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**D E C I S I O N**  
**of 27 April 2004**

**Case Number:** T 1185/01 - 3.3.1

**Application Number:** 97914600.8

**Publication Number:** 0893446

**IPC:** C07D 501/38

**Language of the proceedings:** EN

**Title of invention:**

Cephem compounds and drugs containing the compounds

**Applicant:**

SHIONOGI & CO., LTD.

**Opponent:**

-

**Headword:**

Cephem compounds/SHIONOGI

**Relevant legal provisions:**

EPC Art. 123(2)

**Keyword:**

"Admendments - support in the application as filed (yes)"

**Decisions cited:**

T 0615/95

**Catchword:**

-



Case Number: T 1185/01 - 3.3.1

**D E C I S I O N**  
of the Technical Board of Appeal 3.3.1  
of 27 April 2004

**Appellant:** SHIONOGI & CO., LTD.  
1-8, Doshomachi 3-chome  
Chuo-ku  
Osaka-shi  
Osaka 541-0045 (JP)

**Representative:** Hayes, Adrian Chetwynd  
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**Decision under appeal:** Decision of the Examining Division of the  
European Patent Office posted 16 May 2001  
refusing European application No. 97914600.8  
pursuant to Article 97(1) EPC.

**Composition of the Board:**

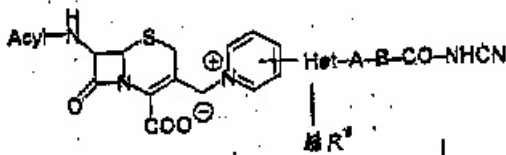
**Chairman:** R. Freimuth  
**Members:** P. P. Bracke  
S. C. Perryman

## Summary of Facts and Submissions

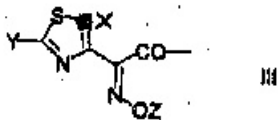
I. The appeal lies from the Examining Division's decision, dispatched on 16 May 2001, refusing European patent application No. 97914600.8, published as WO 97/37996, since the then pending set of claims according to the main request did not meet the requirement of Article 123(2) EPC and the then pending sets of claims according to the first and second auxiliary requests did not meet the requirement of inventive step.

II. As a reply to objections that the sets of claims filed during the written appeal proceedings did not meet the requirement of Article 123(2) EPC, the Appellant submitted at the oral proceedings before the Board, which took place on 27 April 2004, a fresh set of 7 claims superseding any previous request, which set read:

"1. A cephem compound of formula I



wherein Acyl is represented by the formula III:



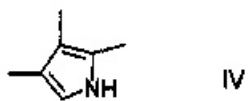
wherein

X is CH or N

Y is optionally protected amino;

Z is a C<sub>1</sub>-C<sub>3</sub> alkyl group or a C<sub>1</sub>-C<sub>3</sub> alkyl group substituted by 1 or 2 halogens;

Het is a group of formula IV:



R<sup>1</sup> is hydrogen or a straight or branched C<sub>1</sub>-C<sub>6</sub> alkyl group;

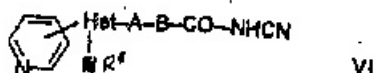
A is a single bond or vinylene; and

B is a single bond."

"2. A pharmaceutical composition comprising a compound of claim 1."

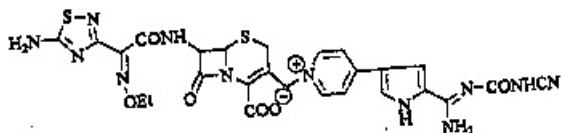
"3. An antibiotic comprising a compound of claim 1."

"4. A compound of the formula VI:

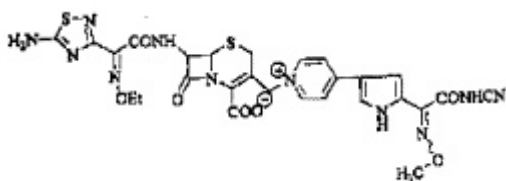


where A, B, R<sup>1</sup> and Het are as defined in claim 1."

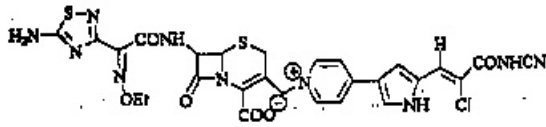
"5. A compound of the formula:



"6. A compound of the formula:



"7. A compound of the formula:



- III. The Appellant submitted that the fresh claims satisfied the requirement of Article 123(2) EPC, since they were based on original claims 2, 3, 5 and 6, and on page 15, paragraph 1 and page 7, line 1 of the application as filed.
- IV. The Appellant requested that the decision under appeal be set aside and that the case be remitted to the first instance for further prosecution on the basis of the claim request submitted at oral proceedings on 27 April 2004.
- V. At the end of the oral proceedings the decision of the Board was announced.

### Reasons for the Decision

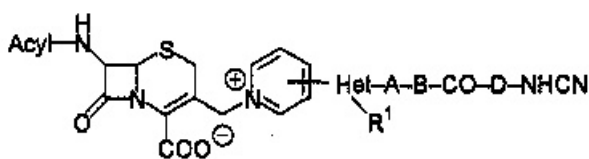
1. The appeal is admissible.
2. *Article 123(2) EPC*

Article 123(2) EPC stipulates that a European patent application may not be amended in such a way that it contains subject-matter which extends beyond the content of the application as filed.

In accordance with the established jurisprudence of the Boards of Appeal, the relevant question to be decided in assessing whether an amendment adds subject-matter extending beyond the content of the application as filed, is whether the proposed amendments were **directly and unambiguously** derivable from the application as filed.

2.1 The subject-matter of Claim 1 has a proper basis in Claim 2 of the application as originally filed in combination with the acyl-group of formula III defined in original Claim 3, the Het-group of formula IV defined in original Claim 5, the definitions of A and B in original Claim 6 and the definitions given for R<sup>1</sup> and Z in the description as originally filed in the sentence bridging pages 6 and 7 and page 15, lines 5 to 9, respectively.

2.1.1 Original Claims 3, 5 and 6 comprise a reference back to Claim 2 and, thus, are all related to compounds of formula I



as defined in original Claim 2. In particular, in original Claim 3 compounds of formula I are described, wherein Acyl is represented by the formula III, wherein X is CH or N, Y is an optionally protected amino and Z is hydrogen or an optionally substituted hydrocarbon group; original Claim 5 describes compounds of formula I wherein Het is a pyrrole of formula IV; and original Claim 6 defines compounds of formula I wherein A is a

single bond or a vinyl group and B and D are each a single bond.

- 2.1.2 R<sup>1</sup> in original Claim 2 is defined as hydrogen, an optionally substituted lower alkyl or an optionally substituted lower alkenyl. The restriction of R<sup>1</sup> in present Claim 1 as being hydrogen or a straight or branched C<sub>1</sub>-C<sub>6</sub> alkyl group, which is supported by the sentence bridging pages 6 and 7 of the application as filed, is thus the result of the deletion of the optionally substituted lower alkenyl group from the list of definitions for R<sup>1</sup> in original Claim 1.

According to the jurisprudence of the Boards of Appeal, the deletion of an originally disclosed meaning in a list of alternative substituents is allowable under Article 123(2) EPC if it does not result in singling out any hitherto not specifically mentioned individual compound or group of compounds, but maintains the remaining subject-matter as a generic group of compounds differing from the original group only by its smaller size. Such shrinking of the generic group of chemical compounds is not objectionable if this deletion does not lead to a particular combination of specific meanings of the respective residues which was not disclosed originally or, in other words, does not generate another invention (T 615/95 no. 6 of the Reasons for the Decision).

- 2.1.3 Moreover, a proper basis for the present meaning of Z can be found on page 15, lines 5 to 9, of the application as filed, stating:

"Examples of preferred Z include hydrogen, (C<sub>1</sub>-C<sub>3</sub>)lower alkyl group and a lower alkyl group substituted by one or 2 substituents selected from halogen and carboxyl group (e.g., fluoromethyl, fluoroethyl, carboxypropyl, etc.)"

Although the unsubstituted lower alkyl was there defined as containing 1 to 3 carbon atoms, it is evident for a skilled person, taking the complete sentence into consideration that the presence of 1 to 3 carbon atoms also refers to the substituted lower alkyl radicals, all the more, since only the groups methyl, ethyl and propyl are given as particular examples for lower alkyl.

2.2 Claims 2 and 3 have a proper basis in original Claims 4 and 5 respectively; Claim 4 is supported by original Claim 10; and Claims 7, 8 and 9 find a proper basis in examples 2, 3 and 15.

2.3 As thus the subject-matter of Claims 1 to 9 was directly and unambiguously derivable from the application as filed, the requirement of Article 123(2) EPC is met.

3. *Remittal to the first instance*

The decision under appeal was based on sets of claims substantially differing from the present one and the objection under Article 56 EPC had its origin in the presence of the wording "optionally substituted" and the undefined meaning of "cephem compound" in the claims underlying the decision under appeal. Since the term "optionally substituted" does not figure any more



in the present claims and the cephem compounds are restricted to the ones having an acyl-group of formula III, the reasons given by the Examining Division for refusing the application are no longer applicable.

Having regard to the fact that the function of the Boards of Appeal is primarily to give a judicial decision upon the correctness of the earlier decision taken by the first instance and in order to give the Appellant the possibility of having his case examined and decided by two instances, the Board exercises its discretionary power under Article 111(1) EPC and remits the case to the Examining Division for further prosecution.

The Board draws the attention to the fact, that in assessing inventive step according to the problem solution approach, the closest state of the art is normally a prior art document disclosing subject-matter aiming at the same objective as the claimed invention and additionally having the most relevant structural elements in common.

Since, in the present case, Claim 1 is related to cephem compounds having antibiotic properties and bearing at the 3-position a substituted 1-pyridinium-methyl radical, those documents describing antibiotic cephem compounds bearing in the 3-position that particular radical, such as documents

(A) EP-A-0 160 969, cited in the Search Report, and

(B) EP-A-0 159 011,

both cited in the present application, should be taken into account when identifying the closest state of the art.

**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 on the basis of the claim request submitted at oral proceedings on 27 April 2004.

The Registrar:

The Chairman:

N. Maslin

R. Freimuth