IN THE UNITED STATES DISTRICT COURT

FOR THE WESTERN DISTRICT OF WISCONSIN

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NOVOZYMES A/S and
NOVOZYMES NORTH AMERICA, INC.,

OPINION and ORDER

Plaintiffs,

10-cv-251-bbc

v.

DANISCO A/S,
GENECOR INTERNATIONAL WISCONSIN, INC.,
DANISCO US INC. and DANISCO USA INC.,

Defendants.

- -

Plaintiffs and defendants are competitors in what the parties agree is essentially a two-party market for enzymes called alpha-amylases used in making fuel ethanol. In 1999, plaintiffs began selling their product, Liquozyme, and acquired as much as 80% of the relevant market. In March 2008, defendants began selling an alpha-amylase called GC358, which began taking business from Liquozyme. In the meantime, plaintiffs filed an application for what later became U.S. Patent No. 7,713,723, which discloses a modified alpha-amylase that achieves "increased thermostability" under particular conditions. That patent was issued on May 11, 2010, the same day plaintiffs filed this lawsuit.

Plaintiffs contend that GC358 and a more recently developed product defendants make, GC980, infringe the '723 patent and they have filed a motion to preliminarily enjoin defendants from selling those products. Dkt. #28. The court held a hearing on plaintiffs' motion on September 17, 2010. Plaintiffs' motion will be denied because they have failed to show that they will be irreparably harmed or that issuing an injunction would serve the public interest. In addition, a substantial question remains whether the '723 patent is invalid.

From the parties' proposed findings of fact and the record, I find that the following facts are undisputed.

UNDISPUTED FACTS

Plaintiff Novozymes A/S is the owner of U.S. Patent No. 7,713,723; plaintiff Novozymes North America is the exclusive licensee. Defendants Danisco USA Inc., Danisco US Inc. and Genencor International Wisconsin, Inc. are subsidiaries of defendant Danisco A/S.

A. The Patent

The '723 patent relates to "variants" of an enzyme called an alpha-amylase, which breaks down starches into smaller chains of glucose. One use for alpha-amylases is to help convert corn into fuel ethanol by adding it to a mix of ground corn and water to break up

the starch molecules into smaller molecules. This makes the mixture less viscous and more easily transported through pipes. The mixture is then heated at temperatures over 80 degrees for up to several hours. Because of the high temperatures used, one important feature of an alpha-amylase is its thermostability, which is its capacity to keep working, or maintain "activity," under high temperatures.

Like all enzymes, alpha-amylases are proteins made up of combinations of the 20 existing amino acids. Alpha-amylases are made naturally by bacteria and fungi, but alpha-amylases cultivated from natural strains of bacteria may degrade quickly when heated or may not be very effective in reducing the viscosity of the corn mixture. Traditionally, these problems were addressed by adding more alpha-amylase during the heating stage or by adding lime to enhance stability.

The amino acid sequences of alpha-amylases can be modified artificially to improve their performance. This can happen in three ways: (1) by "substituting" one or more amino acids with other amino acids; (2) by removing or "deleting" one or more amino acids; or (3) by adding or "inserting" one or more amino acids. When enzymes are modified, the original is called the "parent" and the modified enzyme is called the "variant."

The claims of the '723 patent disclose a variant of an alpha-amylase that has "increased thermostability relative to the parent alpha-amylase." In particular, the claims involve a "substitution of serine at position 239" of the amino acid sequence. There are 17

claims in total, but claim 1 is representative for the purpose of plaintiffs' motion:

> An isolated variant of a parent alpha-amylase, wherein:
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> (a) the variant has at least 90% sequence identity to SEQ ID NO: 6,
>
> (b) the variant comprises a substitution of serine at position 239 relative to the parent alpha-amylase, using the amino acid sequence of SEQ ID NO: 8 for determining position numbering, and
>
> (c) the variant has increased thermostability relative to the parent alpha-amylase, wherein thermostability is determined at pH 4.5, 90° C. and 5 ppm calcium and has alpha-amylase activity.

B. History of Competition Between the Parties

Both plaintiffs and defendants sell alpha-amylase, typically under one or two-year supply contracts. Defendants dominated the market until 1999, when plaintiffs began selling an alpha-amylase called Liquozyme. At one point, plaintiffs' Liquozyme accounted for more than 80% of the dry mill fuel ethanol market. (The parties dispute the benefits of using Liquozyme. Plaintiffs say that Liquozyme was superior to anything else on the market because it "retained its chemical properties and maintained its effectiveness at high temperatures, without the need for added calcium." Plts.' PFOF ¶ 57, dkt. #28. Defendants say that "Liquozyme's primary advantage over earlier products was that it was better able to reduce the viscosity of the slurry (corn mash), which allowed for greater ethanol production rates." Dfts.' Resp. to Plts.' PFOF ¶ 56, dkt. #71.)

In 2008, defendants began selling an alpha-amylase called GC358, which is one of the accused products. A second accused product is GC980, which "is a blend of the GC358 alpha-amylase and another enzyme called 'phytase.'" (Plaintiffs say that their claims are not limited to these two products, but they do not identify any others.) Since defendants introduced GC358, Liquozyme's share of the market has dropped to approximately 60%.

Plaintiffs do not sell a product that practices the '723 patent. (Plaintiffs say that Liquozyme is covered by another patent.)

OPINION

"When a patentee sues an alleged infringer for patent infringement and, for the purpose of immediately preventing further alleged infringement, moves under 35 U.S.C. § 283 for the extraordinary relief of a preliminary injunction, the patentee's entitlement to such an injunction is a matter largely within the discretion of the trial court." Titan Tire Corp. v. Case New Holland, Inc., 566 F.3d 1372, 1375 (Fed. Cir. 2009). The four factors courts must consider are well-established. A plaintiff must show "[1] that he is likely to succeed on the merits, [2] that he is likely to suffer irreparable harm in the absence of preliminary relief, [3] that the balance of equities tips in his favor, and [4] that an injunction is in the public interest." Id. (quoting Winter v. Natural Resource Defense Council, Inc., — U.S. —, 129 S. Ct. 365, 374 (2008)). "Although the factors are not applied mechanically,

a movant must establish the existence of both of the first two factors to be entitled to a preliminary injunction." Altana Pharma AG v. Teva Pharmaceuticals USA, Inc., 566 F.3d 999, 1005 (Fed. Cir. 2009).

A. Irreparable Harm

I begin with the issue of irreparable harm because it is likely to be dispositive by itself. Plaintiffs say they need a preliminary injunction to avoid three types of harm: (1) diminished reputation; (2) loss of market share; and (3) price erosion. In considering these alleged harms, it must be remembered that "[t]he purpose of a preliminary injunction is merely to preserve the relative positions of the parties until a trial on the merits can be held." University of Texas v. Camenisch, 451 U.S. 390, 395 (1981). See also Abbott Laboratories v. Andrx Pharmaceuticals, Inc., 452 F.3d 1331, 1349 (Fed. Cir. 2006) ("Precedent counsels against making an important change in the relationship of the parties while their dispute is being litigated."); Smith International, Inc. v. Hughes Tool Co., 718 F.2d 1573, 1578 (Fed. Cir. 1983) ("A preliminary injunction will normally issue only for the purpose of preserving the status quo and protecting the respective rights of the parties pending final disposition of the litigation."). Many of plaintiffs' arguments ignore this principle by focusing on "harm" that occurred before the '723 patent was issued in May 2010, when it was perfectly legal for defendants to use GC358 to compete with Liquozyme. That is, much of plaintiffs' alleged

harm is their inability to *change* the status quo by regaining market share they lost to defendants before May 2010.

Plaintiffs have not shown that they are likely to lose a significant amount of additional market share between now and trial. The accused products had been on the market for more than two years when the '723 patent was issued. It is undisputed that most of the contracts the parties have with their customers are for one or two years, which means that customers who are inclined to switch from Liquozyme to GC358 or GC980 have had an opportunity to do so before now. Plaintiffs fail to explain why additional customers are likely to switch in the next few months. (In their proposed findings of fact (filed in July), plaintiffs identified two contracts that they said they were in danger of losing in August with Pacific Ethanol and White Energy. Plts.' PFOF ¶¶ 205-08, dkt. #30. However, at the hearing (on September 17), plaintiffs were unable to say what had happened to those contracts.)

Plaintiffs' argument regarding price erosion is similar. They say that "[c]ustomers are very reluctant to accept a return of higher prices after a significant period of paying discounted prices." Plts.' Br., dkt. #29, at 34. Because defendants have already been selling the accused products at a lower price for "a significant period," any damage on that front is likely already done. Further, plaintiffs' "price erosion" argument is somewhat disingenuous because they do not suggest that they have lowered their prices since 2008 or that they have

any intent to do so in the future. Thus, this is simply a restatement of plaintiff's argument regarding lost market share.

Plaintiffs' argument regarding reputational harm is vague and undeveloped. In their opening brief, plaintiffs include the following discussion:

> An expectation of exclusivity is one of the values that motivated Novozymes to invest its research and development resources in commercializing the technology claimed in the '723 patent. More fundamentally, Novozymes's investment in this technology has brought it a reputation as a leader in the field of industrial enzymes for fuel ethanol production. The ability for Novozymes to uniquely make and sell its patented alpha-amylase and related enzymes significantly enhances Novozymes's reputation and its future prospects for success in this industry.

Plts.' Br., dkt. #29, at 33. This argument could be persuasive if plaintiffs actually sold a product that practiced the '723 patent. However, it is difficult for plaintiffs to argue that their good reputation is contingent on their ability "to uniquely make and sell [their] patented alpha-amylase" when they are not even using the claimed technology themselves and have identified no plans to do so. If plaintiffs are not trying to protect their own right to provide consumers a product that embodies the patent, then it may be that the patent is nothing more than a weapon to prevent defendants from competing with them.

Another relevant factor is plaintiffs' delay in seeking a preliminary injunction after they filed this lawsuit. High Tech Medical Instrumentation, Inc. v. New Image Industries, Inc., 49 F.3d 1551, 1557 (Fed. Cir. 1995) ("Delay in seeking a remedy is an important factor

bearing on the need for a preliminary injunction.") Plaintiffs say they waited because they were busy testing defendants' products, getting an expert, preparing their motion and giving defendants "an opportunity to withdraw [their] infringing products from the market." Plts.' Br., dkt. #89, at 45. However, plaintiffs could have accomplished the first three things in the days leading up to the filing of the lawsuit and they could have negotiated with defendants before *and* after they filed a preliminary injunction motion. Although the delay was only two months, in light of the relatively short time to trial in this court, plaintiffs' decision to wait to file their motion is an indication that they can wait a few months more.

Even if I concluded that plaintiffs were likely to be harmed without an injunction, they still would have to show that damages would be unable to remedy that harm. Plaintiffs say little about this issue in their briefs. Their primary argument seems to be that they will not be able to get their market share back if they have to wait for a final judgment, an injury that is too difficult to quantify with damages. However, the court of appeals has said that "neither the difficulty of calculating losses in market share, nor speculation that such losses might occur, amount to proof of special circumstances justifying the extraordinary relief of an injunction prior to trial." Nutrition 21 v. United States, 930 F.2d 867, 871 (Fed. Cir. 1991). Thus, plaintiffs must do more than say that they are losing market share.

Plaintiffs cite Polymer Technologies, Inc. v. Bridwell, 103 F.3d 970, 975-76 (Fed. Cir. 1996), for the proposition that "[c]ompetitors change the marketplace. Years after

infringement has begun, it may be impossible to restore a patentee's (or an exclusive licensee's) exclusive position by an award of damages and a permanent injunction." However, plaintiffs do not explain how this observation applies to a market that has only two major players. By plaintiffs' own assertion, GC358 and GC980 are the only products defendants sell that have comparable quality to Liquozyme. If those products are taken off the market after trial, what alternatives will customers have but to return to Liquozyme? Plaintiffs do not argue that they will be unable to quantify any loss in market share that they suffer until that time.

B. Likelihood of Success on the Merits

Even if I assumed that plaintiffs will suffer irreparable harm, a substantial question remains whether '723 patent will survive defendants' challenge to the patent's validity. "[I]f the trial court concludes there is a 'substantial question' concerning the validity of the patent, meaning that the alleged infringer has presented an invalidity defense that the patentee has not shown lacks substantial merit, it necessarily follows that the patentee has not succeeded in showing it is likely to succeed at trial on the merits of the validity issue." Titan Tire Corp., 566 F.3d at 1378-79. (Defendants raise a noninfringement argument as well, but I need not consider that at this stage.)

Defendants' theory of invalidity relies on the fact that plaintiffs did not file the claims

for the '723 patent until 2009. Plaintiffs obtained a much earlier priority date because the patent office agreed that the '723 patent was a continuation of earlier applications that used the same specfication. However, defendants argue that plaintiffs did not actually come up with the claims of the '723 patent back in 2000. In particular, defendants say that the written description filed in 2000 may have been broad enough to encompass the claims in the '723 patent, but it did not adequately disclose a "substitution of serine at position 239" that exhibits "increased thermostability relative to the parent alpha-amylase, wherein thermostability is determined at pH 4.5, 90° C and 5 ppm calcium." The parties agree that these elements are required by all of the asserted claims of the '723 patent.

"[T]he test for sufficiency [of the written description] is whether the disclosure of the application relied upon reasonably conveys to those skilled in the art that the inventor had possession of the claimed subject matter as of the filing date." Ariad Pharmaceuticals, Inc. v. Eli Lilly and Co., 598 F.3d 1336, 1351 (Fed. Cir. 2010). In arguing that the written description of the '723 patent satisfies this standard with respect to the elements challenged by defendants, plaintiffs point to the following passages in the specification:

> variant[s] of a parent Termamyl-like alpha-amylase, comprising an alteration at one or more positions (using SEQ ID NO:8 for the amino acid numbering) selected from the group of:
>
> 49, 60, 104, 132, 161, 170, 176, 179, 180, 181, 183, 200, 203, 204, 207, 212, 237, 239, 250, 280, 298, 318, 374, 385, 393, 402, 406, 427, 430, 440, 444, 447, 482,

wherein

(a) the alteration(s) are independently

(i) an insertion of an amino acid downstream of the amino acid which occupies the position;

(ii) a deletion of the amino acid which occupies the position, or

(iii) a substitution of the amino acid which occupies the position with a different amino acid,

(b) the variant has alpha-amylase activity and

(c) each position corresponds to a position of the amino acid sequence of the parent Termamyl-like alpha-amylase having the amino acid sequence shown in SEQ ID NO:8.

'723 patent, col. 7, lns. 36-57.

The present invention relates to variants (mutants) of parent Termamyl-like alpha-amylases, which variant has alpha-amylase activity that exhibits an alteration in at least one of the following properties relative to said parent alpha-amylase: stability under, e.g., high temperature and/or low pH conditions, in particular at low calcium concentrations. The variant[s] of the invention are suitable for starch conversion, ethanol production, laundry wash, dish wash, hard surface cleaning, textile desizing, and/or sweetener production.

'723 patent, col. 1, lns. 28-36

In the context of the present invention "high temperature" means temperatures from 70-120º C., preferably 80-100º C., especially 85-95º C.

In the context of the present invention the term "low pH" means from a pH in the range from 4-6, preferably 4.2-5.5, especially 4.5-5.

* * *

> In the context of the present invention the term "low calcium concentration" means free calcium levels lower than 60 ppm, preferably 40 ppm, more preferably 25 ppm, especially 5 ppm calcium.

'723 patent, col. 7. lns. 10-21. (Although the citations are to the patent issued in 2010, the parties agree that the specification was not changed in any relevant way between 2000 and 2010.)

From these passages, plaintiffs say a person of ordinary skill in the art would understand that plaintiffs had possession of an invention for a variant of an alpha-amylase involving a substitution at position 239 that leads to increased thermostability at pH 4.5, 90˚ C and 5 ppm calcium. Defendants disagree. They point out that the cited passages do not identify any of the following:

- which of the 33 positions should be altered;
- whether the alteration should be "an insertion of an amino acid downstream of the amino acid which occupies the position," "a deletion of the amino acid which occupies the position" or "a substitution of the amino acid which occupies the position with a different amino acid";
- what particular beneficial result will be obtained if the alteration is made.

Defendants say that these variables create 8.589×10^{42} possibilities for experimentation. (Apparently, defendants generated this number by multiplying each possible combination of amino acids at any of the 33 positions, or $20^{33} - 1$.) In addition, they note that the

specification includes testing data of *other* variants that will lead to increased thermostability, but no data for a substitution at position 239.

Plaintiffs do not deny that the specification is missing this information. In fact, their expert seems to concede these points. Arnold Dep., dkt. 101-2, at 72 ("There's nothing in the specification . . . by itself that specifically points to position 239 as increasing thermostability."); id. at 106 ("The specification, other than what's in the examples, does not assign specific mutations to alterations in specific beneficial properties."); id. at 94 (answering "no" to the question whether there is "any identification of a particular amino acid residue that can be substituted for serine at position 239 that . . . is beneficial with respect to increasing the thermostability of one of these variants in the patent"). Instead, plaintiffs criticize defendants for focusing on the possible variations discussed in the specification rather than the variations in the claims themselves. However, it is plaintiffs who seem to have it backwards. The question is whether the written description points the reader toward the claimed invention, not whether one can read the claims and work backward to search the specification for possible references to those claims. The cases plaintiffs cite are not to the contrary. Ariad Pharmaceuticals, 598 F.3d at 1351 ("[T]he description must clearly allow persons of ordinary skill in the art to recognize that the inventor invented what is claimed."); Vas-Cath, Inc. v. Mahurkar, 935 F.2d 1555, 1563-64 (Fed. Cir. 1991) ("[T]he applicant must also 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. The invention is, for purposes of the 'written description' inquiry, *whatever is now claimed*.") (emphasis in original).

Plaintiffs cite Ariad Pharmaceuticals, 598 F.3d at 1353, for the proposition that "the written description requirement does not demand either examples or an actual reduction to practice." However, the next sentence in the opinion states that "a constructive reduction to practice that in a definite way identifies the claimed invention" is required. Id. Plaintiffs have not shown that the written description does this. A patent does not need to provide testing data related to the claim, but it must demonstrate in some form that the inventor "possessed" the invention when he submitted the written description. In other words, the written description must demonstrate that plaintiffs knew as of 2000 and 2001 that making a substitution at position 239 would lead to increased thermostability under the claimed conditions and that they did not simply list 33 positions they hoped would lead to some beneficial result when altered in some way. University of Rochester v. G.D. Searle & Co., Inc., 358 F.3d 916, 930 (Fed. Cir. 2004) ("A patent is not . . . a reward for the search, but compensation for its successful conclusion.") (quoting Brenner v. Manson, 383 U.S. 519, 536 (1966)).

At the hearing, plaintiffs cited Application of Driscoll, 562 F.2d 1245(CCPA 1977), for the proposition that the written description of the '723 patent did not need to be more

any more specific than it is to adequately disclose the claims. Because plaintiffs did not discuss Driscoll in their briefs, defendants did not have an opportunity to discuss it, but its application to this case is questionable. In Driscoll, 562 F.2d at 1249, the court considered whether it was permissible to claim an invention involving "a class of chemical compounds in terms of a structural formula wherein the substituents thereof are defined as 'a member selected from the group consisting of A, B, C, D * * *.'" The court referred to these classes as Markush groups, after the name of a case in which they were first discussed. Id. (citing Ex parte Markush, 1925 C.D. 126, 340 O.G. 839). The court concluded that the groups were permissible because "[i]t is generally understood that in thus describing a class of compounds an applicant is, in effect, asserting that the members of the Markush group do not fall within any recognized generic class, but are alternatively usable for the purposes of the invention, and therefore, regardless of which of the alternatives is substituted on the basic structure, the compound as a whole will exhibit the disclosed utility."

Driscoll does not seem to provide guidance in this case for multiple reasons. First, a "Markush group is a form of drafting *a claim term* that is . . . used in a claim to limit the claim to a list of specified alternatives." Abbott Laboratories v. Andrx Pharmaceuticals, Inc., 473 F.3d 1196, 1210 (Fed. Cir. 2007) (emphasis added). Thus, the concept "does not have any meaning within the context of a written description of a patent." Id.

Second, Driscoll says that a Markush group exists only when each member of a group

is "alternatively usable for the purposes of the invention." Driscoll, 562 F.2d at 1249. Plaintiffs do not suggest that any of the other 32 positions listed in the specification would have the same effect as position 239 or that a deletion or insertion would have the same effect as a substitution.

Perhaps Driscoll could be relevant if one reads the specification as disclosing an invention for each of the 33 positions rather than simply stating that one or more of these positions could lead to promising results if altered. That is certainly plaintiffs' position, though, as discussed above, it is far from clear whether the inventors provided any reason to believe that many of these positions were important. However, even if I assume that listing 33 positions is allowed under Driscoll, that is not enough. That is, even if the specification leads the person of ordinary skill in the art to position 239, the question remains whether it adequately describes what to do with that position or what desirable result will be achieved. Although the claims disclose a substitution at position 239, the specification discloses only an *alteration* of some kind, which could be a substitution, a deletion or an insertion at any position "downstream" from 239. At the hearing, plaintiffs stated that the alpha-amylases used in the invention have approximately 500 amino acids, which means that hundreds of possibilities are created by this variable alone.

Further, plaintiffs do not deny that the specification never ties a substitution (or even an alteration) at position 239 to "increased thermostability." The passages they cite refer

to "altered" stability under high temperatures, but they do not identify whether the stability will be higher or lower. Cf. Eli Lilly and Co. v. Teva Pharmaceuticals USA, Inc., Nos. 2010-1005, 2010-1033, — F.3d —, 2010 WL 3421360, *16 (Fed. Cir. Sept. 1, 2010) (written description not adequate because "[o]ne reading the [Particle Size Patent] in 1996 would not know whether the particle size was being increased or decreased [or remain the same] in the formulation.") (alterations in original). Although plaintiffs say that a person of ordinary skill in the art would know that "altered" means "increased," they cite no support for that view. Further, even if it would be obvious to a person of ordinary skill in the art how to "fill in the blanks" left in the specification, that is not enough. Lockwood v. American Airlines, Inc., 107 F.3d 1565, 1572 (Fed. Cir. 1997) ("A description which renders obvious the invention for which an earlier filing date is sought is not sufficient."). The specification must "show that the inventor actually invented the invention claimed," Ariad Pharmaceuticals, 598 F.3d at 1350-51, not leave the details for someone else to piece together.

Driscoll seems less on point than the cases cited by defendants in which the court of appeals rejected patents on the ground that the specification did not include "blaze marks" pointing toward the claimed invention. In re Ruschig, 379 F.2d 990, 994-95 (1967) ("It is no help in finding a trail . . . to be confronted simply by a large number of unmarked trees.") For example, in Fujikawa v. Wattanasin, 93 F.3d 1559, 1571 (Fed Cir. 1996), the court

stated that it was not enough to include a claimed chemical compound in the specification as part of a "lis[t] [of] one possible choice for one position" because, if "this [were] the case, a 'laundry list disclosure of every possible moiety for every possible position would constitute a written description of every species in the genus. This cannot be because such a disclosure would not 'reasonably lead' those skilled in the art to any particular species." Defendants argue that plaintiffs did the same thing in their specification by listing a large number of possible variants without emphasizing the claimed one in particular. Plaintiffs have not provided a persuasive argument for distinguishing Fujikawa.

A distinct but related problem is raised by defendants' argument regarding lack of enablement. Ariad Pharmaceuticals, 598 F.3d at 1351 ("Since its inception, this court has consistently held that § 112, first paragraph, contains a written description requirement separate from enablement.") "To be enabling, the specification of a patent must teach those skilled in the art how to make and use the full scope of the claimed invention without 'undue experimentation.'" Genentech Inc. v. Novo Nordisk A/S, 108 F.3d 1361, 1365 (Fed. Cir. 1997). Defendants' primary argument is that the claims require too much experimentation because they do not identify how to choose the parent alpha-amylase. Instead, claims 1-15 cover any parent that has anywhere from 90 percent to 99 percent sequence identity to particular alpha-amylases. According to defendants, even 99 percent sequence identity creates 7.117×10^{15} possibilities for variants. In addition, defendants note that neither the

claims nor the specification identifies *which* amino acid should be substituted for serine at position 239. That too is left for the practitioner to figure out.

Plaintiffs argue that the failure to identify particular substitutions is not a problem because there are only 20 amino acids and a person of ordinary skill in the art would have no difficulty making those substitutions. ALZA Corp. v. Andrx Pharmaceuticals, LLC, 603 F.3d 935, 940 (Fed. Cir. 2010) ("Enablement is not precluded where a 'reasonable' amount of routine experimentation is required to practice a claimed invention."). However, plaintiffs do not provide a persuasive response to defendants' argument that the claims cover a huge number of parent alpha-amylases without identifying how to choose among them. Plaintiffs say only that defendants have submitted patent applications that also allow for less than 100 percent sequence identity. "They did it too" is not a viable argument. It may be that other patents include similar allowances because a person of ordinary skill in the art would have no trouble identifying particular parent alpha-amylases that lead to the claimed result. However, plaintiffs have not made that showing at this stage of the proceedings.

In sum, plaintiffs cannot simply identify a position on an enzyme that is already known in the art and then claim that they invented any subsequent discovery related to that position. This may be a case in which plaintiffs "provide[d] only a starting point, a direction for further research," Genentech, Inc. v. Novo Nordisk A/S, 108 F.3d 1361, 1366 (Fed. Cir. 1997), rather than a true invention.

C. Balance of Harms

This factor favors defendants as well. Plaintiffs have 60 percent of the market share; defendants have between 30 percent and 35 percent. As discussed above, plaintiffs have not shown that their market share is likely to dwindle further if no injunction is granted. However, if defendants are enjoined, they may very well be crippled and unable to recover even if the injunction is lifted after trial. Again, plaintiffs' own assertion is that defendants' non-accused alpha-amylases are "technically inferior" to Liquozyme and are not sold in "significant quantities." Plts.' Resp. to Dfts.' PFOF ¶ 120, dkt. #90. Thus, plaintiffs essentially are asking for assistance in maintaining a monopoly at least until the end of trial.

D. Public Interest

Finally, I am not persuaded at this stage of the proceedings that an injunction would serve the public interest. Defendants acknowledge that they do not have a product that practices the '723 patent and they do not suggest that they have plans to make one in the future or even to license the patent to a third party. Thus, if defendants' accused products are taken off the market, customers will be deprived of the invention entirely for the course of these proceedings. It is somewhat inconsistent for plaintiffs to be arguing on one hand that the '723 patent represents an important new invention and then argue on the other hand that it should make no difference if no one is allowed to actually use it. In any event,

I cannot conclude that it serves the public interest to lock up an invention and take it off the market for the sole purpose of harming a competitor.

ORDER

IT IS ORDERED that the motion for a preliminary injunction filed by plaintiffs Novozymes A/S and Novozymes North America, Inc., dkt. #28, is DENIED.

Entered this 24th day of September, 2010.

BY THE COURT:
/s/
BARBARA B. CRABB
District Judge