

**Internal distribution code:**

- (A) [ - ] Publication in OJ  
(B) [ - ] To Chairmen and Members  
(C) [ - ] To Chairmen  
(D) [ X ] No distribution

**Datasheet for the decision  
of 25 September 2018**

**Case Number:** T 1090/14 - 3.3.04

**Application Number:** 07724940.7

**Publication Number:** 2021374

**IPC:** C07K17/02, C07K17/14,  
G01N33/543, A61K47/48

**Language of the proceedings:** EN

**Title of invention:**

Biocompatible Three Dimensional Matrix for the Immobilization  
of Biological Substances

**Patent Proprietor:**

LEUKOCARE AG

**Opponent:**

Jennissen, Herbert

**Headword:**

Biocompatible matrix/LEUKOCARE

**Relevant legal provisions:**

EPC Art. 56  
RPBA Art. 12(2)

**Keyword:**

Main and Auxiliary Requests 1 and 2 - Inventive step - (no)  
Auxiliary Requests 3 to 10 - taken into consideration - (no)

**Decisions cited:**

T 1732/10, T 1134/11, T 1784/14

**Catchword:**



**Beschwerdekammern**  
**Boards of Appeal**  
**Chambres de recours**

Boards of Appeal of the  
European Patent Office  
Richard-Reitzner-Allee 8  
85540 Haar  
GERMANY  
Tel. +49 (0)89 2399-0  
Fax +49 (0)89 2399-4465

Case Number: T 1090/14 - 3.3.04

**D E C I S I O N**  
**of Technical Board of Appeal 3.3.04**  
**of 25 September 2018**

**Appellant:** Leukocare AG  
(Patent Proprietor) Am Klopferspitz 19  
82152 Martinsried / München (DE)

**Representative:** Vossius & Partner  
Patentanwälte Rechtsanwälte mbB  
Siebertstrasse 3  
81675 München (DE)

**Appellant:** Jennissen, Herbert  
(Opponent) Alte Klosterstrasse 19  
50858 Köln (DE)

**Representative:** Nobbe, Matthias  
Demski & Nobbe  
Patentanwälte  
Mülheimer Strasse 210  
47057 Duisburg (DE)

**Decision under appeal:** **Interlocutory decision of the Opposition**  
**Division of the European Patent Office posted on**  
**5 March 2014 concerning maintenance of the**  
**European Patent No. 2021374 in amended form.**

**Composition of the Board:**

**Chairwoman** G. Alt  
**Members:** A. Chakravarty  
L. Bühler

## Summary of Facts and Submissions

- I. European patent No. 2 021 374, entitled "*Biocompatible three dimensional matrix for the immobilization of biological substances*" was opposed under Articles 100(a) EPC in conjunction with Articles 54 and 56 EPC and under Articles 100(b) and (c) EPC.
- II. Both the patent proprietor and the opponent (appellants I and II, respectively) filed an appeal against the interlocutory decision of the opposition division that, account being taken of the amendments in the form of auxiliary request 2, the patent and the invention to which it related met the requirements of the EPC (Article 101(3) (a) EPC).
- III. In its decision, the opposition division *inter alia* held that the subject-matter of the main request and auxiliary request 1 lacked an inventive step (Article 56 EPC).
- IV. With the statement of grounds of appeal, appellant I re-filed sets of claims of the main and the first and second auxiliary requests considered by the opposition division and also sets of claims of auxiliary requests 3 to 10, filed before but not considered by the opposition division.
- V. Claim 1 of the **main request** reads:  
  
"1. A method of producing a solid coated carrier carrying biological material, comprising the steps of:  
(a) incubating a solid carrier with a solution comprising 0.1 to 10 % (w/w) or (v/v) of at least one silane and subsequently removing the solution;

- (b) attaching the biological material to the carrier by incubating the carrier with a preferably buffered aqueous solution containing the biological material and subsequently removing the aqueous solution, wherein the biological material is selected from the group consisting of polypeptides, peptides and proteins;
- (c) incubating the carrier in an aqueous solution comprising one or more substances selected from (poly)peptides, amino acids, starch, sugars, polyalcohols, polyethyleneglycols (PEGs) or a mixture thereof, whereby the biological material is embedded in a coating layer; and
- (d) sterilizing the produced solid coated carrier".

Claim 1 of **auxiliary request 1** reads:

"1. A method of producing a solid coated carrier carrying biological material.

consisting of the steps of:

(a) incubating a solid carrier with a solution comprising 0.1 to 10 % (w/w) or (v/v) of at least one silane and subsequently removing the solution, and, optionally, further comprising a step (a') drying the carrier until the residual content of the solution is less than 10 % of the originally applied solution;

(b) attaching the biological material to the carrier by incubating the carrier with a preferably buffered aqueous solution containing the biological material and subsequently removing the aqueous solution, wherein the

biological material is selected from the group consisting of (poly)peptides, peptides and proteins; and, optionally further comprising a step (b') subsequent to the step (b) and previous to step (c):

(b') incubating the carrier in a buffered aqueous solution containing a blocking agent and removing the aqueous solution; or optionally further comprising a step (b'') subsequent to the step (b) and previous to step (c):

(b'') blocking unbound binding sites using an aqueous solution containing 0.5-10 % (w/w) substances selected from the group consisting of (poly)peptides, hydroxyethylstarch (HES), mannitol, sorbitol and polyethyleneglycol (PEG), milk, soya, wheat or egg derived protein and optionally performing one or more washing steps using an aqueous solution after blocking;

(c) incubating the carrier in an aqueous solution comprising one or more substances selected from (poly)peptides, amino acids, starch, sugars, polyalcohols, polyethyleneglycols (PEGs) or a mixture thereof, whereby the biological material is embedded in a coating layer; and, optionally, drying the carrier until the residual water content is < 20% (w/w); wherein steps (a), (b) and (c) are carried out in the above described order; and

(d) sterilizing the produced solid coated carrier".

\*the differences between claim 1 of the main request and claim 1 of auxiliary request 1 are underlined.

Claim 1 of **auxiliary request 2** reads:

"1. A method of producing a solid coated carrier carrying biological material, consisting of the steps of:

(a) incubating a solid carrier with a solution comprising 0.1 to 10 % (w/w) or (v/v) of at least one silane and subsequently removing the solution, and, optionally, further comprising a step (a') drying the carrier until the residual content of the solution is less than 10 % of the originally applied solution;

(b) attaching the biological material to the carrier by incubating the carrier with a preferably buffered aqueous solution containing the biological material and subsequently removing the aqueous solution, wherein the biological material is selected from the group consisting of (poly)peptides, peptides and proteins;

and, optionally further comprising a step (b') subsequent to the step (b) and previous to step (c):

(b') incubating the carrier in a buffered aqueous solution containing a blocking agent and removing the aqueous solution; or optionally further comprising a step (b'') subsequent to the step (b) and previous to step (c):

(b'') blocking unbound binding sites using an aqueous solution containing 0.5-10 % (w/w) substances selected from the group consisting of (poly)peptides, hydroxyethylstarch (HES), mannitol, sorbitol and polyethyleneglycol (PEG), milk, soya, wheat or egg derived protein and optionally performing one or more washing steps using an aqueous solution after blocking;

(c) incubating the carrier in an aqueous solution comprising one or more substances selected from (poly)peptides, amino acids, starch, sugars, polyalcohols, polyethyleneglycols (PEGs) or a mixture thereof, whereby the biological material is embedded in a coating layer; and, optionally, air-drying the carrier until the residual water content is < 20% (w/w); wherein steps (a), (b) and (c) are carried out in the above described order; and

(d) sterilizing the produced solid coated carrier".

\*the differences between claim 1 of auxiliary request 1 and claim 1 of auxiliary request 2 are underlined.

VI. The following documents are mentioned in this decision:

D10: US 5 730 933, published 24 March 1998.

D16: WO 97/17436, published 15 May 1997.

VII. The board issued a communication pursuant to Article 15(1) RPBA. In this it informed the parties, *inter alia*, of its preliminary opinion that auxiliary requests 3 to 10, filed with the statement of grounds of appeal of appellant I, had not been substantiated. The board further stated that, in keeping with established case law, it was inclined to regard these requests to become effective only at the date on which they were substantiated.

VIII. In a letter dated 22 August 2018, appellant I withdrew their request for oral proceedings.

IX. Oral proceedings before the board took place on 25 September 2018 in the absence of appellant I. At the



end of these oral proceedings the chair announced the decision of the board.

- X. The written arguments of appellant I, relevant to the decision, are summarised as follows:

*Inventive step - Article 56 EPC*

The patent related to the field of therapeutic or diagnostic molecules suitable for the transient or permanent application in a patient or for the treatment or diagnosis of diseases. Such treatments included the application of said molecules within the blood stream.

At the time of filing of the patent application, therapeutic molecules were often administered systemically, but to avoid problems with this, an alternative to systemic administration was the immobilisation of molecules of interest. For *in vivo* applications, the sterility of such immobilised devices was of utmost importance, however the direct sterilisation of biological molecules immobilised on devices was considered difficult, if not impossible. Thus, an alternative pursued in the art was the use of *ex vivo* methods, in particular the use of apheresis columns, such as e.g. TheraSorb®.

As described in paragraph [0006] of the introduction of the patent, such apheresis columns contained sepharose with coupled antibodies. Sepharose was the trade name for a cross-linked, beaded-form of agarose, a polysaccharide polymer material extracted from seaweed. Such *ex vivo* methods had major disadvantages in that they were not only expensive, but also required a large amount of work to be implemented (see paragraph [0006] of the patent).

The technical problem to be solved by the present patent was set out in paragraph [0007] as "*to provide means and methods which enable the treatment of patients with biological material such as cells and proteins, which improve this [the above mentioned] situation.*" As a solution, the patent contributed a method of preparing terminally sterilised devices with immobilised, highly defined quantities of therapeutic molecules on a defined surface.

The opposition division erred in holding the subject-matter of claim 1 of the main request and of auxiliary request 1 to lack an inventive step. The opposition division had assessed inventive step starting from document D16 when in fact document D10 was the correct choice of closest prior art.

Document D10 described the protection of biomolecules and solid substrates carrying such biomolecules during sterilisation. The intended purpose of these immobilised molecules was as sterilised biological material for use in medical devices. Thus, document D10 had the same aim as the claimed invention.

Document D16 did not represent the closest prior art because its main emphasis was separation columns, corresponding in essence to the apheresis columns of the prior art described in paragraphs [0006] and [0007] of the patent. As it is a declared aim of the present patent to overcome the drawbacks associated with these columns, document D16 could not be regarded as being for the same purpose invention.

Document D10 disclosed two mixtures suitable for sterilisation: (1) a mixture comprising a biological material to be protected and an extraneous protein,

such as e. g. gelatin, in which case the mixtures have to be cooled (to about  $-70^{\circ}\text{C}$ ) in order to immobilise the mixture; (2) the mixture comprising the biologically active molecule, an extraneous protein and a free-radical scavenger.

The difference between the methods of the claimed invention and those disclosed in document D10 was that in the claimed method an unprotected biomolecule was attached to a carrier, fully or in part via a silane layer and subsequently protected, while in document D10 an already protected mixture was attached to a carrier.

The technical effect of this difference was that substantially all of the attached biomolecules remained attached to the solid carrier, even when put in contact with body fluids such as blood.

Accordingly, the technical problem was the provision of an improved method of preparing a solid carrier suitable for medical uses.

The claimed solution involved an inventive step because document D10 contained no suggestion to directly attach a biomolecule to a carrier. Even if the skilled person had contemplated such a direct attachment they would not have considered either omitting the step of freezing the mixture or omitting the use of a free-radical scavenger.

Even if document D16 were considered to represent the closest prior art, the claimed invention was not obvious. Document D16 did not disclose in one place a method similar to that now claimed. To arrive at the closest starting point, the skilled person would have had to make the deliberate choice of using a non-

soluble support material instead of the preferred soluble one. They would have had to omit the step of lyophilisation which was described in document D16 as a pivotal step prior to sterilisation, and they would have had to select silanes from a choice of over 20 different activating agents instead of the preferred activator epichlorohydrin.

Based on the disclosure of D16 as a whole, it was only with hindsight that one could come to the conclusion that the skilled person might have considered combining all the different parts of the disclosure of document D16 in order to arrive at the present invention. Furthermore, document D16 did not disclose any examples of a sterilised composition. Sterilisation was only disclosed in the context of a lyophilized powder, i. e. a composition that has been additionally protected by a step of freeze-drying, a step which was neither contemplated nor encompassed by the presently claimed methods. Thus, the skilled person, reading document D16 would not have contemplated sterilising a non-freeze dried carrier.

XI. The arguments of appellant II, relevant to the decision, are summarised as follows:

The opposition division's finding of lack of inventive step of the subject-matter of claim 1 of the main request and auxiliary request 1 was agreed with. However, it was inexplicable why the opposition division had considered the subject-matter of claim 1 of auxiliary request 2 to meet the requirements of Article 56 EPC, since this subject-matter was in fact identical to the subject-matter of the main request except for the change of "comprising" to "consisting of". This change however did not affect the outcome of

assessment of inventive step. The subject-matter of claim 1 of auxiliary request 2 thus did not meet the requirements of Article 56 EPC for the reasons given in the decision under appeal for claim 1 the main request.

In more detail, document D16 disclosed a method for the production of a solid support material on which avidin was immobilised (see e.g. claim 7) and which included a protectant (bulking agent). This agent could be maltose (see page 5, final paragraph and Example 1). This material was also disclosed as suitable for sterilisation (see e. g. claims 33 and 34). Document D16 could be taken to represent the closest prior art for the claimed subject-matter since it was from the same technical field as the claimed invention and the method disclosed therein was similar to that claimed in terms of the steps to be carried out and their order. The opposition division was correct to hold that the only difference between the claimed subject-matter was the exact concentration of silane used, i. e. 0.1 to 10% (w/w or v/v). As also correctly identified by the opposition division this difference had no technical consequences as it represented the entire potentially useful range. Starting from document D16, the objective technical problem was merely to determine a useful range of silane concentrations. The claimed range was easily determined by the skilled person and could not impart an inventive step on the claimed subject-matter.

If instead of the disclosure of document D16 as a whole, only Example 1 of document D16 were chosen to represent the closest prior art, then the difference between it and the claimed method lay in the mode of chemical activation of the solid carrier (silane instead of epichlorohydrin) and in the subsequent sterilisation of the product. A potential problem

derivable from this difference was the provision of an alternative sterile carrier coated with a biological material. The claimed solution was obvious because document D16 suggested the use of silane as a chemical activator of the carrier (see pages 9 and 11) and the sterilisation of such a product: "*Thus, the affinity of the avidin for biotinylated biomolecules is maintained even after these rigorous processing steps, i.e., lyophilization and/or terminal sterilization*" (see page 4, second paragraph). It was clear from this passage that sterilisation was contemplated both with and without the freeze drying step. It followed that the subject-matter of claim 1 of auxiliary request 2 and hence that of claim 1 of both the main and auxiliary request 1 lacked an inventive step.

XII. Appellant I requested in writing that the decision under appeal be set aside and that the patent be maintained on the basis of the claims of the main request, or, alternatively of auxiliary request 1, both filed with the statement of grounds of appeal.

Alternatively, it was requested that the appellant II's appeal be dismissed (auxiliary request 2).

Further alternatively, appellant I requested that the case be remitted to the opposition division for further prosecution on the basis of one of auxiliary requests 3 to 10, or that the patent be maintained on the basis of the claims of one of auxiliary requests 3 to 10, and a description to be adapted thereto.

XIII. Appellant II requested that appellant I's appeal be dismissed, the decision under appeal be set aside and the patent be revoked. It was further requested that

auxiliary requests 3 to 10 not be admitted into the appeal proceedings.

### **Reasons for the Decision**

1. Appellant I did not attend the oral proceedings and is treated as relying on their written case (Article 15(3) RPBA).

#### *Main and auxiliary requests 1 and 2 - claim 1*

2. Claim 1 of all of the above requests is for a method of producing a solid coated carrier carrying biological material "comprising" (main request and auxiliary request 1) or "consisting" (auxiliary request 2) of steps (a) to (d).

Step (a) involves incubating a solid carrier with a silane in order to "activate" it, i.e. to provide a means for chemically attaching a biological material. This attaching is done in step (b), which also specifies that the biological material attached is a protein, polypeptide or peptide. In step (c) the biological material is embedded in a coating layer comprising one or more substances selected from (poly)peptides, amino acids, starch, sugars, polyalcohols, polyethyleneglycols (PEGs) or a mixture thereof.

By means of this coating, the accessible surface of the biological material is minimised (see paragraph [0026] of the patent). This is said to have multiple beneficial effects, such as allowing "*the production of carriers with a clearly defined density of the biological material embedded on the surface of the carrier*", allowing "*a defined onset of a therapy*",

"improvement of the stability (shelf life) of the embedded biological", because "the provision of the coating matrix [...] reduces the accessible surface of the biological material for degenerative processes". Moreover, "the coating layer applied to the carrier in step (c) [...] enables for the sterilization of the produced carrier" (see paragraphs [0033] to [0036]).

The sterilisation allows the use of claimed carriers in clinical settings (see paragraph [0078] and claims 12 and 13 of the patent).

3. The subject-matter of claim 1 of auxiliary requests 1 and 2 differs from that of claim 1 of the main request in that additional process steps are excluded due to the amendment of "*comprising*" to "*consisting of*" and in the addition of certain optional steps. However, by virtue of their optional nature, these features are not limiting on the claimed subject-matter. Thus, the method of claim 1 of auxiliary request 1 involves either i) not drying the solid coated carrier after step (c) or ii) drying it until the residual water content is  $< 20\%$ (w/w). Similarly, the method of claim 1 of auxiliary request 2 involves either not drying the solid coated carrier after step (c) or air-drying it. The subject-matter of claim 1 of auxiliary requests 1 and 2 therefore represents an embodiment of the subject-matter of claim 1 of the main request.
4. The following considerations on inventive step are for the subject-matter of claim 1 of auxiliary request 2 but apply equally to that embodiment of claim 1 of each of the main request and auxiliary request 1.



*Inventive step - Article 56 EPC*  
*Second auxiliary request - claim 1*

*Closest prior art*

5. In assessing whether or not a claimed invention meets the requirements of Article 56 EPC, the boards of appeal apply the "problem and solution" approach, which requires as its first step the identification of the closest prior art. In accordance with the established case law, the closest prior art is generally a teaching in a document conceived for the same purpose or aiming at the same objective as the claimed invention and having the most relevant technical features in common, i.e. requiring the minimum of structural modifications to arrive at the claimed invention (see Case Law of the Boards of Appeal, 8th edition 2016, I.D.3.1).
6. Appellant I considered that document D10 represented the closest prior art for the claimed subject-matter, while appellant II considered that document D16 represented the closest prior art for the claimed subject-matter.
7. The purpose of the claimed method is the production a sterile, solid, coated carrier carrying a protein or (poly)peptide for use in clinical settings (cf. claim 1 and paragraph [0007] of the patent).
8. Document D16 discloses a method for producing an avidin-agarose gel (see Example 1). The avidin-agarose so produced is aimed at addressing problems of stability, leaching of avidin or of the avidin-biotin complexes and provision of high activity avidin compositions which could be lyophilized and further, terminally sterilized while maintaining stability (see

document D16, page 2, paragraph 2). The avidin-agarose is also useful in clinical settings, for instance in the production of fibrin monomers (*ibid.*).

9. Example 1 of document D16 discloses a method in which the agarose gel is first activated with epichlorohydrin then coupled to avidin. The avidin-agarose gel is subsequently washed with water and then with a maltose solution. The agarose gel is an embodiment of the solid carrier of the present claim (cf. paragraph [0010] of the patent), while the avidin is an embodiment of the biological material, as claimed. Maltose is an embodiment of the agent used in step (c) of the present claim.
10. Thus, document D16 and the claimed invention also both relate to the purpose of the production of a sterile, solid, coated carrier carrying a protein or (poly)peptide for use in clinical settings.
11. Document D10 relates to *"a method for sterilizing biologically active compounds, more particularly [...] to a method for sterilizing biologically active biopolymers with gamma or electron-beam radiation without significantly affecting the physiological usefulness of the biopolymers"* (see column 1, paragraph 1). The essence of the invention disclosed therein is a method comprising *"the steps of forming a mixture that comprises the biologically active compound and an extraneous protein and cooling the mixture to a temperature sufficient to substantially freeze and immobilize the mixture. The frozen mixture is then irradiated with gamma or electron-beam irradiation for a time sufficient to substantially sterilize the biologically active compound"* (see column 2, lines 30 to 40). In one embodiment *"The protected mixture may be*

*immobilized upon a solid substrate"* (see column 5, lines 36 and 37).

12. In the method disclosed in document D10, a protected mixture is immobilised on a solid carrier by either adsorption or by covalent bonding (see column 5, lines 49 and 50), whereas both the method disclosed in document D16 and the claimed method involve the activation of the solid carrier using a chemical activator, followed by the covalent binding of the biological material to the carrier and the subsequent protection. Thus, the method disclosed in document D16 has more relevant technical features in common with the claimed invention than the method disclosed in document D10. It follows that the method disclosed in Example 1 of document D16 is taken as representing the closest prior art for the claimed invention.

*The technical problem and its solution*

13. The differences between the claimed method and that disclosed in Example 1 of document D16 are that the latter uses the activating agent epichlorohydrin to prepare the solid carrier for binding to the biological material rather than "at least one silane", and that the solid, coated carrier produced by the method disclosed in Example 1 of document D16 is not sterilised.
14. The board is not aware of any particular technical effect of the choice of silanes instead of epichlorohydrin as activating agent. The effect of sterilisation is self-evident.
15. In view of the above differences and the technical effects thereof, the board considers that the technical

problem to be solved by the subject-matter of claim 1 may be formulated as the provision of an alternative method for the production of a solid carrier, coated with a biological material, suitable for use in clinical settings.

*Obviousness*

16. The skilled person seeking to solve the above problem and starting from the disclosure in Example 1 of document D16 (see above), would have found in the same document the following teaching:

*"In order to immobilize the avidin to a support, e.g., agarose, the support must be pre-activated prior to avidin coupling. [...] activation can be carried out by any suitable technique capable of providing an activated support which can form covalent bonds with avidin.*

*For example, various activation reagents available for derivatizing supports are: diazonium groups, isocyanate groups, acid chloride groups, acid anhydride groups, sulfonyl chloride groups, dinitro fluorophenyl groups, isothiocyanate groups, hydroxyl groups, amino groups, n-hydroxysuccinimide groups, triazine groups, hydrazide groups, carbodiimide groups, **silane groups**, aldehydes, 1, 4-butanediol diglycidyl ether, sodium metaperiodate, 1, 1-carbonyl diimidazole, divinylsulphone, 2fluoro-1-methylpyridinium toluene-4-sulphonate and cyanogen bromide" (see page 9, paragraph ; emphasis added by the board).*

This is echoed on page 11, where it is disclosed that:

*"All the above preferred methodologies employ agarose as the support, however, it is possible to use other aforementioned supports as well. For example, when using silica, the preferred activation chemistries are:*

*(a) [...]*

*(b) Gamma - glycidoxypropyltrimethoxysilane activation with direct coupling of the avidin via NH<sub>2</sub> groups on the protein.*

*(c) [...]*

*(d) Gamma - glycidoxytrimethoxysilane activation followed by opening of the epoxide ring to form a diol group, which can be subsequently activated with cyanogen bromide. Direct coupling of the avidin can be achieved via -NH<sub>2</sub> groups on the protein.*

*(e) Gamma - glycidoxypropyltrimethoxysilane activation followed by preparation of amino-silica by treatment with ammonia solution".*

17. In summary, the skilled person learns from document D16 that the preferred activation chemistries include silane based ones, especially if a silica support is used instead of an agarose one. Thus, in seeking an alternative to the method disclosed in Example 1, the skilled person would regard the use of silane based activation chemistries as an obvious measure, especially if silica were chosen as the solid support.
18. With respect to the concentration of silane to be used, document D16 does not disclose any particular concentration while the claim mentions a range of 0.1 to 10 % (w/w) or (v/v). This is a range of 100 orders of magnitude, encompassing most conceivable situations. Moreover, the board has seen no argument that it is a choice associated with any surprising technical effect.

This too is therefore regarded as representing a routine and obvious choice for the skilled person.

19. Turning to the question of the obviousness or otherwise of the sterilisation step, document D16 discloses that:

*"The preferred lyophilized avidin/inert support compositions of the present invention are stable, can be terminally sterilized"; and*

*"The unique combination of components herein also protects the avidin/inert support component from any deleterious effects upon terminal sterilization of the composition. Thus, the affinity of the avidin for biotinylated biomolecules is maintained even after these rigorous processing steps, i.e., lyophilization and/or terminal sterilization" (see page 4, paragraph 2).*

20. It is clear from this passage that the methods for preparing avidin/inert support compositions result in products that are particularly suitable for sterilisation and that this sterilisation step can be done after a lyophilisation step or in the absence of such a step. Thus, the board concludes that the skilled person starting from the method disclosed in Example 1 of document D16 and seeking to solve the technical problem of provision of an alternative method for the production of a solid carrier, coated with a biological material, suitable for use in clinical settings would not hesitate to use a silane-based activation chemistry especially for silica supports and, in view of the intended use in clinical settings, would realise that the so produced support could be routinely sterilised without significant loss of activity.

21. Thus, the subject-matter of claim 1 of auxiliary request 2 was obvious to the skilled person in the light of the disclosure of D16 alone.
22. For the reasons set out above, the subject-matter of each of the main request and auxiliary requests 1 and 2 does not meet the requirements of Article 56 EPC.

*Auxiliary requests 3 to 10*

23. Article 12(2) RPBA *inter alia* provides that the statement of grounds of appeal shall contain a party's complete case, that it shall set out clearly and concisely why it is requested that the decision under appeal be set aside and should specify expressly all the facts, arguments and evidence relied on.
24. Auxiliary claim requests 3 to 10 were submitted with appellant I's statement of grounds of appeal. The statement of grounds of appeal did not contain any explanation why auxiliary requests 3 to 10 overcame the objection of lack of inventive step raised in relation to the requests dealt with in the decision under appeal and which were re-filed in the appeal proceedings, i.e. the statement of grounds of appeal has not placed the board or the other party in a position which allows it to understand why the amended subject-matter overcomes this objection. Nor was such an explanation provided in reply to the board's communication in which appellant I was made aware of the lack of substantiation with regard to these requests. Since it is not self-evident either how auxiliary requests 3 to 10 could remedy the deficiency identified by the opposition division with regard to the previous requests, appellant I cannot be considered as having "*set out clearly and concisely why*

*it is requested that the decision under appeal be set aside".*

25. Consequently, auxiliary requests 3 to 10 do not comply with the requirements of Article 12(2) RPBA and are thus not taken into consideration.
26. Since no request is allowable, the appeal of appellant II is successful, while that of appellant I must be dismissed.

### **Order**

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

1. The decision under appeal is set aside.
2. The patent is revoked.

The Registrar:

The Chair:



S. Lichtenvort

G. Alt

Decision electronically authenticated