by the chemical structure below



wherein R₁ is difluoromethyl or trifluoromethyl and X is chloro, fluoro or bromo; and (B) at least one compound selected from the group consisting of a strobilurin fungicide, an azole fungicide, and others. *Id.* at 1:40–64.

Tobler discloses that a preferred compound of formula (I) is “3-difluoromethyl-1-methyl-1H-pyrazole-4-carboxylic acid (9-dichloromethylidene-benzonorbornene-5-yl)amide (compound A-1.1).” *Id.* at 13:9–11. Petitioner asserts, and on this record, Patent Owner does not

dispute, that compound A-1.1 is benzovindiflupyr. Pet. 28. Tobler presents leaf disc test data to show the action of compound A-1.1 against Asian soybean rust (*Phakopsora pachyrhizi*). Ex. 1006, 41:5–30.

Tobler discloses that compounds in group P are “Especially Suitable Compounds as Component (B)” in its compositions. *Id.* at 22:61–62.

Compounds in group P include, among others,

a strobilurin fungicide selected from azoxystrobin (47), dimoxystrobin (226), fluoxastrobin (382), kresoxim-methyl (485), metominostrobin (551), orysastrobin, picoxystrobin (647), pyraclostrobin (690); trifloxystrobin (832), a compound of formula B-1.1

[formula B-1.1]

an azole fungicide selected from azaconazole (40), bromuconazole (96), cyproconazole (207), difenoconazole (247), diniconazole (267), diniconazole-M (267), epoxiconazole (298), fenbuconazole (329), fluquinconazole (385), flusilazole (393), flutriafol (397), hexaconazole (435), imazalil (449), imibenconazole (457), ipconazole (468), metconazole (525), myclobutanil (564), oxpoconazole (607), pefurazoate (618), penconazole (619), prochloraz (659), propiconazole (675), prothioconazole (685), simeconazole (731), tebuconazole (761), tetraconazole (778), triadimefon (814), triadimenol (815), triflumizole (834), triticonazole (842), diclobutrazol (1068), etaconazole (1129), furconazole (1198), furconazole-cis (1199) and quinconazole (1378);

....

Id. at 22:63–23:25.

In Tobler, “especially preferred compositions” comprise compound A-1.1 (i.e., benzovindiflupyr) as component (A) and “as component (B) a compound selected from azoxystrobin, picoxystrobin, bixafen, fludioxonil, fenpropidin, fenpropimorph, fluopyram, difenoconazole, tebuconazole,

ipconazole, cyprodinil, mandipropamid, chlorothalonil, cyproconazole, prothioconazole, propiconazole and epoxiconazole.” *Id.* at 13:50–14:6.

According to Tobler, its compositions “may also comprise more than one of the active components (B)” to, for example, broaden of the spectrum of phytopathogenic disease control. *Id.* at 27:65–28:1. Tobler states that “it may be advantageous in the agricultural practice to combine two or three components (B) with component (A). An example is a composition comprising a compound of formula (I), azoxystrobin and cyproconazole.” *Id.* at 28:1–5.

Tobler further discloses embodiments E1 and E2 with compositions comprising three active ingredients. *Id.* at 28:6–8. Specifically, an E1 composition is “mancozeb+TX1.” *Id.* at 28:40. Tobler defines TX1 to mean “the compound A-1.1+a compound selected from the group P.” *Id.* at 28:10–11.

2. Analysis

We focus our analysis on claim 1. Claim 1 is directed to a fungicidal combination consisting of benzovindiflupyr, mancozeb, and at least another fungicide selected from a Markush group of thirty-six ergosterol biosynthesis inhibitor fungicides and a Markush group of nineteen quinone outside inhibitor fungicides. Ex. 1001, 21:40–62.

Petitioner contends Tobler anticipates claim 1 because it specifically discloses Embodiment E1 “mancozeb+TX1,” which corresponds to the combination “Mancozeb+ benzovindiflupyr+(group P component).” *Id.* at 30–31 (citing Ex. 1006, 28:6–8, 28:10–11, 28:40). Pointing to the list of group P components in Tobler, Petitioner asserts that, among the fifty-five possible ergosterol biosynthesis inhibitor fungicides and quinone outside

inhibitor fungicides recited in the Markush groups of claim 1, “group P of Tobler recites 47 of them.” *Id.* at 31–32 (citing Ex. 1006, 22:61–25:67; Ex. 1003 ¶¶ 138–144). According to Petitioner, “[t]he substantial overlap with the group P demonstrates the ease with which a POSA would envisage 47 of the 55 possible third components when making the claimed combinations.” *Id.* at 32 (citing Ex. 1003 ¶¶ 142–144). As a result, Petitioner argues Tobler anticipates or at the least renders obvious claim 1. *Id.*

Patent Owner counters that Petitioner’s Tobler-based challenge requires “picking, choosing, and combining various disclosures not directly related to each other by the teachings of the cited reference.” Prelim. Resp. 27. According to Patent Owner, to arrive at Petitioner’s asserted embodiment purportedly covered by the claims, an ordinarily skilled artisan would have to (1) select embodiment E1 over embodiment E2 and Tobler’s “preferred” embodiments; (2) select mancozeb+TX1 from among a list of 120 options; and (3) select the group P component of TX1 to be one of the claimed ergosterol biosynthesis inhibitors or quinone outside inhibitors, “where such fungicides comprise a fraction (less than 20%) of the **250 options** recited group P.” *Id.* at 27–28 (citing Ex. 1006, 22:61–25:67, 28:6–57, 29:51).

Patent Owner argues that Petitioner does not “assert (much less establish) that Tobler provides guidelines for selecting among the numerous options in Tobler to arrive at the claimed fungicidal combinations.” *Id.* at 28 (citing Pet. 29–33; Ex. 1003 ¶¶ 136–146). Petitioner also fails to show, Patent Owner continues, that “a POSA would have immediately envisaged the claimed fungicidal combinations from among the 30,000 options

encompassed by embodiment E1.” *Id.* at 29 (citing Pet. 32; Ex. 1003 ¶¶ 142–144).

Patent Owner concludes that Petitioner has not shown the challenged claims are unpatentable over Tobler because Petitioner fails to address “the expansive scope of the genus disclosed in Tobler,” which, according to Patent Owner, includes “at least about **30,000 possible combinations** (120 x 250)—none of which is identified as ‘preferred.’” *Id.* at 28–30.

Based on this record, and for at least the following reasons, we find Petitioner’s argument more persuasive. Under the Federal Circuit’s case law, when the prior art discloses a genus, if “the class of compounds that falls within the genus is so limited that a person of ordinary skill in the art can at once envisage each member of this limited class,” the reference describing the genus anticipates every species within the genus. *In re Gleave*, 560 F.3d 1331, 1338 (Fed. Cir. 2009) (quotation marks omitted). Similarly, when the prior art discloses a list, the court has rejected the notion that an ingredient cannot anticipate because it “appears without special emphasis in a longer list.” *Perricone v. Medicis Pharm. Corp.*, 432 F.3d 1368, 1376 (Fed. Cir. 2005).

In this case, claim 1 recites, in addition to benzovindiflupyr and mancozeb, a third component selected from fifty-five other fungicides. Contrary to Patent Owner’s assertion (*see* Prelim. Resp. 27–28), an ordinarily skilled artisan does not need to make any “picking, choosing, and combining” from “a list of **120 options**” to arrive at “mancozeb+TX1,” because Tobler explicitly spells out this composition. *See* Ex. 1006, 28:40. Thus, Tobler explicitly discloses a composition comprising “three active

ingredients:” benzovindiflupyr, mancozeb, and a group P compound. *Id.* at 28:6–11.

For group P compounds, Tobler lists 250 fungicides. Ex. 1006, 22:61–25:67. Petitioner argues, and Patent Owner does not dispute, that forty-seven of the group P compounds are among the fifty-five other fungicides recited in claim 1. Pet. 31. Patent Owner, however, emphasizes that only “a fraction (less than 20%) of the **250 options** recited group P” are recited in claim 1. Prelim. Resp. 28. This fact alone, however, does not doom Petitioner’s anticipation challenge here. Indeed, the Federal Circuit has held a reference that “teaches a total of fourteen skin benefit ingredients” anticipates a claim that recites one of them, even though “it appears without special emphasis in a longer list.” *Perricone*, 432 F.3d at 1376. Needless to say, forty-seven out of 250 (i.e., ~ 19%) in this case is a larger “fraction” than one out of fourteen (i.e., ~ 7%) in *Perricone*.

Patent Owner also argues that “Petitioner’s failure to address the expansive scope of the genus disclosed in Tobler precludes it from establishing anticipation.” Prelim. Resp. 28. We disagree. As an initial matter, Tobler presents its disclosure in the form of lists, and not genera. “For the purposes of whether they are anticipatory, lists and genera are often treated differently.” *Gleave*, 560 F.3d at 1337. More importantly, “[t]he anticipation analysis asks solely whether the prior art reference discloses and enables the claimed invention, and not how the prior art characterizes that disclosure or whether alternatives are also disclosed.” *Hewlett–Packard Co. v. Mustek Sys., Inc.*, 340 F.3d 1314, 1324 n. 6 (Fed. Cir. 2003); *See also Gleave*, 560 F.3d at 1333, 1334, 1338 (holding a reference that lists more than 1,400 “fifteen-base sense oligodeoxynucleotide

in a known nucleic acid sequence anticipates or renders obvious claims to specific antisense sequences”).

In sum, based on the current record, we find Petitioner has shown that it is more likely than not that Tobler anticipates claim 1. Because anticipation is the epitome of obviousness (*see Connell v. Sears, Roebuck & Co.*, 722 F.2d 1542, 1548 (Fed. Cir. 1983)), we further find Petitioner has shown that it is more likely than not that Tobler renders claim 1 obvious. *See also Merck & Co., Inc. v. Biocraft Labs., Inc.*, 874 F.2d 804, 806–807 (Fed. Cir. 1989) (holding a prior art reference renders the claim-at-issue obvious even though it taught “more than 1200 combinations,” and did not highlight the claimed one as a preferred embodiment, because “[t]hat the [prior art reference] discloses a multitude of effective combinations does not render any particular formulation less obvious. This is especially true because the claimed composition is used for the identical purpose taught by the prior art”).

Petitioner also contends that Tobler anticipates claims 3–10 and renders obvious claims 2–10. Pet. 34–50. Patent Owner does not make separate arguments to address these claims apart from what we addressed above for claim 1. Based on the current record, we determine Petitioner has made a sufficient showing regarding these claims too. *See id.* Thus, we institute a post-grant review as to all challenges raised in the Petition. *See Practice Guide 5.* We nevertheless offer the following observations on the other asserted grounds.

E. Other Prior-Art Grounds

1. Godoy

Petitioner asserts that Godoy anticipates claims 1, 3–5, 7, 9, and 10. Pet. 19–27. Petitioner also contends that claims 1–10 would have been obvious over the combination of Tobler and Godoy. *Id.* at 33–42. Petitioner further argues that claims 1–10 would have been obvious over De Oliveira, either alone or in combination with Wiglesworth, Tobler, and Godoy. *Id.* at 50–67.

Petitioner argues that Godoy discloses a protocol using multisite fungicides in combination with other fungicides. *Id.* at 19 (citing Ex. 1005, 3). Specifically, Petitioner relies on Godoy’s disclosure of “the combination of benzovindiflupyr + mancozeb + azoxystrobin.” *Id.* at 19–20 (citing Ex. 1005, 3).

Patent Owner counters that Petitioner fails to show Godoy is prior art. Prelim. Resp. 16–22. Patent Owner challenges the credibility of Petitioner’s declarant, the asserted publication date of Godoy, and the public accessibility of Godoy. *Id.*

Patent Owner also contends that Petitioner fails to show Godoy discloses a “combination” of mancozeb, benzovindiflupyr, and azoxystrobin. *Id.* at 22–24 (“[R]ather than mixtures applied as a single combination, the protocols are based on using fungicides in separate ‘*associated treatments*.’”).

Patent Owner further argues that Petitioner fails to show Godoy discloses any treatment “consisting of” the claimed fungicides. *Id.* at 25. Patent Owner points to footnote 1 to Table 3 of Godoy, where it shows “Added Nimbus 0,6 L ha-1.” *Id.* (citing Ex. 1005, Table 3). According to

Patent Owner, “‘Nimbus’ is the proprietary name for pesticides containing a sulfur fungicide excluded from the ‘consisting of’ combinations claimed in the ’727 patent.” *Id.* (citing Exs. 2003–2010). Acknowledging that “Petitioner’s declarant asserts that Nimbus is a mineral oil,” Patent Owner nonetheless contends that the articles relied on by the declarant “say nothing about the contents of the Nimbus product *disclosed in Godoy*.” *Id.* at 26 (citing Ex. 1003, 41 n.3; Exs. 1017, 1018).

Although Patent Owner’s arguments are not unreasonable, they involve fact intensive issues better resolved after the parties fully develop the record during trial.

2. De Oliveira

Petitioner contends that De Oliveira teaches “treating the plant at the locus of the infection with a **dithiocarbamate fungicide**, and concurrently, prior or subsequently to the dithiocarbamate fungicide, with at least another fungicide selected from **a demethylation inhibitor, quinone outside inhibitor, succinate dehydrogenase inhibitor, quinone inside inhibitor or combinations thereof**.” Pet. 51 (citing Ex. 1007, 7). Petitioner points to De Oliveira for teaching mancozeb as a dithiocarbamate fungicide. *Id.* (citing Ex. 1007, 9). In addition, according to Petitioner, (1) there is a “significant overlap” between the quinone outside inhibitors (commonly known as strobilurins) disclosed in De Oliveira and those claimed in the ’727 patent, and (2) there is a “significant overlap” between the conazoles (the preferred demethylation inhibitors) disclosed in De Oliveira and the ergosterol biosynthesis inhibitors claimed in the ’727 patent. *Id.* (citing Ex. 1003 ¶¶ 159, 195, 196; Ex. 1007, 11).

Petitioner relies on the combination mixtures A(2), B(2), C(2), and D(2), each of which includes mancozeb, a strobilurin, and a conazole. *Id.* at 52 (citing Ex. 1007, 25). De Oliveira concludes that “the addition of a multi-site contact fungicide such as mancozeb acted as a synergist” and “increased the rust control of the conventional strobilurin + conazole fungicide treatment standard.” *Id.* (citing Ex. 1007, 25).

Petitioner acknowledges that “De Oliveira does not disclose benzovindiflupyr” as a succinate dehydrogenase inhibitor (SDHI). *Id.* Petitioner, however, argues that “it would have been obvious to include benzovindiflupyr in any one of combinations A(2), B(2), C(2), and D(2) of De Oliveira because De Oliveira states the combinations can further include an SDHI, and Wiglesworth, Tobler and Godoy provide additional motivation for selection and a reasonable expectation of success.” *Id.* at 54.

Patent Owner argues that Petitioner fails to explain “why a POSA would [have] been led to select an undisclosed SDHI (benzovindiflupyr) where De Oliveira expressly discloses other preferred [SDHIs].” Prelim. Resp. 33. According to Patent Owner, De Oliveira’s working examples do not contain any SDHIs. *Id.* at 36. Patent Owner asserts that Petitioner fails to address “why a POSA would have been motivated to make a combination ‘consisting of’ the claimed combinations, e.g., without De Oliveira’s fungicides excluded from the claims.” *Id.* at 35. Patent Owner further contends that Wiglesworth, Tobler, and Godoy do not cure the deficiencies in De Oliveira. *Id.* at 34.

Again, Patent Owner’s arguments are not unreasonable. But, for these factual disputes, we again encourage the parties to further address the relevant issues to fully develop the record during trial.

F. Section 112 Grounds

Petitioner asserts that claims 1–10 are invalid under 35 U.S.C. § 112(a) for lack of written description support. Pet. 73–76. Petitioner also argues that claims 1–10 are invalid under 35 U.S.C. § 112(a) because they are not enabled. *Id.* at 76–81. Based on the current record, we are not persuaded by Petitioner’s arguments.

The challenged claims are directed to fungicidal combinations, compositions, and methods of use thereof. Petitioner appears to recognize this. *See* Pet. 73 (stating “the claims are directed to known ingredients which were previously used effectively as fungicides in the art”). Petitioner, however, argues that during prosecution, the applicant distinguished the prior art based on the unexpected synergy achieved by the claimed combinations. Pet. 74 (citing Ex. 1002, 138); *see also id.* at 13 (the same). As a result, Petitioner asserts “the patent is not directed at the combination of fungicidal ingredients, but rather to the alleged synergistic interaction between them.” *Id.* at 74. We disagree.

The language in the prosecution history Petitioner relies on reads: “The technical effects achieved by the claimed combinations, i.e., an enhancement of the efficacy, and a surprising reduction in fungal disease incidence when mancozeb is added to the claimed combinations.” Ex. 1002, 138. It is not a complete sentence and it is unclear what this language actually means. Thus, we decline to read a requirement of “synergistic interaction” into the challenged claims. *See, e.g.,* Pet. 74 (acknowledging the applicant “did not add this patentable distinction to the[] claims”); *see also Genuine Enabling Tech. LLC v. Nintendo Co., Ltd.*, 29 F.4th 1365, 1374 (Fed. Cir. 2022) (“For a statement during prosecution to qualify as a

disavowal of claim scope, it must be ‘so clear as to show reasonable clarity and deliberateness’ and ‘so unmistakable as to be unambiguous evidence of disclaimer.’” (quoting *Omega Eng’g, Inc. v. Raytek Corp.*, 334 F.3d 1314, 1325 (Fed. Cir. 2003)).

Patent Owner contends that “***Petitioner admits***” the Specification of the ’727 patent provides sufficient written description support for the claimed subject matter. *See* Prelim. Resp. 37–38 (citing Ex. 1001, 3:11–4:19, 6:19–48, 7:40–8:30; Pet. 7–10).

We agree. Indeed, Petitioner acknowledges:

The ’727 specification provides disease control test data for three different two fungicide combinations (Table 1) and a fourth with a three[-]fungicide combination as the control. Specifically, each of the combinations contains prothioconazole combined with another fungicide. Data is then provided for the same combinations with the addition of mancozeb. The four test combinations each contain prothioconazole, mancozeb, and either benzovindiflupyr, isopyrazam, penthiopyrad, or azoxystrobin.

Benzovindiflupyr, isopyrazam, and penthiopyrad are identified as succinate dehydrogenase inhibitor fungicides; and azoxystrobin is identified as a quinone outside inhibitor fungicide. Ex. 1001, 6:49–51, 7:41–43, and 8:33–35. The results of these tests for the addition of mancozeb on the mixtures is described in Table 1 of the ’727 [patent]. Ex. 1001, 20:37–63. The patent discloses what appear to be two test points for each control and test combination; specially “2015/16” and “2016/17.” *Id.*

Pet. 7–8.

Petitioner’s statements amount to a concession that the Specification of the ’727 patent shows the inventors “invented what is claimed.” *See Ariad Pharms., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1351 (Fed. Cir. 2010). Thus, on the current record, we find Petitioner has not shown it is more likely than

not that at least one challenged claim is unpatentable for failing to satisfy the written description requirement.

On the current record, we also reject Petitioner's assertion that the '727 patent fails to enable the use of the full scope of the challenged claims as "fungicidal combinations providing . . . enhanced efficacy and synergy." *See* Pet. 78. To analyze the enablement requirement, we examine whether the patent specification enables an ordinarily skilled artisan to practice "the claimed invention" without undue experimentation. *In re Wands*, 858 F.2d 731, 735 (Fed. Cir. 1988). As explained above, "enhanced efficacy and synergy" is not a claimed limitation. Petitioner does not point to any legal authority requiring a patentee to enable unclaimed subject matter. Thus, on the current record, we find Petitioner has not shown it is more likely than not that at least one challenged claim is unpatentable for failing the enablement requirement.

III. CONCLUSION

Based on the current record, and for the reasons explained above, we find Petitioner has shown it is more likely than not that at least one challenged claim is unpatentable. Under USPTO Guidance, we therefore institute a post-grant review of all challenged claims on all asserted grounds.

At this stage of the proceeding, the Board has not made a final determination as to the construction of any claim term or the patentability of any challenged claim. Our view with regard to any conclusion reached in the foregoing could change upon further development of the record during trial.

IV. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that, pursuant to 35 U.S.C. § 324(a), a post-grant review is hereby instituted on all challenged claims of the '727 patent based on all the asserted grounds set forth in the Petition; and

FURTHER ORDERED that, pursuant to 35 U.S.C. § 324(d) and 37 C.F.R. § 42.4(b), notice is hereby given of the institution of a trial commencing on the entry date of this decision.

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