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D E C I S I O N
of 10 March 1994

Case Number: T 0306/92 - 3.3.2

Application Number: 83112042.3

Publication Number: 0110409

IPC: B01J 20/32

Language of the proceedings: EN

Title of invention:

Adsorbent and process for preparing the same

Patentee:

Kanegafuchi Kagaku Kogyo Kabushiki Kaisha

Opponent:

B. Braun Melsungen Aktiengesellschaft

Headword:

Adsorbent/KANEGAFUCHI

Relevant legal norms:

EPC Art. 54, 111(1)

Keyword:

"Novelty (yes)"

Decisions cited:

G 0002/88

Catchword:

-

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D E C I S I O N
of the Technical Board of Appeal 3.3.2
of 10 March 1994

Appellant: Kanegafuchi Kagaku Kogyo Kabushiki Kaisha
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Decision under appeal: Decision of the Opposition Division of the European Patent Office dated 4 December 1991 and posted on 27 January 1992 revoking European patent No. 0 110 409 pursuant to Article 102(1) EPC.

Composition of the Board:

Chairman: P.A.M. Lançon
Members: L. Galligani
S.C. Perryman

Summary of Facts and Submissions

- I. European patent No. 0 110 409 concerning an adsorbent for removing a substance from body fluid and based on application No. 83 112 042.3 was granted on the basis of Claims 1 to 15.
- II. The Respondent (Opponent) filed a notice of opposition against the European patent. Eight prior art documents were cited of which the following remain relevant in the present appeal:
- (1) US-A-4 103 685;
 - (2) US-A-4 096 136.
- III. During the opposition proceedings the Appellant (Patentee) filed an amended Claim 1 and requested the maintenance of the patent in amended form either on the basis of amended Claim 1 and Claims 2 to 15 as granted (main request) or on the basis of Claims 14 to 15 as granted (auxiliary request).

The Opposition Division revoked the patent at the end of the oral proceedings held on 4 December 1991 on the grounds that the subject-matter of amended Claim 1 as well as the subject-matter of Claim 14 lacked novelty within the meaning of Article 54(1)(2) EPC, having regard to reference (2). The reasoned decision was notified on 27 January 1992.

The Opposition Division took the view that the feature "porous cellulose gel having uniform structure" in amended Claim 1 did not constitute a distinguishing feature with respect to the adsorbent cellulose gel of

reference (2) because this feature was implicitly disclosed in (2) as "every cellulose is a porous cellulose having a uniform structure". Moreover, in its view, reference (2) also anticipated Claim 14 since it disclosed a method of preparing the adsorbent which comprised reacting the cellulose matrix with epichlorohydrin and propylene oxide in a first reaction and then with the ligand.

IV. The Appellant lodged an appeal against this decision and paid the appeal fee. With the Statement of Grounds the Appellant filed new Claims 1 to 13, of which Claim 13 was a "use" claim not previously present (reference to decision G 2/88, OJ EPO 1990, 93). The Appellant argued in favour not only of novelty of the claimed subject-matter with respect to reference (2), but also in favour of its inventiveness with respect to both references (1) and (2).

V. In reply thereto the Respondent filed its observations and two further documents, namely:

- (9) An Introduction to Affinity Chromatography, C.R. Lowe, Elsevier Biomedical, 1970, pages 361 to 365;
- (10) Lexikon der Biochemie, Herder Verlag, 1990, page 232.

The Respondent, who requested the dismissal of the appeal, objected to the formal admissibility under Article 123(3) EPC of amended Claims 1 to 13 on the grounds that the scope of protection of the claims had been extended by adding the features "continuous", "hard" and "having a uniform structure". Moreover, with respect to Claim 13 the Respondent remarked that

decision G 2/88 (*loc.cit.*) was applicable only to the change of a product claim to a claim to the use of the product. However, in the present case the scope of the claims was extended to include, in addition to the product, also its use.

The Respondent submitted that, even if the Appellant was to overcome the above objection, it would have had to substantiate novelty and inventive step. In fact the said features did not provide novel and inventive subject-matter in comparison with the matter disclosed in references (1) and (2).

VI. In reply thereto the Appellant filed by letter dated 17 September 1993 (received on 18 September 1993) a new set of Claims 1 to 12 and requested the maintenance of the patent on the basis thereof.

Claim 1 of the amended set read as follows:

"An adsorbent for removing low and/or very low density lipoproteins from body fluid in continuous extracorporeal circulation treatment comprising a porous cellulose hard gel on which a polyanion compound is immobilized by covalent linkage; said porous cellulose hard gel having uniformly pores at any part of the gel, having an exclusion limit of from 10^6 to 10^9 daltons, and having a cellulose content of from 2 to 60%"

Independent Claim 10 was as follows:

"A process of preparing an adsorbent for removing low and/or very low density lipoproteins from body fluid in continuous extracorporeal circulation treatment which

comprises immobilizing a polyanion compound on a porous cellulose hard gel having a uniform structure, by reacting the porous cellulose hard gel having a uniform structure with epichlorohydrin or a polyoxirane compound to introduce epoxy groups into the gel and reacting the resulting epoxy-activated gel with the polyanion compound."

Claim 12 was as follows:

"Use of an adsorbent as claimed in any of claims 1 to 9 for the continuous extracorporeal circulation treatment of body fluids to remove low and/or very low density lipoproteins."

The Appellant argued that one of the important distinctive features of the claimed subject-matter was the use of the polyanion compound in combination with the particular porous cellulose hard gel. In its submission, this combination lead to unexpected advantages and was not rendered obvious by the prior art documents cited by the Respondent.

VII. As both parties had requested oral proceedings in case of unfavourable decision, the Board issued a communication pursuant to Article 11(2) of the Rules of procedure of the Boards of Appeal wherein preliminary observations on the case were also made.

In reply thereto both the Appellant and the Respondent withdrew their request for oral proceedings and requested that the case be remitted to the Opposition Division for further prosecution.

In reply to the Board's observation that Claim 12 appeared to be concerned with a method for therapeutic treatment excluded under the provisions of Article 52(4) EPC, the Appellant deleted the said Claim 12.

Reasons for the Decision

1. The appeal is admissible.
2. *Formal admissibility of the amended Claims 1 to 11 (Article 123(2) and (3) EPC)*

As a result of the amendments the subject matter of the present claims is **more narrowly** defined than it was in the claims as granted. Consequently, the extent of protection conferred by the claims is **reduced** in comparison with that conferred by the claims as granted. Thus, the requirements of Article 123(3) EPC are met.

Also the requirements of Article 123(2) EPC are fully met because the said amendments find support in the original application documents. In fact, the application as filed explicitly refers to the removal of low and/or very low density lipoproteins (see page 2, lines 27 to 37) in a "continuous" extracorporeal circulation system (see page 12, last paragraph) by use of a porous "hard" cellulose gel (passage bridging pages 3-4) having uniformly pores at any part of the gel (page 5, lines 10 to 15), an exclusion limit of from 10^6 to 10^9 daltons (page 5, lines 4 to 9), and a cellulose content of from "2 to

60%" (page 7, lines 15 to 17) to which a "polyanion" is covalently bound (page 9, lines 1 to 23).

3. *Novelty (Article 54 EPC)*

Neither reference (1) nor reference (2) disclose explicitly or implicitly the activation of porous "hard" cellulose gel with epichlorohydrin or a polyoxirane and the binding thereto of a polyanion.

In (2) the reaction of cellulose with epichlorohydrin is carried out for the purpose of cross-linking the matrix. Under the reaction conditions, the resulting product does not contain oxirane groups. Consequently, no covalent link with a polyanion is produced.

In (1) the activation of the cellulose gel (a soft gel) is carried out by reaction with a cyanogen halide.

Nor do the cited references describe **explicitly** a cellulose gel having the specific features recited in Claim 1 covalently linked to a polyanion.

Whether or not features like "having uniformly pores at any part of the gel", and/or "having an exclusion limit of from 10^6 to 10^9 daltons", and/or "having a cellulose content of from 2 to 60%" could **implicitly** be found also in the cellulose matrixes of references (1) and (2), is immaterial in the present case because there is always **at least one difference** between the adsorbent of present Claim 1 and that of either (1) or (2), namely the gels described in (1) are "soft" gels, not "hard" gels and the matrix of (2) does not have a polyanion linked thereto.

Thus, the subject-matter of Claim 1 and, consequently, of Claims 2 to 11, is novel.

4. The question of the inventiveness of the claimed subject matter has not yet been examined by the Opposition Division. During the appeal proceedings, both the Appellant and the Respondent have sent their observations in this respect. In order to ensure that the parties have the opportunity of having the question decided by the Opposition Division, so that the possibility of a further appeal remains open, the Board considers it appropriate to make use of the power granted to it under Article 111(1) EPC to remit the case to the Opposition Division for further prosecution.

Order

For these reasons, it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the Opposition Division for further prosecution on the basis of Claims 1 to 11 filed by letter dated 17 September 1993 (received on 18 September 1993).

The Registrar:

The Chairman:

P.Martorana

P.A.M.Lançon