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**Datasheet for the decision  
of 18 July 2008**

**Case Number:** T 0445/07 - 3.3.02

**Application Number:** 99919005.1

**Publication Number:** 1075280

**IPC:** A61K 47/48

**Language of the proceedings:** EN

**Title of invention:**

Hemoglobin-haptoglobin complexes for targeted drug delivery

**Applicant:**

Hemosol Inc.

**Headword:**

Hemoglobin complexes/HEMOSOL INC.

**Relevant legal provisions:**

EPC Art. 54, 111

**Keyword:**

"Novelty - yes: a conceptual disclosure does not anticipate an individualised alternative"

"Remittal - yes: unexamined issues"

**Decisions cited:**

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**Catchword:**

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Case Number: T 0445/07 - 3.3.02

**D E C I S I O N**  
of the Technical Board of Appeal 3.3.02  
of 18 July 2008

**Appellant:** Hemosol Inc.  
2585 Meadowpine Blvd.  
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Ontario L5N 8H9 (CA)

**Representative:** Harding, Charles Thomas  
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**Decision under appeal:** Decision of the Examining Division of the  
European Patent Office posted 20 October 2006  
refusing European application No. 99919005.1  
pursuant to Article 97(1) EPC.

**Composition of the Board:**

**Chairman:** U. Oswald  
**Members:** J. Riolo  
J. Van Moer

## Summary of Facts and Submissions

- I. European patent application No. 99 919 005.1 was refused by a decision of the Examining Division dated 12 October 2006 under Article 97(1) EPC with regard to Article 54 EPC (lack of novelty).
- II. The decision was based on claims 1 and 13 of the set of 22 claims of the main request filed with the appellant's letter of 10 August 2006.

Claims 1 and 13 of this request read as follows:

"1. A hemoglobin complex comprising a non cross-linked hemoglobin capable of binding to haptoglobin and a hepatocyte modifying substance bound to the hemoglobin.

13. A hemoglobin construct-complex comprising a hemoglobin complex according to claim 1 together with a haptoglobin bound to the hemoglobin."

- III. The following document, cited during the proceedings before the Examining Division and the Board of Appeal, is relevant for the present decision:

(3) WO-A-93 08842

- IV. The arguments in the decision may be summarised as follows:

The Examining Division considered that the subject-matter of the application was implicitly anticipated by the disclosure in document (3).

This document disclosed a conjugate of a drug, which fell within the broad definition given for a hepatocyte modifying substance in the application in suit, and a haemoglobin like protein.

As document (3) recited that the haemoglobin may be optionally crosslinked, the Examining Division considered that the alternative of non-crosslinked haemoglobin was thus implicitly disclosed, thereby anticipating the subject-matter of claim 1 of the application.

As to the subject-matter of claim 13, the Examining Division considered that it was also anticipated by this document since it disclosed that haemoglobin may be bound to haptoglobin.

- V. The appellant (applicant) lodged an appeal against the said decision. He filed a main request and 5 auxiliary requests together with a letter dated 4 July 2008.

The 22 claims of the set of claims of the main request are the same that those of the main request before the Examining Division, wherein the second medical use claims 17 to 22 were redrafted according to Article 54(5) EPC 2000 and the spelling of the last compound in claim 10, fialuridine, was corrected.

- VI. In a communication dated 10 July 2008, the Board expressed its view that the subject-matter of claims 1 and 13 of the main request was novel vis-à-vis document (3) and that the decision under appeal should be set aside.

VII. In reply to this communication, the appellant withdrew its request for oral proceedings (appellant's letter dated 25 July 2008).

VIII. The appellant essentially argued in its written submission that the independent claims of the main request included a limitation that the hemoglobin was non-crosslinked, which represented a novel selection invention over the general disclosure of document (3).

It acknowledged that document (3) described hemoglobin-drug complexes in general terms. However, it was of the opinion that, in the decision under appeal, the Examining Division, which relied strongly on a supposed inference in document (3) that cross-linking was not mandatory, and therefore that non-cross-linked hemoglobin was somehow at least implicitly disclosed, was wrong.

It submitted that this assertion was based on a misunderstanding of document (3), namely that this document only comprised two options for the hemoglobin moiety, i.e. crosslinked and non-crosslinked.

It put forward that document (3) rather taught that cross-linking was only one of a multiplicity of options for modifying hemoglobin.

It concluded that, as the general disclosure of hemoglobin-drug conjugation in document (3) embraced a wide range of possible hemoglobin modification possibilities and as it was nowhere specifically indicated that non-crosslinked hemoglobin may be used

in such a conjugate, the present invention a fulfilled the requirements of Article 54 EPC over document (3).

- IX. The appellant requested in writing that the decision under appeal be set aside and that the case be remitted to the first instance (appellant's letter dated 28 July 2008).

### **Reasons for the Decision**

1. The appeal is admissible
2. *Novelty*

Main request

Claim 1

Present claim 1 is directed to a hemoglobin complex comprising a non-crosslinked hemoglobin capable of binding to haptoglobin and a hepatocyte modifying substance bound to the haemoglobin.

Document (3) discloses the use of hemoglobine conjugates as drug-delivery agents and claims a conjugate of a drug and a haemoglobin-like protein (page 7, lines 1 to 16; claim 1).

According to the application "a hepatocyte modifying substance" is defined as a bioactive, therapeutic or diagnostic agent, as an agent which exerts an effect on cells or on other agents, or as a therapeutic agent, diagnostic agent, marker or the like capable of

interacting with hepatocytes (page 4, line 14; page 5, lines 13 to 24; page 8, lines 10 to 14).

Having regard to this broad definition, a drug falls under the definition of "a hepatocyte modifying substance" according to claim 1 of the application.

However, document (3) does not explicitly mention the use of non-crosslinked haemoglobin.

In that respect, the Board observes that document (3) gives no restrictive definition of the term "hemoglobin" as used in the document (page 19, lines 4 to 27). It thus concerns also modified hemoglobin according to the prior art (page 27, lines 10 to 21). Moreover, specific alternatives, such as polymerisation, glycosylation, PEGylation, and encapsulation in liposomes are listed in the document (page 27, lines 21 to 23).

Under these circumstances, it cannot be unambiguously concluded that the sentence "a polypeptide of one tetramer [hemoglobin] may be crosslinked..." on page 19, lines 21 and 22, implies that, *a contrario*, the other hemoglobin envisaged in document (3) is **inevitably** a non-crosslinked hemoglobin since, as it appears from the above, cross-linking is just one of a multiplicity of alternatives envisaged in this document.

In fact, it is not sufficient for the purpose of novelty assessment that a prior art alternative belongs **conceptually** to a disclosed class of possible alternatives.

Accordingly, the subject-matter of claim 1 is formally novel vis-à-vis document (3), as it relates to a restricted and **individualised** type of hemoglobin complexes resulting from a selection within the disclosure of document (3).

Claim 13

The same applies to the subject-matter of claim 13 which also relates to non-crosslinked hemoglobin.

3. *Remittal to the first instance*

3.1 Although Article 111(1) EPC does not guarantee an absolute right to have all the issues in the case considered by two instances, it is well recognised that any party should where possible be given the opportunity to have two readings of the important elements of the case. The essential function of an appeal is to consider whether the decision 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 and leaves other essential issues outstanding. If, following appeal proceedings, the appeal on the particular issue is allowed, the case is 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 Examining Division decided that claims 1 and 13 of the request were not patentable on the grounds of lack of novelty (Article 54 EPC) over a single document, but left out other essential issues such as inventive step (Articles 52(1), 56 EPC) and the assessment of the patentability of the second medical use claims 17 to 22. These issues, however, form, *inter alia*, the basis for the examination of the application and must therefore be considered as essential substantive issues in the present case.

In that respect, the Board would like to emphasise that, for the assessment of inventive step in the case of a selection invention, it is required that an effect can be shown for the selected subject-matter which is not present outside the selection.

- 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 Examining Division for further prosecution on the basis of the set of claims of the main request.

**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

N. Maslin

U. Oswald