

Internal distribution code:

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

**Datasheet for the decision
of 20 June 2012**

Case Number: T 1993/08 - 3.3.10

Application Number: 02705373.5

Publication Number: 1378224

IPC: A61K 7/48, A61K 7/00,
A61K 7/06, A61K 31/52,
A61K 31/675, A61P 17/00,
A61P 17/16

Language of the proceedings: EN

Title of invention:
Sugar Intake Promoters

Applicant:
Otsuka Pharmaceutical Co., Ltd.

Opponent:
-

Headword:
-

Relevant legal provisions:
EPC Art. 56, 123(2)

Relevant legal provisions (EPC 1973):
-

Keyword:
"Inventive step (yes): claimed use not obvious from prior art"

Decisions cited:
-

Catchword:
-



Case Number: T 1993/08 - 3.3.10

D E C I S I O N
of the Technical Board of Appeal 3.3.10
of 20 June 2012

Appellant:
(Applicant)

OTSUKA PHARMACEUTICAL CO., LTD.
9, Kandatsukasa-cho 2-chome
Chiyoda-ku
Tokyo 101-8535 (JP)

Representative:

Hoffmann Eitle
Patent- und Rechtsanwälte
Arabellastraße 4
D-81925 München (DE)

Decision under appeal:

Decision of the Examining Division of the
European Patent Office posted 20 May 2008
refusing European patent application
No. 02705373.5 pursuant to Article 97(2) EPC.

Composition of the Board:

Chairman: J. Mercey
Members: C. Komenda
D. S. Rogers

Summary of Facts and Submissions

- I. The appeal lies from the decision of the Examining Division refusing European patent application No. 02 705 373.5 published with the International publication No. WO 2002/083087.
- II. The Examining Division found that the subject-matter of the claims according to the then pending sole request did not involve an inventive step in the sense of Article 56 EPC. In its decision the Examining Division relied *inter alia* on documents
- (5) JP-B-47 026 687,
 - (12) JP-A-05 913 4706 and
 - (13) JP-A-10 182 412.

In particular the Examining Division held that starting from any of documents (5), (12) or (13) as closest state of the art, the problem consisted in providing compositions which were capable of preventing or improving spots, freckles, erythema or pigment deposits, or alternatively, of providing further uses of adenosine 5'-monophosphate (AMP). As the use of compositions comprising AMP or its salt for application to the skin was already known and no evidence had been provided that the above mentioned technical problem was successfully solved, the subject-matter of the then pending claims was regarded as not involving an inventive step.

- III. At the oral proceedings held on 20 June 2012 before the Board, the Appellant filed a new sole main request. Claim 1 thereof reads as follows:

"1. A cosmetic use of adenosine 5'-monophosphate (AMP) or a salt thereof for preventing or improving spots, freckles and/or pigment deposits."

Independent claim 8 reads as follows:

"8. Adenosine 5'-monophosphate (AMP) or a salt thereof for use in preventing or improving erythema."

IV. The Appellant submitted in particular that starting from any of documents (5), (12) or (13), the problem to be solved was to provide alternative uses of AMP or salts thereof. The solution to this problem was the cosmetic use of AMP or salts thereof according to claim 1 for preventing or improving spots, freckles and/or pigment deposits, and AMP or a salt thereof according to claim 8 for use in preventing or improving erythema. The experimental data filed with letter of 21 May 2012 demonstrated that AMP was effective in reducing skin chromaticity. This effect was not due to a bleaching action of the AMP containing composition, but was due to an increased cell turnover rate of epidermal keratinocytes, which effectively improved or prevented various skin conditions, such as freckles, spots, pigment deposits and erythema. Although document (13) taught the use of AMP as a cell activator, this was for anti-ageing and skin-moistening effects. It was, however, known from document

(6) EP-A-0 256 472

that such effects were achieved by activation of dermal cells below the epidermis, from which faster renewal of

the keratinocytes could not be deduced. As none of the cited documents suggested these particular uses of AMP or a salt thereof, the subject-matter of claims 1 and 8 involved an inventive step.

- V. The Appellant requested that the decision under appeal be set aside and that a patent be granted on the claims 1 to 14 according to the New Main Request submitted at the oral proceedings before the Board.
- VI. At the end of the oral proceedings the decision of the Board was announced.

Reasons for the Decision

1. The appeal is admissible.
2. *Amendments (Article 123(2) EPC)*
 - 2.1 Claim 1 was redrafted as a second non-medical use claim relating to a purely cosmetic use of AMP or a salt thereof for preventing or improving spots, freckles, and/or pigment deposits. A basis for independent claims 1 and 8 is to be found on page 6, lines 13 to 23, particularly line 20 and on page 13, lines 2 to 9 of the application as filed.
 - 2.2 The dependent claims 2 and 9 restrict the subject-matter of the respective independent claims 1 and 8 to the sodium salt of AMP, which is based on page 7, lines 7 to 10 of the application as filed.

- 2.3 The dependent claims 3 to 5, as well as dependent claims 10 to 12, contain further restrictions concerning the amounts of AMP or a salt thereof. Basis for these amendments is to be found on page 8, lines 18 to 23 and additionally on page 14, line 23 to page 15, line 5 of the application as filed.
- 2.4 The AMP containing compositions used according to dependent claims 6 and 13 have a pH in the range of from 2 to 8, which is originally disclosed on page 15, lines 5 to 6 and additionally in originally filed claims 8 and 17.
- 2.5 Dependent claims 7 and 14 indicate that the preparations are in a form for external application, which finds a basis in original claim 9 and additionally on page 7, lines 22 to 25, page 8, lines 1 to 2, page 15, lines 10 to 13 or page 22, lines 1 to 4 of the application as filed.
- 2.6 Therefore, the Board is satisfied that the amendments made fulfil the requirements of Article 123(2) EPC.

3. *Novelty (Article 54 EPC)*

In the decision under appeal the Examining Division did not raise any objections to the novelty of the claimed subject-matter. As none of the cited documents discloses the claimed uses of AMP or a salt thereof, the novelty of the claimed subject-matter is acknowledged.

4. *Inventive step (Article 56 EPC)*

4.1 The present application is directed to new cosmetic uses of AMP or a salt thereof and to AMP or a salt thereof for therapeutic treatment of the skin. The use of AMP in preparations to be applied to human skin is already disclosed in documents (5), (12) and (13), of which document (13) appears to be the closest prior art to the subject-matter of the application in suit.

4.2 Document (13) discloses a medical preparation for external use, which contains sea water taken from the ocean depths and a cell activator. The preparation shows excellent skin anti-ageing, roughening- and drying-preventive effects as well as a skin-moistening effect. The list of suitable cell activators includes AMP.

4.3 Starting from this prior art document the problem to be solved according to the Appellant was to provide alternative uses of AMP.

4.4 As a solution to this problem the application in suit proposes the cosmetic use of AMP or a salt thereof for preventing or improving spots, freckles and/or pigment deposits as claimed in claim 1 or AMP or a salt thereof for preventing or improving erythema as claimed in claim 8.

4.5 The decision under appeal did not accept that the technical problem was successfully solved, since there were no experimental data which supported the claimed uses.

4.6 In order to demonstrate that the proposed solution to the technical problem was indeed successful, the Appellant filed experimental data with its letter dated 21 May 2012, which related to *in vivo* experiments carried out on guinea pigs. The skin of the animals was stained with dabsyl chloride, which formed a stable coloured protein complex within the epidermis. A portion of the thus stained skin surface was subsequently treated with preparations having various concentrations of the disodium salt of AMP. The optometric evaluation of the skin chromaticity of the treated skin revealed that the AMP salt resulted in significantly reduced skin chromaticity, thus supporting the claimed effect of preventing or improving freckles, spots and/or pigment deposits. This effect was not due to a mere bleaching of the coloured skin or a removal of the dye, but was due to an increased rate of cell turnover of the outer keratinocytes, since the dabsyl chloride protein complex could only be removed by replacement of the stained skin cells by new keratinocytes.

Therefore, the experimental data, which show that application of a salt of AMP leads to an increased cell turnover, render credible that AMP or a salt thereof is also effective in preventing or improving erythema, since an increased cell turnover rate means that damaged skin cells would be replaced faster.

4.7 It remains to be decided whether the proposed solution to the above mentioned technical problem was obvious in view of the cited prior art.

In document (13), AMP is used as a cell activator for providing an anti-ageing, roughening- and drying-preventive effect on human skin (see paragraph 4.2 *supra*). From document (6) the skilled person learns that an anti-ageing and moistening effect is achieved by activation of the derma cells of deeper skin layers, which promote the production of elastin and of collagen (see page 11, lines 14 to 27). Thus, the skilled person would not have expected that AMP activates the keratinocytes thereby providing an increased cell turnover rate of the keratinocytes in the epidermis. Therefore, the use of AMP or a salt thereof for preventing or improving spots, freckles, pigment deposits and/or erythema was not obvious from the prior art.

- 4.8 The Board concludes from the argumentation as set out above that the subject-matter of independent claims 1 and 8 and that of the respective dependent claims 2 to 7 and 9 to 14 of the New Main, and sole, Request involves an inventive step within the meaning of Articles 52(1) and 56 EPC.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.

2. The case is remitted to the department of first instance with the order to grant a patent with claims 1 to 14 of the New Main Request submitted at the oral proceedings before the Board and a description to be adapted.

The Registrar:

The Chair:

C. Rodríguez Rodríguez

J. Mercey