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**Datasheet for the decision  
of 10 July 2006**

**Case Number:** T 0833/03 - 3.3.02

**Application Number:** 94902475.6

**Publication Number:** 0674506

**IPC:** A61K 9/16

**Language of the proceedings:** EN

**Title of invention:**

Controlled release growth hormone containing microspheres

**Patentee:**

Alkermes Controlled Therapeutics, Inc.

**Opponents:**

Novo Nordisk A/S  
Bioglan Pharma PLC  
Takeda Chemical Industries, Ltd.

**Headword:**

Controlled release microsphere/ALKERMES CONTROLLED  
THERAPEUTICS, INC.

**Relevant legal provisions:**

EPC Art. 83

**Keyword:**

"Main request - sufficiency of disclosure - yes: specific  
mechanism for a specific embodiment of the claims disclosed in  
the description"

**Decisions cited:**

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**Catchword:**

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Case Number: T 0833/03 - 3.3.02

**D E C I S I O N**  
of the Technical Board of Appeal 3.3.02  
of 10 July 2006

**Appellant:**  
(Patent Proprietor)

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**Respondent 1:**  
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**Respondent 2:**  
(Opponent 02)

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**Respondent 3:**  
(Opponent 03)

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**Decision under appeal:**

**Decision of the Opposition Division of the  
European Patent Office posted 5 June 2003  
revoking European patent No. 0674506 pursuant  
to Article 102(1) EPC.**

**Composition of the Board:**

**Chairman:** U. Oswald  
**Members:** J. Riolo  
J. Seitz

## Summary of Facts and Submissions

- I. European Patent No. 0 674 506 based on application No. 94 902 475.6 was granted on the basis of 11 claims.

Independent claim 1 as granted reads as follows:

"1. A polymeric microsphere having a diameter of less than 1000  $\mu$ M (microns), formed of a biocompatible polymer selected from the group consisting of poly(lactide), poly(lactide-co-glycolide)s, poly(caprolactone), polycarbonates, polyamides, polyanhydrides, polyamino acids, polyortho esters, polyacetals, polycyanoacrylates, degradable polyurethanes, polyacrylates, polymers of ethylene-vinyl acetate and other acyl substituted cellulose acetates and derivatives thereof, polysaccharides, non-erodible polyurethanes, polystyrenes, polyvinyl chloride, polyvinyl fluoride, poly(vinyl imidazole), chlorosulphonated polyolifins, polyethylene oxide, copolymers and mixtures thereof, containing growth hormone dispersed through the polymer in a concentration of between 0.1% and 50% by weight, in combination with an excipient modifying growth hormone solubility present in a concentration of between 0.1 and thirty percent (w/w polymer) which is selected from the group consisting of salts, complexing agents, inorganic acids, organic acids, inorganic bases, organic bases, and surfactants and an excipient modulating polymer erosion rate wherein the growth hormone is released under physiological conditions over a period of time greater than one day."

- II. Oppositions were filed against the granted patent by respondents 1 to 3, (opponents 01 to 03). The patent was opposed under Article 100(b) EPC for insufficiency of disclosure and under Article 100(a) EPC for lack of novelty and inventive step and under Article 100(c) EPC on the grounds that its subject-matter extended beyond the content of the application as originally filed.
- III. The decision of the Opposition Division pronounced on 22 May 2003 at the end of the oral proceedings revoked the patent under Article 102(1)EPC for insufficiency of disclosure.

The Opposition Division considered that, as the disclosed excipients were excipients modifying the erosion rate of erodible polymers only, whereas the claimed polymeric microspheres could be formed either with erodible or non-erodible polymers, the skilled person had no information on suitable excipients for the embodiments of the microspheres in which the polymer was a non-erodible polymer.

It therefore concluded that the patent as granted did not disclose the invention in a manner sufficiently clear and complete for it to be carried out by a person skilled in the art.

- IV. The appellant (patent proprietor) lodged an appeal against the said decision.
- V. With a letter dated 27 May 2004, observations were filed under Article 115(1) EPC.

VI. With a letter dated 11 May 2006, respondent 3 informed the Board that it would not attend the oral proceedings.

With a letter dated 4 July 2006, the appellant informed the Board that it would not attend the oral proceedings.

VII. Oral proceedings were held before the Board on 10 July 2006.

VIII. The appellant's submissions in the written procedure can be summarised as follows:

The invention did not lay in the polymers used in the polymeric matrices of the sustained release microspheres but in the presence of a complexing agent in the formulation of the growth hormone which modified the solubility of this drug so that it did not lose its activity due to aggregation upon release.

Since the polymers referred to in the claims were well established in the prior art for use in sustained delivery devices before the priority date of the contested patent and since it was also well established in the prior art how to modify the properties of these polymers, the appellant held that there was no need for the patent to provide guidance for what was already known to the skilled person.

IX. Respondents 1 and 3 did not take part in the oral proceedings.

None of the respondents filed written submissions during the appeal proceedings.

During the oral proceedings, respondent 2 contested the appellant's arguments. It recapitulated the Opposition Division's arguments.

As to the observations under Article 115(1) EPC concerning Article 100(b) EPC, it also merely repeated in substance the Oppositions Division's argument that, as the chemical structures of some of the polymers referred in claim 1, such as polyvinyl chloride (PVC) or polyvinyl fluoride (PVF), were chemically stable, the exipients modulating polymer erosion rate disclosed in the patent would not erode them.

As the disclosure in the contested patent was silent on how to select a suitable exipient for such polymers, they concluded that the patent in suit did not fulfil the requirements of Article 100(b) EPC.

- X. The appellant requested in writing that the decision under appeal be set aside and that the patent be maintained on the basis of either the main request (ie as granted) or one of the auxiliary requests 1 to 3 filed with letter dated 10 October 2003.

Respondent 2 requested that the appeal be dismissed.

## Reasons for the Decision

1. The appeal is admissible.
2. Main request

### Sufficiency of disclosure

- 2.1 The objection of respondent 2 and the objections in the observations under Article 115(1) EPC with respect to Article 83 EPC were based on the allegation that the skilled person could not find any relevant information on suitable excipients modulating the polymer erosion rate for the embodiments of the microspheres in which the polymer was a non-erodible polymer.

It is undisputed that the patent in suit is totally silent about such excipients in the case of non-erodible polymers.

It is however noted that claim 1 is not restricted to non-erodible polymers but clearly foresees mixtures with non-erodible polymers, so that the disclosure concerning excipients modulating the polymer erosion rate in erodible polymers remains an enabling disclosure relevant to such mixtures as well.

Furthermore, the contested patent discloses that "the release of the growth hormone from these polymeric systems can occur by two different mechanisms. The drug can be released by diffusion through aqueous filled channels generated in the dosage form by the dissolution of the drug or by voids created by the removal of the polymer solvent during the original



microencapsulation. The second mechanism is enhanced release due to the degradation of the polymer. With time the polymer begins to erode and generates increased porosity and microstructure within the device. This creates additional pathways for drug release" (page 5, paragraph 34).

From this passage in the description of the patent in suit, the skilled person is thus unambiguously taught how to deal with erodible polymers and also with non-erodible polymers.

Accordingly, the Board is satisfied that, in the absence of concrete evidence to the contrary, the skilled person could prepare the polymeric microspheres made of non-erodible polymers according to this particular embodiment of claim 1 in the light of the disclosure in the patent relating to the first mechanism of release, ie a mechanism which does not require excipients modulating polymer erosion rate.

Moreover, the Board observes that the respondents and the observations under Article 115(1) EPC failed to provide any evidence or argument to demonstrate that, contrary to the appellant's submissions, the polymers referred to in the claims were not well established in the prior art for use in sustained delivery devices before the priority date of the contested patent and that it was also not well established in the prior art how to modify the properties of these polymers.

2.2 In conclusion, the Board's judgement is that the invention is disclosed in a manner sufficiently clear and complete for it to be carried out by a skilled person so that the patent meets the requirements of Article 100(b) EPC and there is accordingly no substantiation of the ground for opposition under Article 100(b) EPC.

3. Remittal to the first instance

3.1 Although Article 111(1) EPC does not guarantee the parties an absolute right to have all the issues in the case considered by two instances, it is well recognised that any party should, whenever possible, be given the opportunity to two readings of the important elements of the case. The essential function of an appeal in *inter partes* proceedings is to consider whether the decision which has been issued by the first instance department is correct. Hence, a case is normally referred back if essential questions regarding the patentability of the claimed subject-matter have not yet been examined and decided by the department of first instance.

In particular, remittal is taken into consideration by the boards in cases where a first instance department issues a decision solely upon one particular issue which is decisive for the case against a party and leaves other essential issues outstanding. If, following appeal proceedings, the appeal on the particular issue is allowed, the case should be normally remitted to the first instance department for consideration of the undecided issues.

3.2 The observations and comments made above apply fully to the present case. The Opposition Division decided that claim 1 was not patentable on the grounds of insufficiency of disclosure (Article 100(b) EPC), but left open the essential issues of novelty (Articles 52(1), 54 EPC) and inventive step (Articles 52(1), 56 EPC). These issues, however, form, *inter alia*, the basis for the requests of the respondent that the patent be revoked in its entirety and must therefore be considered as essential substantive issues in the present case.

3.3 Thus, in view of the above considerations, the Board has reached the conclusion that, in the circumstances of the present case, it is necessary to remit the case to the Opposition Division for further prosecution.

**Order**

**For these reasons it is decided that:**

4. The decision under appeal is set aside.
5. The case is remitted to the department of first instance for further prosecution.

The Registrar:

The Chairman:

A. Townend

U. Oswald