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**Datasheet for the decision
of 8 April 2008**

Case Number: T 1300/06 - 3.3.08

Application Number: 98109967.4

Publication Number: 0867504

IPC: C12N 9/28

Language of the proceedings: EN

Title of invention:
Oxidation-stable alpha-amylase

Patentee:
GENENCOR INTERNATIONAL, INC.

Opponent:
NOVOZYMES A/S

Headword:
Amylase/GENENCOR

Relevant legal provisions:
EPC Art. 76(1)

Relevant legal provisions (EPC 1973):
-

Keyword:
"Remittal (yes)"

Decisions cited:
G 0009/91, G 0010/91, G 0009/92

Catchword:
-



Case Number: T 1300/06 - 3.3.08

D E C I S I O N
of the Technical Board of Appeal 3.3.08
of 8 April 2008

Appellant I: GENENCOR INTERNATIONAL, INC.
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Decision under appeal: Interlocutory decision of the Opposition
Division of the European Patent Office posted
20 June 2006 concerning maintenance of European
patent No. 0867504 in amended form.

Composition of the Board:

Chairman: L. Galligani
Members: P. Julià
C. Rennie-Smith

Summary of Facts and Submissions

- I. European patent No. 0 867 504 entitled "Oxidation-stable alpha-amylase" was granted with 18 claims. The patent was based on European patent application No. 98 109 967.4, which was a divisional application of the earlier application No. 94 909 609.3 published under the PCT with the publication No. WO 94/18314.
- II. The patent was opposed on the grounds as set forth in Article 100 paragraphs (a), (b) and (c) EPC, the last relating to the presence of a disclaimer in claim 1 as granted. The opposition division considered that the main request and the first and second auxiliary requests did not satisfy the requirements of Article 54 EPC. The patent was maintained in amended form based on the third auxiliary request on file.
- III. Both the patentee (appellant I) and the opponent (appellant II) filed notices of appeal, paid the appeal fees and submitted statements setting out their grounds of appeal. Appellant I maintained the claims as granted as a main request and the six auxiliary requests filed on 17 March 2006.
- IV. On 20 March 2007 and 14 March 2007, respectively, appellant I and appellant II replied to the respective statements of grounds of appeal. Appellant I also filed new auxiliary requests 1 to 6. Appellant II raised an objection under Article 76(1) EPC in respect of the omission from the claims of a limitation to "oxidizable" as qualifying the amino acid to be replaced.

V. The board sent a communication pursuant to Article 11(1) (now Article 15(1) - see OJ EPO 2007, page 543) of the Rules of Procedure of the Boards of Appeal (RPBA) and informed the parties of its preliminary, non-binding opinion on substantive matters. Therein, *inter alia* attention was drawn to the issue under Article 100(c) EPC (namely, compliance with Article 76(1) EPC).

VI. With letters dated 7 March 2008, appellants I and II replied to the board's communication. Appellant I filed auxiliary requests 3A, 4A, 4B and 6A and withdrew auxiliary requests 4 and 5 on file. It also requested the board to disregard the new attack under Article 100(c) EPC or, in the alternative, to remit the case to the opposition division so that the point could be considered by two instances.

VII. Oral proceedings took place on 8 March 2008. At the beginning of the oral proceedings, appellant I withdrew the main request and the first and second auxiliary requests and made the third auxiliary request on file its main request. This new main request was identical to the claims maintained by the opposition division.

VIII. Claim 1 of the **main request** read as follow:

"1. A mutant alpha-amylase selected from the group consisting of:

(a) an alpha-amylase that is the expression product of a mutated DNA sequence encoding an alpha-amylase, the mutated DNA sequence being derived from a precursor alpha-amylase of *Bacillus licheniformis* by

site-specific substitution of an amino acid at position M+15, and

(b) an alpha-amylase that is the expression product of a mutated DNA sequence encoding an alpha-amylase, the mutated DNA sequence being derived from a precursor alpha-amylase which is a *Bacillus* alpha-amylase by site-specific substitution of an amino acid that corresponds in position in either the primary or tertiary structure to M+15 in *Bacillus licheniformis* alpha-amylase,

said alpha-amylase exhibiting an altered pH and/or temperature performance profile when compared to wild-type *Bacillus* alpha-amylase;

wherein the substituent amino acid is Val, His, Gly, Phe, Ala, Arg, Trp or Pro."

Claims 2 to 4 were directed to specific embodiments of the mutant alpha-amylase of claim 1. Claims 5 to 7 related, respectively, to a DNA encoding the mutant alpha-amylase of claims 1 to 4, expression vectors encoding said DNA and host cells transformed with the expression vector. Claims 8 to 10 and claim 11 concerned, respectively, a detergent composition and a starch liquefying composition comprising a mutant alpha-amylase of claims 1 to 4.

Claims 12 to 19 related to a method for altering the pH and/or temperature performance profile of a *Bacillus* alpha-amylase providing a precursor DNA sequence encoding a precursor alpha-amylase of *Bacillus licheniformis* (claim 12(a)) or from *Bacillus* (claim 12(b)), and modifying said precursor DNA sequence to

obtain a mutated DNA sequence encoding a mutant alpha-amylase as defined in claim 1 and with Thr as additional substituent amino acid in the list of substituents indicated in claim 1.

Claims 20 to 23 related to a detergent composition comprising a mutant alpha-amylase and one or more additional enzymes wherein said mutant alpha-amylase was selected from a group defined as in claim 1 but without any limitation to the substituent amino acid. Claim 24 concerned a method of liquefying a granular starch slurry from either a wet or dry milling process at a pH of from about 4 to 6 using a mutant alpha-amylase defined as in claim 20. Claim 25 related to a starch liquefying composition comprising a mutant alpha-amylase defined as in claims 20 and 24. Claim 26 was dependent on claim 25 and defined the alpha-amylase as M15L.

IX. The arguments of appellant I relevant to the present decision may be summarized as follows:

Main request

Article 76(1) EPC and remittal to the first instance

The objection under Article 76(1) EPC was not raised in the written proceedings at first instance nor discussed in the oral proceedings held before the opposition division and, accordingly, it was not mentioned in the decision under appeal. Neither was this objection raised in the opponent's grounds of appeal. Since the objection under this article concerned the claims as granted and it was not occasioned by any amendments or submissions made by the patentee at any stage after

grant, it constituted a new attack under Article 100(c) EPC, effectively being a new ground of opposition. The decisions of the Enlarged Board of Appeal G 10/91 (OJ EPO 1993, 420) and G 9/92 (OJ EPO 1994, 875) stated that the purpose of an appeal was to contest the opposition division's decision and that a new ground of opposition could not be introduced into appeal proceedings, and that any consideration of it was prohibited, without the patentee's consent. In the present case, the patentee expressly declined to give such consent.

Nevertheless, if the objection was to be considered, it would not be appropriate to deny the patentee the right to two instances and therefore, remittal to the first instance for further prosecution was requested.

- X. The arguments of appellant II relevant to the present decision may be summarized as follows:

Main request

Article 76(1) EPC and remittal to the first instance

The subject-matter of claim 1(b) comprised mutant alpha-amylases derived from the substitution of a Thr residue in the alpha-amylase from *B. amyloliquefaciens* or a Leu residue in the alpha-amylase from *B. stearothermophilus*, both residues corresponding in position in the primary structure to the M+15 in *B. licheniformis* alpha-amylase. Leucine and threonine were non-oxidizable amino acids and claim 1 comprised thus embodiments that contemplated the substitution of **non-oxidizable** amino acids. However, the earlier application as filed disclosed only the substitution of

oxidizable amino acids and it was strictly limited to this class of substitution. There was no disclosure and no formal basis in the earlier application as filed for a substitution of non-oxidizable amino acids in a position equivalent in position +15 in *B. licheniformis* alpha-amylase. Hence, the claimed subject-matter extended beyond the content of the earlier application as filed (Articles 76(1) and 100(c) EPC).

No objections were raised against a remittal of the case to the first instance for further prosecution, although a decision of the board was preferred.

XI. Appellant I (patentee) requested that the decision under appeal be set aside and the patent be maintained on the basis of the main request filed as auxiliary request 3 on 20 March 2007 or any of auxiliary requests 6 (filed on 20 March 2007) or 3A, 4A, 4B and 6A filed on 7 March 2008, or that the case be remitted to the first instance for further prosecution.

XII. Appellant II (opponent) requested that the decision under appeal be set aside and the patent be revoked.

Reasons for the Decision

Article 76(1) EPC and remittal to the first instance

1. In decision G 9/91 (OJ EPO 1993, 408), the Enlarged Board of Appeal indicated (cf. point 18 of the Reasons) that the purpose of the appeal procedure *inter partes* is mainly to give the losing party the possibility of challenging the decision of the opposition division and

that it is not in conformity with this purpose to consider grounds for opposition on which the decision of the opposition division has not been based. For fresh grounds of opposition to be considered at the appeal stage, they must be *prima facie* highly relevant to the board and the patentee must agree to their introduction. If a fresh ground is admitted, the case should, having regard to the purpose of the appeal procedure, be remitted to the first instance for further prosecution, unless special reasons present themselves for doing otherwise. If the patentee does not agree to the introduction of a fresh ground for opposition, such a ground may not be dealt with in substance by the board. However, in order to avoid any misunderstanding, the Enlarged Board of Appeal further stated that "*in case of amendments of the claims or other parts of a patent in the course of opposition or appeal proceedings, such amendments are to be fully examined as to their compatibility with the requirements of the EPC (e.g. with regard to the provisions of Article 123(2) and (3) EPC)*" (cf. G 9/91, *supra*, point 19 of the Reasons for the Decision).

2. Thus, in summary, in cases where Article 100(c) EPC was not an original ground of opposition and the opposition division did not consider necessary to use its discretion to introduce it into the opposition proceedings, the consideration of this Article for the granted claims at appeal stage is possible only with the patentee's consent. This, however, does not prevent the board from examining anew the formal requirements of the EPC - in particular Articles 123(2) and (3) EPC and, for patents originating from a divisional application, Article 76(1) EPC - of any other request

containing amendments and filed in order to overcome original grounds of opposition. The fact that objections raised under these Articles - and the arguments submitted therefor - might also have been relevant to the granted claims, cannot prevent the board from considering them in the context of the new amended request, since each request has to be considered on its own.

3. In the present case, the opponent had indeed raised in the notice of opposition grounds under Article 100(c) EPC but only in relation to the presence in granted claim 1 of a disclaimer. When the third auxiliary request was put forward by the patentee during the oral proceedings before the opposition division, the opponent objected thereto under Article 123(2) EPC only because it considered that the selection of a subgroup of substituents from all the possible ones given in the description was not directly and unambiguously derivable from the description (cf. point 22 of the Minutes of the oral proceedings before the opposition division). This objection was dealt with by the opposition division in the decision under appeal (cf. point 11 of the decision under appeal), which considered the amendment to have a basis in the application as filed. The opponent-appellant II also failed in its statement of grounds of appeal to raise an objection under Articles 100(c) and 76(1) EPC against the claims as maintained by the opposition division (the main request at issue here). Such an objection was raised only in its reply to the appellant's I ground of appeal.

4. The board finds that, when confronted with amendments of the claims as granted in the third auxiliary request that it finally accepted, the opposition division should have carried out a more thorough analysis of their formal allowability under Article 123(2) EPC and, in view of the fact that it was a divisional application, also under Article 76(1) EPC. In such circumstances, merely restricting itself to the objections raised by the opponent might not be enough as amendments which go beyond the original disclosure may affect the public at large. In order to ensure legal security for third parties, it is the responsibility of the EPO to ensure that any amendment made remains within the limits of the application as filed (and, in case of divisional applications, of the parent application) and that no new matter is added. This, thus presupposes a stringent and complete analysis.

5. The board noticed the relevance of the "late" objection by appellant II and in its communication accompanying the summons to oral proceedings outlined the legal and factual situation and observed that the issue under Article 76(1) EPC had not been raised in the opposition proceedings, had not been addressed by the opposition division in the decision under appeal and had not been the subject of any submissions by appellant I (cf. Section V *supra*). In reply thereto, appellant I filed auxiliary requests 3A and 4B allegedly aimed at finding a remedy, but insisted that the objection could not be raised at this stage (cf. Section IX *supra*).

6. The discussion which took place during the oral proceedings before the board and which included some

substantive aspects of the case, has shown the paramount importance of all the features resulting from the amendments introduced in the claims for establishing patentability. It is thus essential to find a clear, direct and unambiguous basis for these features in the application as filed as well as in the parent application. It is also worth noting that a decision on this objection is of importance for all (generic and specific) embodiments claimed in each and every request to be examined. The more so in view of their different nature and scope which comprises embodiments contemplating not only the substitution of a non-oxidizable residue by other non-oxidizable residues but the substitution of a non-oxidizable residue by oxidizable residues, such as in claims 20(b) and 24(b) of the main request (cf. Section VIII *supra*), as well as individualized substitutions (such as His or Tyr by Trp) in the context of a generalization to mutant alpha-amylases derived from any *Bacillus* alpha-amylase other than from *B. licheniformis*, such as in the claims of some auxiliary requests now on file.

7. As stated above (cf. point 4), the necessary analysis has not been carried out by the first instance on the amended claim request. This is a sufficient reason for setting aside the decision under appeal so as to deal more thoroughly with the matter before entering substantive examination. As indicated (cf. points 1 and 2 *supra*), this can and has to be done because, in the case of amendments, these are to be fully examined as to their compliance with the requirements of the EPC.

8. In the light of the above findings, appellant I's request for a remittal to the first instance appears to be justified. The more so since no arguments have been put forward against this request by appellant II, who does not object to such a remittal (cf. Sections IX and X *supra*). A remittal to the first instance for further prosecution will allow the opposition division to carry out - in a complete and exhaustive way - the examination of all formal requirements of the EPC, including the identification of the presence or absence of formal support in both the earlier application (Article 76(1) EPC) and the application as filed (Article 123(2) EPC), for each and every embodiment - as well as combinations and generalizations thereof - claimed in the requests to be examined.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the first instance for further prosecution.

The Registrar:

The Chairman:

A. Wolinski

L. Galligani