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IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF CALIFORNIA

TESSENDERLO KERLEY, INC.,

Plaintiff,

v.

OR-CAL, INC,

Defendant.

No. C 11-04100 WHA

**ORDER GRANTING
PLAINTIFF'S MOTIONS
TO DEFER MOTIONS FOR
SUMMARY JUDGMENT, AND
VACATING HEARING**

INTRODUCTION

In this patent-infringement action, defendant moves for summary judgment of invalidity. Plaintiff moves to defer the motions for summary judgment pursuant to Rule 56(d). For the reasons stated below, plaintiff's motions to defer summary judgment are **GRANTED**. Defendant's motions for summary judgment are **DENIED WITHOUT PREJUDICE**. The hearing scheduled for June 14 is **VACATED**.

STATEMENT

Plaintiff Tessenderlo Kerley, Inc. and defendant Or-Cal, Inc. are competing manufacturers of sun protectants for crops. TKI asserts infringement of United States Patents 6,110,867 and 6,464,995, both of which claim methods for utilizing finely divided particulate materials to increase CO₂ assimilation in horticultural crops.

The '867 patent — filed in 1997, issued in August 2000, and reissued after reexamination in 2006 — disclosed examples of using calcined kaolin, a particulate material, to increase CO₂ assimilation in a few different plant species, but broadly claimed use of finely divided particulate

1 materials in horticultural crops. Claim 1 is a representative claim (col. 9; reexamination
2 certificate col. 1):

3 A method for enhancing the photosynthesis of
4 horticultural crop by increasing carbon dioxide
5 assimilation of said horticultural crop which
6 comprises

7 applying to the surface of said horticultural
8 crop an effective amount of one or more
9 highly reflective particulate materials, said
10 particulate materials

11 being finely divided, and

12 wherein the particles as applied
13 allow for the exchange of gases on
14 the surface of said crop and

15 the finely divided particulate
16 materials have a median individual
17 particle size below about 3 microns..

18 The limitation of “increasing carbon dioxide assimilation” was added during reexamination to
19 overcome a prior-art reference, Moreshet, which is raised by Or-Cal in its instant motion for
20 summary judgment.

21 The '995 patent, a related patent arising out of the same parent application as the '867
22 patent, also claimed, generally, the use of particulate materials to enhance horticultural effects
23 via a similar mechanism. Claim 1 is a representative claim (col. 12):

24 A coated substrate comprising

25 a horticultural substrate selected from the
26 group consisting of fruits, vegetables, trees,
27 flowers, grasses, roots, and landscape and
28 ornamental plants

wherein the surface of said substrate is
coated with a membrane formed from a
slurry comprising water and one or more
particulate materials,

the membrane comprised of one or more
particulate layers,

said layers comprising one or more
particulate materials selected from the group
consisting of calcium carbonate, hydrous
kaolin, calcined kaolin and mixtures thereof,

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said particulate materials being finely divided, and

wherein said membrane allows for the exchange of gases on the surface of said substrate and the particulate material comprises a hydrophilic core and a hydrophobic outer surface.

In both patents, calcium carbonate was listed among the particulate materials designated as “useful for the purposes of [the] invention,” but no working example of CO₂ assimilation with calcium carbonate was described. TKI alleges that Or-Cal infringed by manufacturing products with calcium carbonate particles.

This action was file in August 2011. In February 2012, TKI served its infringement contentions. A week later, Or-Cal moved for TKI to fix deficiencies in the infringement contentions, which an April 2012 order granted (Dkt. No. 70). Soon thereafter, Or-Cal served its invalidity contentions, which were 300 pages long and based on 76 references (*see* Watkins Decl. ¶ 23). In that same month, Or-Cal filed two motions for summary judgment of invalidity on five grounds: anticipation, obviousness, enablement, written description, and unpatentable subject matter. Or-Cal cites two prior-art references, academic articles published in the 1970s by Samuel Morsehet, et al., and Antoine Abou-Khaled, et al, for its anticipation and obviousness arguments. TKI’s opposition briefs to Or-Cal’s motions for summary judgment were due approximately *two weeks* after receiving Or-Cal’s motions for summary judgment, invalidity contentions and accompanying documents.

TKI argues that Or-Cal’s motions for summary judgment of invalidity are premature because they were filed three months prior to the claim construction hearing, set for August 2012, and seven months before the deadline for fact discovery and expert reports, set for November 2012 (Dkt. No. 39). At the time its opposition briefs were due, TKI had retained an expert, Dr. James Syvertsen, but he had not yet conducted experiments or finished research on the knowledge of a person of ordinary skill for issues of invalidity. TKI had not finished taking depositions (in its initial disclosures, Or-Cal disclosed 174 individuals who were likely to have discoverable information concerning invalidity). There is no evidence that TKI has not been diligently pursuing discovery.

1 ANALYSIS

2 Where a summary judgment motion is filed before a party has an opportunity to pursue
3 discovery relating to its theory of the case, district courts should grant any Rule 56(d) motion
4 fairly freely. The rule *requires* discovery where the non-moving party has not had the
5 opportunity to discover information that is essential to its opposition. *Burlington Northern Santa*
6 *Fe R. Co. v. Assiniboine & Sioux Tribes of Fort Peck Reservation*, 323 F.3d 767, 773 (9th Cir.
7 2003).

8 **1. ANTICIPATION.**

9 In order to properly respond to assertions of anticipation, TKI requires: (1) claim
10 construction, (2) discovery into what particulate materials were used in the prior-art experiments
11 conducted by Moreshet and Abou-Khaled, and (3) discovery into the characteristics of those
12 particulate materials.

13 **A. Claim Construction.**

14 At least some claim construction is needed before determining whether the prior art
15 anticipates the asserted claims. TKI will argue at claim construction that the limitation of “allow
16 for the exchange of gases” should mean that the formation of a membrane does not impair gas
17 exchange. This claim definition would, arguably, exclude both Moreshet and Abou-Khaled as
18 anticipating prior art because, in both, gas exchange was impaired (*see* Snow Decl. Exh. 1
19 [Moreshet] at Table 2; Snow Decl. Exh. 5 [Abou-Khaled] at Fig. 8).

20 In its opposition brief, Or-Cal misinterprets TKI’s proposed claim construction and does
21 not address TKI’s arguments head on. This problem highlights the need for full briefing on
22 claim construction issues before adjudicating Or-Cal’s invalidity arguments.

23 **B. Discovery Regarding the Abou-Khaled Reference.**

24 The Abou-Khaled reference did not expressly disclose the particulate materials claimed
25 by the patent. Instead, the reference identified the particulate used in its study as “R. T.
26 Vanderbilt Company’s” kaolin (clay mineral). Because the reference does not on its face
27 anticipate the asserted claims, Or-Cal instead resorts to on extrinsic evidence to argue R. T.
28 Vanderbilt’s kaolinite would have inherently met the asserted claims’ limitation of particulate

1 size (median particle size below ten microns) and reflectivity (“Block Brightness” of at least 80
2 as measured by TAPPI standard T 646). But because different inferences can be made from Or-
3 Cal’s extrinsic evidence, more discovery on this issue is required before the motion for summary
4 judgment can be correctly adjudicated.

5 TKI requires fact discovery to determine what type of kaolin was used in the Abou-
6 Khaled reference. It is unclear which of R. T. Vanderbilt’s kaolin products was used, as there
7 were different versions in the 1970s. While Or-Cal cites two versions of R. T. Vanderbilt’s
8 kaolinite that plausibly satisfy the claims’ limitations, there are other versions that do not.
9 Discovery into this issue is required before summary judgment can be properly adjudicated.

10 Similarly, the Abou-Khaled article also referred to a kaolin product by the name of
11 Sun-Guard. Or-Cal’s only cited evidence of Sun-Guard’s particulate material is a 2003 product
12 specification. This specification document, created forty years after the prior-art reference had
13 been published, cannot establish with reasonable certainty that the Sun-Guard product used in
14 the 1970s contained the particulate material that satisfied the claims’ limitation. More discovery
15 on this is needed. TKI intends to seek third-party discovery from Sun-Guard’s manufacturer
16 regarding the composition of Sun-Guard in the 1970s.

17 As for particulate material’s limitation of reflectivity, Or-Cal argues that the particulate
18 material used in the prior art met the reflectivity limitation based on a graph in the article (Abou-
19 Khaled at 282; figure 3). However, the measurement used in Abou-Khaled was percent
20 reflectivity, which does not match the measurement disclosed in the ’867 patent, which required
21 Block Brightness as measured by TAPPI standard T 646 (’867 at col. 2). In addition, Abou-
22 Khaled’s data was purportedly on reflectivity of the leaves, rather than the particles. Or-Cal
23 does not cite any expert opinion that these difference are inconsequential; TKI requires
24 additional discovery to argue that these differences are material.

25 C. Discovery Regarding the Moreshet Reference.

26 The Moreshet reference disclosed the use of Speswhite, a brand of hydrous kaolin, as the
27 particulate material used in its published study. Similar to the Abou-Khaled reference discussed
28 above, the Moreshet prior art also did not expressly disclose the claim limitation of reflectivity.

1 Citing a 1974 German book as extrinsic evidence, Or-Cal argues that the Speswhite material
2 inherently met the “highly reflective” limitations of the claims because Speswhite in the 1970s
3 had a brightness level of 89 on the Elrepho scale. However, the Elrepho scale was *not* the
4 measurement standard disclosed in the asserted patents. Or-Cal does not cite any evidence or
5 expert opinion for its assertion that an 89 on the Elrepho scale would have been equivalent to or
6 higher than an 80 on the TAPPI standard T 646, which is the claims’ limitation (’867 at col. 2).
7 Or-Cal does append an exhibit to a *reply declaration* in support, but this sand-bagging material
8 will be disregarded because it should have been included in the opening motion (Dkt. No. 28 ¶
9 8). Moreover, this equivalency is disputed by TKI and will be a point for further expert
10 discovery. Or-Cal’s anticipation contention is premature.

11 2. OBVIOUSNESS.

12 Obviousness typically requires expert testimony on what would have been known to a
13 skilled artisan. In this case, TKI’s expert, Dr. James Syvertsen, has opined that a person of
14 ordinary skill in the art would have had a Ph.D. in plant biology or related field and at least two
15 years of practical experience in lab and field testing of crop protectant products (Syvertsen Decl.
16 ¶ 8). Or-Cal did not submit an expert declaration with its motions for summary judgment.

17 As discussed above, additional discovery is required to determine whether Or-Cal’s
18 prior-art references anticipate the asserted claims. This is also true for Or-Cal’s obviousness
19 defense, which is based on the same prior-art references. Whether the differences discussed
20 above between the prior art and the asserted claims would have been obvious to a skilled artisan
21 is an area of expert opinion. In this case, TKI’s expert asserts, and will show through more
22 experimentation, that it would not have been obvious to a skilled artisan to use calcined kaolin
23 (with specifications meeting the claim limitations) in the Abou-Khaled and Moreshet references.

24 Or-Cal only offers an undeveloped, conclusory argument that it would have been obvious
25 to substitute calcined kaolin (with specifications meeting the claim limitations) into the prior-art
26 studies. Or-Cal does not offer any expert opinion on this point and cites no dispositive evidence.
27 TKI’s expert disagrees that it would have been obvious and requires additional testing for
28 support. Or-Cal’s obviousness contention is premature.

1 **3. ENABLEMENT.**

2 Or-Cal argues that the asserted claims are not enabled because a skilled artisan would not
3 be able to use calcium carbonate as a particulate material for the claimed methods. Similarly,
4 Or-Cal argues that the patent does not enable broad application on plant species not tested in the
5 patent specifications.

6 Enablement, which requires that a person skilled in the art be able to make the claimed
7 invention without undue experimentation, nearly always requires expert analysis because it
8 requires an assessment from the perspective of a person of ordinary skill in the art. The
9 following factors should be considered in determining whether undue experimentation is
10 required: (1) the quantity of experimentation necessary, (2) the amount of direction or guidance
11 presented, (3) the presence or absence of working examples, (4) the nature of the invention, (5)
12 the state of the prior art, (6) the relative skill of those in the art, (7) the predictability or
13 unpredictability of the art, and (8) the breadth of the claims. *In re Wands*, 858 F.2d 731, 737
14 (Fed. Cir. 1988).

15 One issue is whether using calcium carbonate, which the specifications did not provide a
16 working example of, was nonetheless enabled by the patents. TKI's expert testifies that calcined
17 kaolin (which the patent did provide a working example of) and calcium carbonate are
18 sufficiently similar so that the kaolin example in the patent specification would have also taught
19 a skilled artisan how to use calcium carbonate (Syvertsen Decl. ¶¶ 10–11). In support of this
20 opinion, Dr. Syvertsen will perform tests to determine, given the patent's calcined kaolin
21 example, how much additional experimentation with calcium carbonate is required to
22 accomplish CO₂ assimilation. Similarly, Dr. Syvertsen will perform experiments to show that
23 the use of particulate materials has consistent and predictable effects across a range of different
24 plant species.

25 Or-Cal argues that the wealth of evidence in the record shows that the claims are not
26 enabled, and no expert declaration or experimentation could show otherwise. At this stage, this
27 conclusory assertion that no experimentation could raise a genuine dispute is unpersuasive. As
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1 discussed above, there are possible discoveries to be made by TKI’s expert that could raise a
2 genuine dispute. Or-Cal’s enablement contention is premature.

3 **4. WRITTEN DESCRIPTION.**

4 The test for sufficiency [of written description] is
5 whether the disclosure of the application relied
6 upon reasonably conveys to those skilled in the art
7 that the inventor had possession of the claimed
8 subject matter as of the filing date. . . . Specifically,
9 the level of detail required to satisfy the written
10 description requirement varies depending on the
11 nature and scope of the claims and on the
12 complexity and predictability of the relevant
13 technology. . . . For generic claims, we have set
14 forth a number of factors for evaluating the
15 adequacy of the disclosure, including the existing
16 knowledge in the particular field, the extent and
17 content of the prior art, the maturity of the science
18 or technology, and the predictability of the aspect at
19 issue. . . . Nor do we set out any bright-line rules
20 governing, for example, the number of species that
21 must be disclosed to describe a genus claim, as this
22 number necessarily changes with each invention,
23 and it changes with progress in a field.

24 *Ariad Pharmaceuticals, Inc. v. Eli Lilly and Co.*, 598 F.3d 1336, 1351–52 (Fed. Cir. 2010).

25 Or-Cal’s arguments regarding written description are largely the same as its arguments
26 for enablement. Specifically, Or-Cal argues that the no skilled artisan would have understood
27 that the inventors were in possession of broad claims (using calcium carbonate on a variety of
28 plant species) because the patent only disclosed specific examples and the results outside those
examples would not have been predictable. Or-Cal’s argument, which again is not supported by
expert opinion, is unpersuasive at this stage for the same reasons as its enablement arguments,
discussed above. Additional fact and expert discovery may support TKI’s expert testimony that
a skilled artisan, reading the patents, would have understood that inventors claimed a broad
invention on the use of many particulate materials, including calcium carbonate, in a variety of
plant species. Or-Cal’s written-description contention is premature.

29 **5. PATENTABILITY.**

30 The Supreme Court has recognized that “all inventions at some level embody, use,
31 reflect, rest upon, or apply laws of nature, natural phenomena, or abstract ideas.” In order to be
32 patentable, a process that focuses upon the use of a natural law must

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also contain other elements or a combination of elements, sometimes referred to as an ‘inventive concept,’ sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the natural law itself. . . . In particular, the steps in the claimed processes (apart from the natural laws themselves) [cannot] involve well-understood, routine, conventional activity previously engaged in by researchers in the field.

Mayo Collaborative Services v. Prometheus Laboratories, Inc., 132 S.Ct. 1289, 1293–94 (2012).

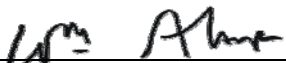
That is, the natural law’s *application* must not be “well-understood, routine, conventional activity previously engaged in by researchers in the field.” Here, purportedly patentable subject matter is the application of finely divided particulate materials of a certain size and with certain reflectivity properties in a particular quantity for certain horticultural crops. The natural law is that those particulates will increase CO₂ assimilation. As discussed, more discovery is needed to determine whether the application of those particulate materials in the manner described was routine and conventional. Until then, this order leaves unanswered whether the patent claims too broadly preempt the use of a natural law.

CONCLUSION

For the reasons stated, plaintiff’s motions to defer summary judgment are **GRANTED**. Defendant’s motions for summary judgment are **DENIED WITHOUT PREJUDICE**. Defendant may raise its invalidity arguments after the end of fact and expert discovery, sooner if defendant cooperates in producing discovery and disclosures and plaintiff is not diligent in taking advantage of the time being granted. The hearing scheduled for June 14 is **VACATED**.

IT IS SO ORDERED.

Dated: June 5, 2012.



WILLIAM ALSUP
UNITED STATES DISTRICT JUDGE