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**Datasheet for the decision
of 16 January 2008**

Case Number: T 0406/06 - 3.3.04

Application Number: 02026139.2

Publication Number: 1306091

IPC: A61K 38/26

Language of the proceedings: EN

Title of invention:

Stimulation of beta cell proliferation

Applicant:

NOVO NORDISK A/S

Opponent:

-

Headword:

Stimulation of beta cell proliferation/NOVO NORDISK

Relevant legal provisions:

EPC Art. 54(1),(2),(5)

Keyword:

"Main and auxiliary request: novelty of second medical use
(no)"

Decisions cited:

G 0005/83, G 0002/88, T 0019/86, T 0290/86, T 0059/87,
T 0254/93, T 1127/05

Catchword:

see points 2 to 6



Case Number: T 0406/06 - 3.3.04

D E C I S I O N
of the Technical Board of Appeal 3.3.04
of 16 January 2008

Appellant: NOVO NORDISK A/S
(Applicant) Novo Allé
DK-2880 Bagsvaerd (DK)

Representative: Thomas, Philip John Duval
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Decision under appeal: Decision of the Examining Division of the
European Patent Office posted 31 October 2005
refusing European patent application
No. 02026139.2 pursuant to Article 97(1) EPC
1973.

Composition of the Board:

Chairman: R. Moufang
Members: G. Alt
R. Gramaglia

Summary of Facts and Submissions

- I. The appeal lies against the decision of the examining division refusing European patent application No. 02 026 139.2, entitled "Stimulation of beta cell proliferation", pursuant to Article 97(1) EPC 1973. This application is a divisional application of European patent application No. 99 934 520.0.
- II. The examining division held that the subject-matter of claim 1 of the main request, the sole request before them, lacked novelty because the function recited in claim 1 "for stimulating beta-cell proliferation" was not a new therapeutic application in the sense of decision G 5/83, but merely described a mechanism underlying the application of GLP-1 in the treatment of diabetes known from the prior art. The examining division considered that the reasoning in decision T 254/93 supported this view.
- III. In its grounds of appeal dated 6 February 2006 the appellant (applicant) requested, as a main request, to set aside the decision of the examining division and to grant a patent on the basis of claims 1 to 10 corresponding to the claims of the main request considered by the examining division or on the basis of claims 1 to 17 of an auxiliary request.

Claim 1 of the main request read:

"1. Use of GLP-1 or an analogue or a derivative thereof or a GLP-1 agonist for the manufacture of a medicament for stimulating beta-cell proliferation to prevent or

treat beta cell depletion in a subject and diabetes associated therewith."

The main request contained nine further claims, all of them dependent on claim 1.

Claim 1 of the auxiliary request read:

"1. Use of GLP-1 or an analogue or a derivative thereof or a GLP-1 agonist for the manufacture of a medicament for stimulating beta-cell proliferation to prevent or treat beta-cell depletion in a subject to cure diabetes associated therewith."

The auxiliary request contained seven further independent and nine dependent claims. The independent claims differed from claim 1 in replacing the wording after the expression "to prevent or treat beta-cell depletion in a subject" as follows:

Claim 2: "... suffering from Type I diabetes to cure diabetes associated therewith".

Claim 3: "... suffering from Type II diabetes to cure diabetes associated therewith."

Claim 4: "... suffering from Type II diabetes to obtain a less severe disease stage."

Claim 5: "... who is not suffering from Type I diabetes to prevent Type I diabetes associated therewith."

Claim 6: "... who is not suffering from Type II diabetes to prevent Type II diabetes associated therewith."

Claim 7: "... having impaired glucose tolerance (IGT) to delay progression to insulin requiring Type II diabetes associated therewith."

Claim 8: "... suffering from non-insulin requiring Type II diabetes to delay progression to insulin requiring Type II diabetes."

IV. With a communication dated 10 August 2007 the board informed the appellant that oral proceedings were to be held on 16 January 2008.

V. With letter dated 15 January 2008 the appellant's representative informed the board that the appellant would not be attending the oral proceedings.

VI. Oral proceedings were held as scheduled in the absence of the appellant. At the end of the oral proceedings, the decision was announced.

VII. The following documents are referred to hereinafter:

D2: WO 98/08871

D3: Byrne, M. et al., Diabetic Medicine, vol. 13, 1996, pages 854-860

VIII. The appellant's arguments submitted in writing may be summarised as follows:

Main request

Novelty

GLP-1 was known at the priority date for use in the treatment of diabetes type 1 and type 2 patients, but there was no disclosure in any of documents D2 or D3 that GLP-1 was capable of stimulating beta-cell proliferation. Thus, the subject-matter of claim 1 was novel because the technical effect stated in claim 1 of "stimulating beta-cell proliferation" was new.

The facts of the present case were similar to those underlying decision T 290/86 in which novelty of a further therapeutic indication was acknowledged on the basis of a new technical effect.

In the case underlying decision T 254/93 the technical effect was not novel. Therefore, the circumstances differed from that of the present case.

Auxiliary Request

Novelty

None of the prior art documents disclosed that GLP-1 or its derivatives could be used as a cure for diabetes. Instead, all of the prior art documents accepted that any treatment with GLP-1 was palliative.

Reasons for the Decision

Article 15(3) RPBA

1. According to Article 15(3) of the Rules of Procedure of the Boards of Appeal (RPBA) the board is not obliged to delay any step in the proceedings, including its decision, by reason only of the absence at the oral proceedings of any party duly summoned who may then be treated as relying only on its written case. In the present case the board could therefore take a decision at the oral proceedings, notwithstanding the announced absence of the duly summoned appellant.

Swiss-type claims under the EPC 2000

2. All the claims submitted to the board for consideration in the present case are drafted in the so-called Swiss-type format.
3. Under the EPC 1973 a patent for a further medical application could, pursuant to case law established by decision G 5/83 (OJ EPO 1985, 64), be granted for a claim directed to the use of a substance or composition for the manufacture of a medicament for a specified therapeutic application ("Swiss-type claim"). The novelty of the subject-matter of such a claim could be derived not only from the novelty of the substance or of the method of manufacture, but also from the new therapeutic application (decision G 5/83, points 20 and 21 of the reasons). This "special approach to the derivation of novelty" as it was called in decision G 5/83 (point 21 of the reasons) constituted a narrow

exception to the general novelty requirement and was not to be applied in other fields of technology.

4. Article 54(5) EPC 2000 permits purpose-related product protection for any further new and inventive medical use of a known substance already known as a medicament.

According to Article 1, No. 3 of the Decision of the Administrative Council of 28 June 2001 under Article 7 of the Act revising the EPC of 29 November 2000, revised Article 54(5) EPC 2000 is applicable to European patent applications pending at the time of the EPC 2000's entry into force, insofar as a decision on the grant of the patent has not yet been taken, and hence also to the present application (see decision T 1127/05 of 15 January 2008).

5. The question arises whether the exception to the general novelty requirement, which was accepted in decision G 5/83 under the EPC 1973, is still justified under the new legal framework which enables the applicant to frame its claims in accordance with the provision of Article 54(5) EPC 2000 in order to obtain patent protection for a new therapeutic application of a known medicament. If this question had to be answered in the negative, the novelty of Swiss-type claims would have to be assessed merely on the basis of the substance itself or the manufacturing process.

- 5.1 In the present case, in the absence of any features characterising a manufacturing process, claim 1 of the main and the auxiliary request would then have to be regarded as lacking novelty in view of document D2 disclosing GLP-1, analogues and derivatives thereof.

6. Although the above question may be regarded as an important point of law for the purposes of Article 112(1)(a) EPC, no referral to the Enlarged Board of Appeal is required in the present case. Even if the introduction of Article 54(5) EPC did not change the legal basis on which decision G 5/83 was founded, the claimed subject-matter would, as set out below, still lack novelty. Without deciding this point, the board therefore assumes, to the benefit of the appellant, that the novelty of the subject-matter of a Swiss-type claim can still be derived from a new therapeutic application.

Main Request

Novelty

7. Claim 1 is directed to the "Use of GLP-1 or an analogue or a derivative thereof or a GLP-1 agonist for the manufacture of a medicament for stimulating beta-cell proliferation to prevent or treat beta cell depletion in a subject and diabetes associated therewith."
8. The appellant does not contest that, at the priority date of the present patent application, GLP-1 and its manufacture had been disclosed and that also the use of GLP-1 for the treatment of both types of diabetes patients (document D2, page 2, lines 12 to 13 for the treatment of type 2 diabetes (called "NIDDM" in the document); document D3, page 858, right column, third paragraph, for the treatment of type 2 diabetes (NIDDM)

and type 1 diabetes (called "IDDM" in the document)) was known.

9. The appellant submits that the effect ascribed to GLP-1 according to claim 1 "for stimulating beta-cell proliferation" had not been disclosed in either document D2 or D3. The board agrees.
10. The appellant argues that the subject-matter of claim 1 should be considered as novel because the feature "for stimulating beta-cell proliferation" was new.
11. A first question to be considered in view of the appellant's submission is whether in the present case the new effect reflects a new therapeutic use in the sense of decision G 5/83 or whether the new effect merely reveals a mechanism underlying the known therapeutic use.
 - 11.1 Claim 1 explicitly states that the intended use of GLP-1 is the treatment of diabetes ("and diabetes associated therewith"). It is also derivable from the description of the present application that beta-cell depletion is a symptom of diabetes (see paragraph [0002]): "However in diabetic patients the number of beta cells is reduced and it is therefore pertinent not only to improve the function of the beta cells by therapeutic means but also to increase the number of beta cells." Other pathologic conditions in which beta-cell depletion might be involved are not mentioned in the application. The appellant also has never argued that there are such conditions. Hence the therapeutic use indicated by the feature "for stimulating beta-cell proliferation" is the treatment of diabetes.

11.2 According to the case law, a claim to a second medical use can also derive novelty, for example, from the application of the substance to a new patient group, or by a new mode of administration (Case Law of the Boards of Appeal of the EPO, 5th edition, 2006, I.C.5.2.2).

However, there are no indications that such a situation is present here. In particular, with respect to the features "to prevent or treat beta cell depletion" and "for stimulating beta-cell proliferation" the board considers that they cannot be taken, either alone or in combination, to imply a limitation of the use to a new group or sub-group of patients. In the board's view, it follows, for example from paragraph [0002] (see point 11.1 above), that beta-cell depletion is not limited to particular forms of diabetes, but is a general feature of diabetes. Also from paragraph [0003], containing the disclosure of the invention in general terms, an indication for a treatment of a distinct patient group is not derivable because reference is made either to "a subject" or to both type 1 and type 2 diabetes. It also transpires from the claims of the auxiliary request filed in the course of the appeal proceedings (see section III above) that a selective use of GLP-1 is not foreseen according to the application. This has also never been argued by the appellant.

11.3 Consequently, it is concluded that the therapeutic use to which claim 1 relates is the one known from the prior art.

12. Thus, in view of the appellant's argument, the further question arises as to whether or not a claim to the use

of a substance in the manufacture of a medicament for a known therapeutic application can be held novel because the claim recites a new technical effect.

12.1 According to the appellant this question has to be answered in the affirmative in view of decision T 290/86 (OJ EPO 1992, 414). In that decision the board was concerned with a prior art disclosure of the use of lanthanum salts to reduce the solubility of tooth enamel in organic acids. The invention as claimed related to the use of lanthanum salts for cleaning plaque and/or stains from human teeth.

12.2 The board held that under these circumstances the "claimed invention represents a further and different therapeutic use from that disclosed in document (1), within the meaning of Decision G 5/83 (in particular paragraph 21 thereof), because the claimed invention is based upon a different technical effect from that which is disclosed in document (1)" (point 6.1, third paragraph).

Moreover, in generalising the underlying specific situation, the board reasoned in the fourth paragraph of point 6.1: "In this connection the board follows the approach set out in paragraph 10 of Decision T 19/86 (OJ EPO 1989, 24). Thus, when a prior document and a claimed invention are both concerned with a similar treatment of the human body for the same therapeutic purpose, the claimed invention represents a further medical indication as compared to the prior document within the meaning of Decision G 5/83 if it is based upon a different technical effect which is both new and inventive over the disclosure of the prior document."

- 12.3 The present board notes that it is not stated in decision G 5/83 that novelty of a therapeutic use can be established merely on the basis of a new technical effect. In fact, in interpreting decision G 5/83, the boards of appeal have rather ruled that a new technical effect alone is not sufficient to establish novelty of a second medical use, but that a therapeutic use may only be considered as novel if the new technical effect also leads to a truly new industrial/commercial application or activity (Case Law of the Boards of Appeal of the EPO, 5th edition, 2006, I.C.5.2.2).
- 12.4 In decision T 19/86 (OJ EPO 1989, 24), the decision relied on in point 6.1 of decision T 290/86 (see point 12.2 above), the board ruled that the use of certain compounds for the intranasal vaccination of sero-positive piglets against Aujeszky's disease was novel over the disclosure in the prior art of the unsuccessful intranasal vaccination of sero-negative piglets against the same disease. Thus, also in that case, the claimed subject-matter was not held to be novel on the basis of the new technical effect alone, but because the new technical effect, i.e. the successful vaccination, resulted in a new application, i.e. the vaccination of a different group of animals.
- 12.5 The reasons given in decision T 290/86 have thus to be balanced by the above observations. This leads the board to the conclusion that this decision does not help the appellant's case.
13. Headnote III of decision G 2/88 (OJ EPO 1990, 93) reads:
"A claim to the use of a known compound for a

particular purpose, which is based on a technical effect which is described in the patent, should be interpreted as including that technical effect as a functional technical feature, and is accordingly not open to objection under Article 54(1) EPC provided that such technical feature has not previously been made available to the public". This statement could prima facie be interpreted to support the appellant's argument.

- 13.1 However, in the decision giving rise to the referral to the Enlarged Board, decision T 59/87 (OJ EPO 1988, 347), claim 1 related to the "Use of at least 1 per cent by weight based on the total composition of (defined compounds in accordance with structural formulae), as a **friction reducing** additive in a lubricant composition comprising a major portion of a lubricating oil". The prior art disclosed compounds falling under the definition in claim 1 for a different purpose, i.e. the **inhibition of the formation of rust**. Thus, unlike in the present situation, in the case underlying decision G 2/88, the uses disclosed in the prior art and the claimed one were different - rust formation versus reduction of friction. Therefore, the situation at stake in decision G 2/88 is different from the present situation, where both the claimed use and the use described in the prior art are the same. Hence, decision G 2/88 does not apply.

14. The board thus concludes that no case has been made out to the effect that a claim to the known use of a known substance in the manufacture of a medicament for a known therapeutic application can be held novel for the

sole reason that the claim recites a new technical effect.

15. In summary, claim 1 does not relate to a new therapeutic use in the sense of decision G 5/83. Therefore, the subject-matter of claim 1 is not novel.

Auxiliary request

16. With regard to claims 1 to 17 of this request the board sees objections under Rule 43(2) EPC (eight independent claims, see section III), Article 84 EPC (claim 4 "a less severe disease state") and Article 83 EPC (no exemplification of a "cure"). However, a detailed consideration of them is not necessary in view of the board's negative finding on the issue of novelty (see below).

Novelty

17. Whereas according to claim 1 of the main request GLP-1 is used "in the manufacture of a medicament for stimulating beta-cell proliferation to **prevent or treat** beta cell depletion in a subject **and** diabetes associated therewith", GLP-1 is used according to claim 1 of the auxiliary request "in the manufacture of a medicament for stimulating beta-cell proliferation to prevent or treat beta-cell depletion in a subject **to cure** diabetes associated therewith". Hence, in the board's view, claim 1 of the main request must be interpreted as relating to the prevention or treatment of diabetes, while claim 1 of the auxiliary request must be interpreted as relating to curing diabetes.

- 17.1 Having decided that the use of GLP-1 for preventing or treating diabetes is not new, the relevant question to be decided with respect to claim 1 of the auxiliary request is therefore whether or not the use of GLP-1 for curing diabetes may be construed as a new therapeutic use within the meaning of decision G 5/83.
- 17.2 The board acknowledges that there is a difference in meaning between the terms "cure" and "treatment"/"prevention", which is reflected, on the one hand, on the patient's side - the disease disappears; the patient is healed - and, on the other hand, on the medical practitioner's side - he/she carries out the treatment with the knowledge that the patient will be healed. However, as long as these effects - a different end result achieved by the application of a substance and a different state of mind when applying the substance - do not translate into a different application, novelty of a further therapeutic use cannot be acknowledged (see point 12.3 above).
- 17.3 The application documents do not reveal any difference between the treatment/prevention and the curing by GLP-1. In particular, as regards the patients to which the substance is administered, it is derivable from the description that, also when the curing of diabetes is intended, they are type 1 or type 2 diabetes patients (see for example paragraph [0005]: "[The invention furthermore relates to ...] the use of GLP-1 or an analogue or a derivative thereof or a GLP-1 agonist for the preparation of a medicament for curing Type I or Type II diabetes; ... ").

17.4 Hence the claimed use of GLP-1 for curing diabetes cannot not be construed as a new therapeutic use within the meaning of decision G 5/83 over the use of GLP-1 for preventing or treating diabetes.

17.5 Consequently, claim 1 lacks novelty for the reasons given in relation to the main request.

Order

For these reasons it is decided that:

The appeal is dismissed.

The registrar:

The chair:

P. Cremona

R. Moufang