IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF VIRGINIA
Norfolk Division

BASF PLANT SCIENCE, LP,

Plaintiff,

v.

COMMONWEALTH SCIENTIFIC AND INDUSTRIAL RESEARCH ORGANIZATION, GRANIS RESEARCH AND DEVELOPMENT CORPORATION, AND NUSEED PTY LTD,

Defendants.

C.A. No. 2:17-cv-503

COMMONWEALTH SCIENTIFIC AND INDUSTRIAL RESEARCH ORGANISATION, GRAINS RESEARCH AND DEVELOPMENT CORP., AND NUSEED PTY LTD.,

Plaintiffs- Counterclaimants

v.

BASF PLANT SCIENCE, LP, AND CARGILL, INC.,

Defendants- Counterdefendants

OPINION & ORDER

These matters are before the Court pursuant to Commonwealth Scientific and Industrial Research Organisation's ("CSIRO's"), Grains Research and Development Corporation's ("GRDC's"), and Nuseed Proprietary Limited's ("Nuseed Pty. Ltd.'s") (collectively, "Proponents") Motion for Judgment as a Matter of Law and a New Trial under Fed. R. Civ. P. 50(B) and 59(a), Doc. 852, and BASF Plant Science, L.P. and Cargill, Inc's (collectively,

"Opponents") Motion for Judgment as a Matter of Law under Fed, R. Civ. P. 50(b) or New Trial under Fed R. Civ. P. 59(a), Doc. 850.

I. INTRODUCTION AND OUTCOME OF THE TRIAL

The Court held a jury trial which commenced on Wednesday, October 16, 2019. Due to the procedural complications of identifying the parties in this case to the jury, CSIRO, GRDC, and Nuseed were collectively referred to as the "Proponents," because they are the proponents of the patent claims, and BASF and Cargill were collectively referred to as the "Opponents," because they opposed the patent claims. The Court bifurcated the trial into a liability phase and a remedies phase.

On November 1, 2019, the jury returned a verdict on liability. The jury found that claim 20 of the '541 patent is infringed; that each asserted patent is not obvious; that only claim 1 of the '084 patent is invalid for lack of written description; that BASF is a co-owner of only the '792 patent; and that CSIRO first conceived of the inventions claimed by the '357 and '880 patents in February of 2003. The jury further found that, subject to the two foregoing exceptions, claims 1 and 22 of the '357 patent, claim 5 of the '579 patent, claims 2 and 10 of the '880 patent, claim 4 of the '792 patent, and claim 5 of the '033 patent were valid and enforceable. Doc. 788. The parties stipulated that claim 5 of the '579 patent, claims 1 and 33 of the '357 patent, claim 5 of the '033 patent, claims 2 and 10 of the '880 patent, claim 4 of the '792 patent, and claim 1 of the '084 patent are infringed.

II. LEGAL STANDARD

In a patent case, the grant or denial of judgment as a matter of law ("JMOL") is a procedural issue that is decided under regional circuit law. See Wechsler v. Macke Int'l Trade, Inc., 486 F.3d 1286, 1291 (Fed. Cir. 2007) Therefore, in the Fourth Circuit, judgment at a matter

of law may be granted when the district court "'finds that a reasonable jury would not have a legally sufficient evidentiary basis to find for' the non-moving party." Dotson v. Pfizer, Inc., 558 F.3d 284, 292 (4th Cir. 2009) (quoting Fed. R. Civ. P. 50(a)(1)). The district court must conclude, "after consideration of the record as a whole in the light most favorable to the non-movant, that the evidence presented supports only one reasonable verdict, in favor of the moving party." Id. The Court begins its analysis with the Proponents' motion.

III. PROPONENTS' MOTION FOR JUDGMENT AS A MATTER OF LAW

Proponents assert two grounds for which judgment as a matter of law should be granted. First, Proponents suggest that BASF can not own the '792 patent because CSIRO did not breach the Materials Transfer and Evaluation Agreement ("MTEA"). Second, they aver that claim 1 of the '084 patent has valid written description because the specification adequately demonstrates possession of the claimed subject matter.

A. MTEA

Proponents argue that the patent cannot be jointly owned by BASF because nothing in the '792 patent was new and jointly developed under the MTEA. Specifically, they point to the fact that CSIRO disclosed all but two of the enzymes claimed in the '792 patent in its 2004 and 2005 patent applications years before the signing of the MTEA. Additionally, Proponents note that the combinations of the claimed enzymes were free to use by CSIRO as information from the public domain. Doc. 853 at 9. Proponents primarily rely on Dr. Singh's direct testimony as evidence that CSIRO never used any of the material from BASF to create the inventions. Doc. 853 at 10.

Opponents respond that there was ample trial evidence that demonstrated that the '792 claims "subsisted in" materials subject to the MTEA. Doc. 870 at 3. Opponents cite to evidence presented at trial that the '792 patent contained two "BASF proprietary genes" that were used as

Joint Materials under the MTEA. Opponents cite to the admission made by Dr. Singh during cross-examination that 11 of 13 joint constructs in the MTEA contained the Thraustochytrium desaturase that was claimed in the '792 patent. Id. at 4. As additional support, they note the testimony of Dr. Bauer that BASF brought "genes, constructs, Brassica napus transformation techniques, Brassica napus plants, and related confidential knowhow in canola" to the collaboration with CSIRO under the MTEA. Id. at 5.

Despite evidence presented on both sides of this issue, the jury in their verdict was permitted to make their own credibility determinations and credit the evidence in favor of the Opponents. There was ample evidence, such as the admission by Dr. Singh and the testimony of Dr. Bauer, for a reasonable juror to conclude that BASF co-owned the '792 patent. Accordingly, the Court **FINDS** that the jury had a legally sufficient evidentiary basis to conclude that BASF co-owns the '792 patent.

B. Written Description 084' Patent

Next, Proponents aver they are entitled to JMOL that the claim 1 of the '084 patent is valid in spite of the juries finding that it lacked written description. The written description requirement requires the patent owner to "'convey with reasonable clarity to those skilled in the art that, as of the filing date sought, he or she was in possession of the invention,' and demonstrate that by disclosure in the specification of the patent." Idenix Pharm. LLC v. Gilead Scis. Inc., 941 F.3d 1149, 1163 (Fed. Cir. 2019) (quoting Carnegie Mellon Univ. v. Hoffmann-La Roche Inc., 541 F.3d 1115, 1122 (Fed. Cir. 2008)); see Hynix Semiconductor Inc. v. Rambus Inc., 645 F.3d 1336, 1351 (Fed. Cir. 2011); Ariad Pharms., Inc. v. Eli Lilly and Co., 598 F.3d 1336, 1351 (Fed. Cir. 2010). The hallmark of the written description test is disclosure. Ariad, 598 F.3d at 1351. Therefore, the "test requires an objective inquiry into the four corners of the

specification from the perspective of a person of ordinary skill in the art." Id.; see Idenix, 941 F.3d at 1163.

This analysis must focus on if the invention was described understandably to the skilled artisan and shows that the inventor invented the claimed invention. Ariad, 598 F.3d at 1351. Specifically, the "written description requirement does not demand either examples or an actual reduction to practice; a constructive reduction to practice that in a definite way identifies the claimed invention can satisfy the written description requirement." Id. at 1352. Moreover, "actual 'possession' or reduction to practice outside of the specification is not enough . . . it is the specification itself that must demonstrate possession." Id. This detailed look at the patent is dependent on the context and is a question of fact.[1] The inquiry into written description is "applied to the invention at the time it enters the patent process." Id. at 1351.

Here, the jury found that the claim 1 of the '084 patent failed to meet the written description requirement by clear and convincing evidence. Opponents, in their opposition to the Proponant's JMOL motion, note that "Claim 1 of the '084 patent recites Brassica sp. seed oil with 1-16% DPA (among other claim limitations)." Doc. 870 at 11. Opponents highlight that during trial "the evidence . . . was clear that the alleged invention was oil including 7-35% DPA, not 1-16% DPA." Opponents note their expert Dr. Murphy "emphasized that the distinction was critical; the range of 7-35% DPA indisputably did not cover Opponents' accused products." Doc. 870 at 11. Furthermore, they cite to col. 9:39-44 of the '084 patent which states that:

> In a preferred embodiment of the first aspect above, the lipid or oil, preferably a seedoil, more preferably a Brassica sp. seedoil or Camelina sativa seedoil, has the following

[1]The Federal Circuit has clearly articulated that "whether a claim is supported by an adequate written description is a factual inquiry . . . ." Hynix Semiconductor Inc. v. Rambus Inc., 645 F.3d 1336, 1351 (Fed. Cir. 2011). Therefore, on JMOL, the Federal Circuit's review of the district judge's denial of a new trial and denial of judgment as a matter of law on written description is severely circumscribed as a factual issue already decided by a jury and approved by the district court. Id. at 1352.

> features: in the total fatty acid content of the lipid or oil, **the level of DPA is between about 7% and 30% or between about 7% and 35%** . . . .

Doc. 870 at 12 (emphasis added). Dr. Murphy concluded that the "specification does not convey to a person of ordinary skill in the art that the inventors possessed oil with 1-16% DPA as claimed." Doc. 870 at 12. Based on the presented evidence, the Court cannot conclude as a matter of law that "a reasonable jury would not have a legally sufficient evidentiary basis to find for the non-moving party." See Dotson v. Pfizer, Inc., 558 F.3d 284, 292 (4th Cir. 2009). The testimony presented by Dr. Murphy provided ample reason for a jury to conclude that Proponents did not possess the claimed 1-16% DPA invention and that the specification was directed at an invention that operated in the 7-35% range of DPA production. Doc. 870 at 12; see Ariad, 598 F.3d at 1351 (noting disclosure as the hallmark of written description). Therefore, the Court **DENIES** Proponents' Motion on both MTEA and written description grounds.

IV. OPPONENTS' MOTION FOR JUDGMENT AS A MATTER OF LAW

Opponents assert three reasons for which the Court should grant judgment as a matter of law. First, Opponents contend that the Court should grant judgment as a matter of law that the Asserted Group A patents and Asserted Group B patent are invalid for lack of written description. Second, they aver that no reasonable juror could have concluded that the CSIRO inventors conceived of the alleged inventions of the Group A claims as of February 2003. Third and finally, Opponents assert that the Court should grant judgment as a matter of law that BASF co-owns the Group A, D and E patents.

A. Lack of Written Description - Group A and Group B Patents

Opponents contend, that as a matter of law, the Group A patents are invalid for lack of written description. As noted supra, [t]o fulfill the written description requirement, the

Proponents "must 'convey with reasonable clarity to those skilled in the art that, as of the filing date sought, he or she was in possession of the invention,' and demonstrate that by disclosure in the specification of the patent." Idenix Pharm. LLC v. Gilead Scis. Inc., 941 F.3d 1149, 1163 (Fed. Cir. 2019) (quoting Carnegie Mellon Univ. v. Hoffmann-La Roche Inc., 541 F.3d 1115, 1122 (Fed. Cir. 2008)) see Hynix Semiconductor Inc. v. Rambus Inc., 645 F.3d 1336, 1351 (Fed. Cir. 2011); Ariad Pharms., Inc. v. Eli Lilly and Co., 598 F.3d 1336, 1351 (Fed. Cir. 2010).

Opponents argue that the "evidence showed conclusively that the inventors were only able to achieve nominal amounts of [Long-Chain Polyunsaturated Fatty Acids or] LC-PUFAs in a laboratory model plant Arabidopsis." Doc. 851 at 5. Therefore, they conclude that nothing in the specification conveys to a person ordinarily skilled in the art ("POSITA") that the inventor possessed a genetically-modified canola plant that makes LC-PUFAs. As support, Opponents note the 139 page, 218 column specification does not provide any working examples – "or even prophetic examples" of what the inventors expected to achieve by making LC-PUFAs in canola. Doc. 851 at 5 (noting the entire specification focuses entirely on the model plan Arabidopsis). They note that the only disclosures of Brassica or canola are in three laundry lists of "essentially every plant that could theoretically be transformed in an attempt to produce LC-PUFAs." Id. The first list contains over 35 different plants across a large range of possibilities. The second list includes a similarly large range covering most plants that have oil in their fruit. The third list has fifteen plants including non-oilseed plants such as beets and sorghum. Id. at 6.

Moreover, Opponents contend that the Group B patent are also invalid for lack of written description. They highlight that claim 4 of the '792 patent is directed to a "very particular combination of four enzymes for producing DHA via the delta 6 pathway . . . ." Doc. 851 at 15. The Opponents note the specific four enzyme combination within the claim is not disclosed

anywhere in the '792 patent specification. Consequently, since the specification discloses countless options of enzymes to construct the LC-PUFA pathway, "without any guidance to choose or preference stated for the specific set of enzymes that are claimed – there is not written description as a mater of law." As support, the Opponents highlight the specification's generic language as proof that there is no sufficiently detailed example or specific guidance that would direct a POSA to identify the effective four-enzyme combination. They note that Colum 32:1-4 states that "[t]he desaturase, elongase and acyl transferase proteins and genes encoding them may be used in the invention are any of those known in the art or homologs or derivatives thereof." Id. at 14.

Furthermore, the Opponents claim that it is obvious that the effective combination would not be disclosed in the specification as they suggest the combination of enzymes used by the Proponents to achieve LC-PUFA production were learned later through MTEA collaboration with BASF. Opponents cite the jury's finding of co-ownership of the '792 patent as support that CSIRO intentionally targeted BASF enzymes in 2017 (when the '792 patent was filed – nine years after the filing of the original patent specification). Therefore, Opponents rest their argument on the idea that the inventors never possessed the specific claimed combination of enzymes. They focus that no reasonable jury could conclude there was adequate written description without specific language in the specification that would point a POSITA to the specific combination of enzymes used to achieve effective results. As support for their arguments on the Group A and Group B patents, Opponents cite Fujikawa v. Wattanasin, 93 F.3d 1559 (Fed. Cir. 1996) and the more recent case of Idenix Pharm. LLC v. Gilead Scis. Inc., 941 F.3d 1149, 1163 (Fed. Cir. 2019). The Court finds that a summary of Idenix is helpful to analyze Opponents' main arguments.

In Idenix, the Federal Circuit was asked on review of a JMOL order: whether the '597 patent demonstrated that the inventor was in possession of 2' methyl-up nucleosides that fall within the boundaries of the claim (effective treatment options against Hepatitis C) but are not disclosed by explicit formulas or examples in the specification.[2] Idenix, 941 F.3d at 1154. There, "Idenix [the Proponent of the Patent] argues that the key to its invention, and to treatment of HCV, is the use of 2'-methyl-up nucleosides: nucleosides "having a methyl substitution ('CH3') at the 2' 'up' position of the molecule's sugar ring." Id. The Opponent of the patent Gilead argues that the '597 patent specification provided "no guidance in determining which of the billions of potential 2'-methyl-up nucleosides are effective in treating HCV. Id. at 1155. Therefore, according to the Gilead,

> the '597 patent primarily describes 2'-methyl-up nucleosides that have a hydroxyl group (OH) at the 2'-down position. But Gilead's accused product has fluorine (F), not OH, at the 2'-down position. *Id.* According to Gilead, the '597 patent cannot enable the full scope of effective 2'-methyl-up nucleosides at least because its accused embodiment, 2'-methyl-up 2'-fluoro-down, is not disclosed in or enabled by the specification

Id.

The claim at issue in the '597 patent read "A method for the treatment of a hepatitis C virus infection, comprising administering an effective amount of a purine or pyrimidine β-D-2'-methyl-ribofuranosyl nucleoside or a phosphate thereof, or a pharmaceutically acceptable salt or ester thereof." The district court in the case construed the structural limitation "β-D-2'-methyl-ribofuranosyl nucleoside" to require "a methyl group in the 2' up position and non-hydrogen substituents at the 2' down and 3' down positions." There was no dispute in the case that the applications did not disclose the emobidment at issue, "a 2'-methyl-up 2'-fluoro-down

[2] The '597 patent, in Idenix, claims a method of treating HCV [Hepatitis C Virus] by administering nucleoside compounds having a specific chemical and stereochemical structure. The nucleosides claimed in the '597 patent contain a sugar ring having five carbon atoms, numbered 1' (one prime) to 5' (five prime), as well as a base. At each carbon, substituent atoms or groups of atoms can be added in either the "up" or "down" position.

nucleoside", in any formulas or examples within the specification. Id. at 1164. Idenix, thus, was forced to argue "that its claims are directed to the entire genus of 2'-methyl-up compounds for treating HCV, and are enabled by the disclosure of a number of examples, without needing to disclose each species of nucleoside." Id. Generally, the '597 Patent had "eighteen position-by-position formulas describing "principal embodiments" of compounds that may treat HCV. Id. The Federal Circuit noted that "other than generic language regarding 'pharmaceutically acceptable salts and prodrugs thereof' (a category not at issue here), the specification provides no indication that any nucleosides outside of those disclosed in its formulas could be effective to treat HCV." Id.

The Federal Circuit found the '597 patent invalid for lack of written description because the patent "fails to provide sufficient blaze marks to direct a POSA[3] to the specific subset of 2'-methyl-up nucleosides that are effective in treating HCV." Id. Sufficient blaze marks within the specification allow a genus to be "sufficiently disclosed by 'either a representative number of species falling within the scope of the genus or structural features common to the members of the genus so that one of skill in the art can visualize or recognize the members of the genus.'" Id. (citing Ariad, 598 F.3d at 1350). Accordingly, blaze marks have been described within the patent specification as descriptions that "single out particular trees in a forest, rather than simply 'pointing to trees.'" Id. (quoting Fujikawa, 93 F.3d at 1570). Specifically, in Idenix, the court found insufficient blaze marks because the language of the specification "provide[d] no method of distinguishing effective from ineffective compounds for the compounds reaching beyond the formulas disclosed . . . ." Id. As such, "a POSA is deprived of any meaningful guidance into what compounds beyond the [disclosed] examples and formulas" are effective in achieving the

[3] The Federal Circuit in Idenix uses the term POSA to indicate a person ordinarily skilled in the art. Here, Opponents use the abbreviation POSITA to indicate the same type of individual. Therefore, for purposes of this opinion, the Court will use the abbreviation POSITA to mean a person ordinarily skilled in the art.

results of the invention. Id. Therefore, the listing of examples and formulas within a specification "cannot provide adequate written description support" for undisclosed compounds without providing some form of instruction that would enable a POSITA to determine that the undisclosed compound would be effective in achieving the results of the invention. See Id.

Turning first to the Group A patents, they are distinguishable from the situation described by the Federal Circuit in Idenix. In Idenix, the at issue embodiment, a 2'-fluoro-down nucleoside, was noticeably undisclosed as an effective compound within the specification. This lack of disclosure forced a person ordinarily skilled in the art ("POSITA") to extrapolate from generic examples that the effective embodiment was obvious from the text of the specification. Without any baseline guidance of what made that particular formula effective in the treatment of HCV, a POSITA was devoid of any meaningful instruction that the at issue embodiment was actually in the possession of the inventor at the time the patent entered the application process. Therefore, the Federal Circuit buttressed its lack of written description opinion on the fact that the specification (1) contained no disclosure of the effective embodiment and (2) lacked any specific blaze marks for a POSITA to extrapolate the effective embodiment from any of the other formulas and examples disclosed within the specification.

Here, the blueprint for production of Long-Chain Polyunsaturated Fatty Acids ("LC-PUFAs") located in the Group A patent discloses the invention in Brassica napus/canola. Particularly, the disclosures made in the specification list canola at the top of the list of preferred embodiments for the invention. See Doc. 871 at 6-7. At trial, Dr. Kunst testified that "the identification of Brassica napus as the first or second preferred embodiment on these lists would inform the skilled artisan that Brassica napus was particularly 'important' for the blueprint." Doc. 871 at 7. The jury viewing both the disclosure of canola within the specification and Dr.

Kunst's expert testimony could reasonably conclude that the patent conveyed with adequate clarity to a POSITA that the Proponents had possession of the claimed invention. Accordingly, the Court cannot conclude that the jury lacked sufficient evidentiary basis for their verdict. Therefore, the Court **DENIES** Opponents' Motion for Judgment as a Matter of Law with regard to the Group A patents.

Turning to the Group B patent, Opponents highlight that the specification "generically discloses countless options of enzymes to construct the LC-PUFA production pathway—without any guidance to choose or preference stated for the specific set of enzymes that are claimed." Doc. 851 at 13. They argue that this type of generic disclosure lacks the blaze marks that could be used by a POSITA to determine the effective combination. Id. Similar to the Group A patents, Opponents rely on Idenix for the general notion that a "'description that merely renders the invention obvious does not satisfy' the written description requirement." Idenix, 941 F.3d at 1165 (quoting Ariad, 598 F.3d at 1353).

Proponents refute Opponents' argument by highlighting that the Group B specification explains that the inventors identified multiple efficient combinations of enzymes that are included in the specification within table 1 and table 2. Specifically, the claim at issue highlights a specific combination from the tables as "a transgenic *Brassica* seed comprising the following exogenous enzymes: Δ6 elongase, *Ostreococcus tauri* Δ6 desaturase, *Thraustochytrium* sp. Δ5 desaturase, *Ostreococcus tauri* Δ5 elongase, and *Pavlova lutheri* Δ4 desaturase." Doc. 871 at 15. Proponents aver that a POSITA reading the specification "would naturally be led to Tables 1 and 2 of the specification, where each of the specific enzymes of the asserted claim is identified." Doc. 871 at 16. Proponents cite that "Tables 1 and 2 guide and direct the skilled artisan to specific enzymes (e.g., grouped by functionality) from organism (e.g., microalgae) that can be used in a specifically identified combination, to work in a particularly identified sequence." Doc. 871 at

17. They point to the fact that the specification notes the "inventors identified an efficient combination of microalgal enzymes using Micromonas pusillia to transform canola." Doc. 871 at 15 (emphasis in original).

Proponents conclude there was ample evidence at trial for the jury to conclude there was adequate written description including the testimony of Dr. Kunst who affirmed that a POSITA would have seen the list of enzymes and be "led to the claimed combination of enzymes." Doc. 871 at 17. Dr. Kunst, at trial, was asked about these tables in the specification:

> Q. Okay. And I think we'll recall that Dr. Murphy put up the table from the patent, Table 1 and table 2. Can you explain what those tables describe in the patent?
>
> A. So I know this lettering is really tiny and is difficult to see, but in Table 1 all the functionality -- each enzyme is listed by functionality, so delta-6 desaturases, delta-6 elongases, and so on, and so under each functionality there's a list of enzymes that were known that fall into that category.
>
> And so one would use -- so this was like material that you could use to put your pathway together according to the rules of the blueprint. So if you know that you're going to use the blueprint and that is the delta-6 pathway, you would need to select one enzyme from each category and put them together to make DNA -- to make DHA.

Tr. 1755:9-23. Moreover, Dr. Kunst testified that specification guided a POSITA to the specific combination of enzymes:

> Q. Dr. Kunst, in your opinion, does this patent, the '792 patent, demonstrate that the inventors had invented the combination of enzymes that's claimed in claim 4?
>
> A. Yeah, it definitely guides the scientists. It's a roadmap to the pathway, basically, to the delta-6 pathway, and specifically with the delta-6 desaturase or desaturases that use CoA substrates.

Tr. 1759:13-19. However, when asked about the specific *Pavlova lutheri* Δ4 desaturase (one of the claimed 4 enzymes) was disclosed anywhere in the 200 plus columns of the patent (besides the table), Dr. Kunst responded "Well, if there were, I would have indicated it. But, like I said, there isn't a disclosure in the table." Tr. 1869:3-4. Opponents argue that "a cursory review of Dr. Kunst's testimony makes clear that she merely worked backwards from the claim, identified the

claimed enzymes in the specification, and contended that was adequate written description." Doc. 875 at 10; see Novozymes, 723 F.3d at 1349 (written description cannot be established with hindsight reconstruction using disclosures "plucked selectively" from the specification).

Yet, the Federal Circuit explained that the specification "does not require theory or explanation of how or why a claimed composition will be effective" but instead requires some sort of record evidence that a person ordinarily skilled in the art would have understood that the particular invention was effective. See Nuvo Pharm. (Ireland) Designated Activity Co. v. Dr. Reddy's Laboratories Inc., 923 F.3d 1368, 1380 (Fed. Cir. 2019) ("the record evidence demonstrates that a person of ordinary skill in the art would not have known or understood that uncoated PPI is effective. And there is nothing in the specification of the patents-in-suit showing 'that the inventor actually invented the invention claimed.'"). Dr. Kunst testified exactly to this point. She confirmed that certain sections of the specification contain adequate blaze marks for a POSITA to select effective combinations of enzymes from the tables in the specification It is clear to the Court that the specification does in fact points to generalities about the enzymes characteristics such as col. 4 ll. 48–49 ("The desaturase preferably has greater activity on an acyl-CoA substrate than a corresponding acyl-PC substrate.") or col. 8 ll. 35–38 ("In a further embodiment, one or more or all of the desaturases expressed from exogenous polynucleotides in the cell of the invention have greater activity on an acyl-CoA substrate than the corresponding acyl-PC substrate.") which could lead a POSITA in the direction of selecting the claimed enzyme combination. Therefore, the situation here is distinguishable from Idenix because there "the listed examples and formulas cannot provide adequate written description support for undisclosed nucleosides that also happens to treat HCV." Idenix, 941 F.3d at 1164 (emphasis added).

At this posture, the Court is required to consider the record as a whole in the light most favorable to the non-movant and only grant judgment as a matter of law where the evidence presented supports only one reasonable verdict. Dotson v. Pfizer, Inc., 558 F.3d 284, 292 (4th Cir. 2009). It is not the job of the Court at this stage to weigh the credibility of the evidence and overturn the jury's verdict based on its own factual review. Accordingly, based on a reading of the specification and the testimony of Dr. Kunst, the Court cannot conclude that there was only one reasonable conclusion regarding the jury's written description determination. Therefore, Opponents' Motion for Judgment as a Matter of Law is **DENIED** with regard to the Group B patent.

B. February 2003 Date

Opponents contend that the Court should grant JMOL that claim 1 of the '357 patent and claim 2 of the '880 patent were not conceived in February 2003 because there was no legally sufficient evidentiary basis to conclude that Dr. Singh conceived of the inventions at that time. Proponents respond that Dr. Singh clearly testified that "inventors began working with and transforming canola to produce monounsaturated fatty acids no later than 2000" and "inventors conceived of transforming plants (particularly canola) to produce LC-PUFAs such as EPA using exogenous enzymes from the Δ6 pathway—in particular, desaturases with acyl-CoA preference—no later than February 2003." Doc. 871 at 21. This testimony was corroborated by multiple details. Proponents aver that "[f]irst, Dr. Singh had a lab notebook with a February 10, 2003 entry that showed that the inventors were already attempting to isolate candidate genes for its Δ6 pathway construct" and "[s]econd, there was a February 20, 2003 proposal that sought funding for the transformation of *Arabidopsis* using a Δ6 pathway construct." Doc. 871 at 21. They also aver that Dr. Petrie corroborated Dr. Singh's testimony by stating that "the inventors

were already isolating candidate genes for its Δ6 pathway construct" in March of 2003. Id. It appears from this evidence presented at trial that a reasonable juror could have concluded that the CSIRO inventors conceived of the alleged inventions of the above Group A claims as of February 2003. Therefore, Opponents' Motion for Judgment as a Matter of Law is **DENIED** regarding lack of conception in February 2003.

C. Co-Ownership

Moreover, Opponents move for JMOL that BASF/Cargill co-own the Group A, D and patents. Opponents aver that since the jury found that BASF co-owns the Group B patent then the only logical conclusion is that they own the Group A patents as well. They essentially argue that Proponents did not dispute the evidence at trial which "showed that any intellectual property subsisting in the MTEA's Joint New Materials and Joint Results is jointly owned by BASF and CSIRO." Doc. 851 at 23. They conclude that the "MTEA defines "Joint New Materials" as constructs containing both CSIRO and BASF genes" and "Joint Results" is defined as results with respect to Joint Transformed Lines and Joint New Materials." Doc. 851 at 23. Therefore, Opponents conclude that "the '579 and '033 Group A Patents—just like the Group B patent—arise from the Joint New Materials and Joint Results under the MTEA." Doc. 851 at 23. They state that this is true because "Dr. Singh stated that based on the results of the MTEA, '10% DHA in canola is achievable [sic].'" PX-299 at CSI00142267 (Singh email attaching "090821 BASF-CSIRO Joint Evaluation Summary"), Ex. 23 hereto Doc. 851 at 24. Moreover, they contend that "Dr. Singh confirmed those statements in PX-299 that the amount of data shared by BASF under the MTEA was 'quite substantial' and of 'extremely good value.'" Doc. 851 at 24.

Additionally, Opponents cite jury confusion as part of the reason that they found there was not co-ownership of the Group A patents. They state that "Proponents made reference to that

priority '571 application in a concerted effort to give the jury the false impression that the later issued Group A patents were identified as being owned by CSIRO, such that it was not possible for BASF to co-own the patents." Id. For example, Opponents cite that Proponents' Counsel "elicited testimony concerning certain patent materials identified in the MTEA; and that if a patent was identified in the MTEA as belonging to CSIRO, then it belonged to CSIRO only, meaning BASF could not be a co-owner of that patent. Id. at 25.

Proponents respond that the patents in suit do not claim any "Joint New Materials" or "Joint Transformed Lines" that were collaboratively developed under the MTEA. Proponents note that "[t]he evidence also showed that nothing jointly developed or confidentially obtained from BASF pursuant to the MTEA is claimed in any of the patents-in-suit . . . [and] *all* of the witnesses with personal knowledge of the work developed under the MTEA or the information exchanged during the MTEA testified that CSIRO never used any "Joint Results" (let alone "Joint Transformed Lines" or "Joint New Materials") or BASF's confidential information to procure any of the patents-in-suit, even when BASF had an opportunity to raise this with CSIRO many years before the litigation between the parties began." Doc. 871 at 27.

Reviewing the testimony and evidence, it is apparent that there was adequate evidence presented from both parties allowing a jury to come to a reasonable conclusion for either side. Therefore, the court cannot find at this stage of the proceeding that the evidence weighed entirely in favor of one party over the other. Therefore, Opponents' Motion for Judgment as a Matter of Law is **DENIED** regarding co-ownership of the Group A, D and E patents.

V. MOTIONS FOR A NEW TRIAL

Both Opponents and Proponents move for a new trial under Fed. R. Civ. P. 59. Under the rule, "on a motion for a new trial, the district court may weigh the evidence and should grant a new trial only if "1) the verdict is against the clear weight of the evidence, 2) is based on

evidence which is false, or 3) will result in a miscarriage of justice." Bryant v. Aiken Regl. Med. Centers Inc., 333 F.3d 536, 543 (4th Cir. 2003). Both Proponents and Opponents argue that a new trial should be granted regarding the same issues that were argued in their motions for judgment as a matter of law. For the reasons discussed supra, the Court has already determined that the jury's decision is supported by legally sufficient evidence. Therefore, the Court **FINDS** that the verdict of the jury is not against the clear weight of the evidence. Accordingly, the Court **DENIES** both Proponents' and Opponents' motions for a new trial.

VI. CONCLUSION

For the reasons stated above, the Court **DENIES** the Proponents' Motion for Judgment as a Matter of Law and a New Trial under Fed. R. Civ. P. 50(B) and 59(a) and **DENIES** Opponents' Motion for Judgment as a Matter of Law and a New Trial under Fed. R. Civ. P. 50(B) and 59(a).

The Clerk is **REQUESTED** to distribute a copy of this Opinion and Order to counsel of record.

It is **SO ORDERED**.

/s/
Henry Coke Morgan, Jr.
Senior United States District Judge

Norfolk, Virginia
September 2, 2020

HENRY COKE MORGAN, JR.
SENIOR UNTIED STATES DISTRICT JUDGE