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D E C I S I O N
of 15 February 2001

Case Number: W 0012/00 - 3.3.1

Application Number: PCT/US98/17590

Publication Number: -

IPC: C07F 5/02

Language of the proceedings: EN

Title of invention:

Robustaflavone, intermediates and analogues and method for preparation thereof

Applicant:

MEDICHEM RESEARCH, INC.

Opponent:

-

Headword:

Robustaflavone/MEDICHEM

Relevant legal provisions:

PCT Art. 17(3)(a)

PCT R. 13.1, 13.2, 40.1, 40.2

PCT Administrative Instructions, Annex B, Part 1 (g)(i) and (v)

Keyword:

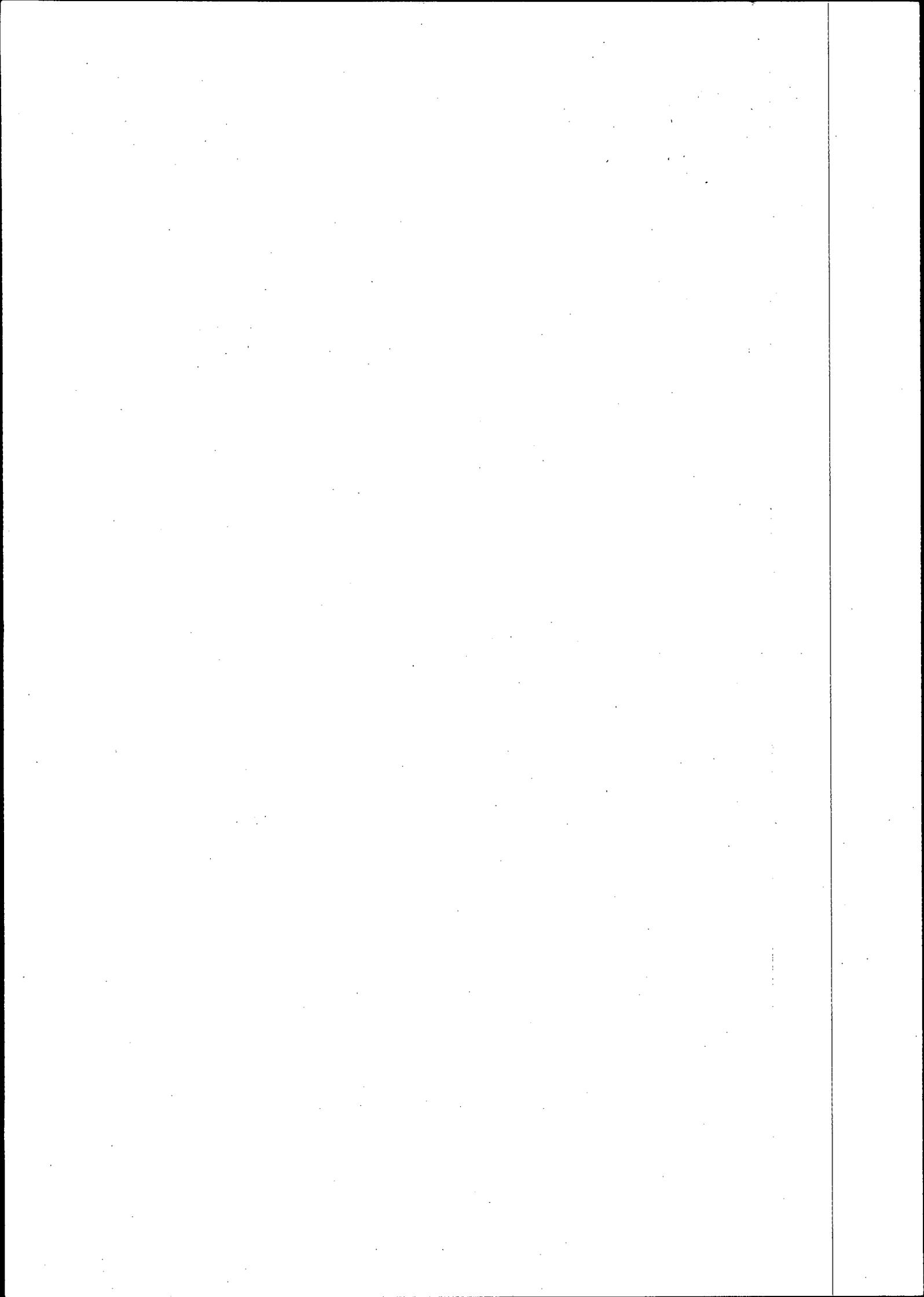
"Lack of unity *a posteriori* (yes) - intermediate not new - disqualification as unifying element"

Decisions cited:

G 0001/89, W 0003/94, W 0006/96

Catchword:

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Boards of Appeal

Chambres de recours

Case Number: W 0012/00 - 3.3.1

D E C I S I O N
of the Technical Board of Appeal 3.3.1
of 15 February 2001

Applicant:

MEDICHEM RESEARCH, INC.
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Representative:

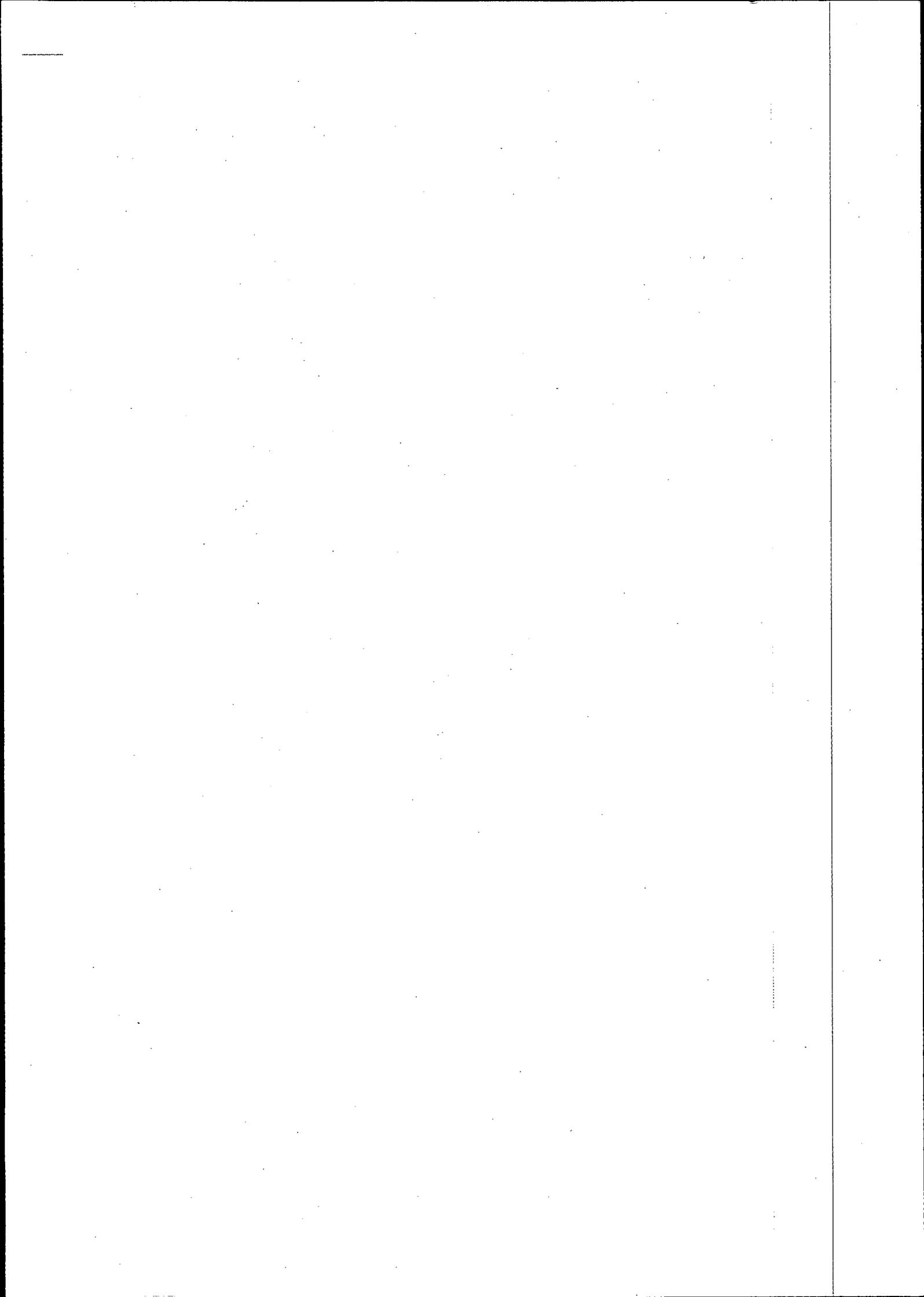
Pett, Christopher Phineas
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Subject of this Decision:

Protest according to Rule 40.2(c) of the Patent
Cooperation Treaty made by the applicant
against the invitation (payment of additional
fee) of the European Patent Office
(International Searching Authority) dated
15 January 1999.

Composition of the Board:

Chairman: A. Nuss
Members: R. Freimuth
B. Günzel



Summary of Facts and Submissions

- I. Following the filing of international application No. PCT/US98/17590 the EPO, acting as ISA, on 15 January 1999 issued an invitation to pay within 45 days an additional search fee (Article 17(3)(a) and Rule 40.1 PCT).
- II. The said international application contained 23 claims. Claims 1 to 5 were directed to a multi step method for preparing robustaflavone by reacting in the first step 6-iodo-5,7,4'-trimethoxyflavone 8 and 5,7,4'-trimethoxy-3'-(trimethylstannyl)flavone 9a. Claims 6 to 10 referred to a method for preparing compound 8 starting from 5,7,4'-trimethoxyflavone 5b. Claims 22, 23 and 11 to 15 were directed to compound 9a, to 5,7,4'-trimethoxyflavone-3'-boronate 9b and to a method for preparing the latter compound, respectively. Claims 16 to 18 and 19 to 21 related to a method for preparing 6- or 3'-alkyl or -aryl substituted robustaflavone analogues, respectively.

The ISA stated in the invitation to pay additional fees (IPAF) that the international application related to two groups of inventions, namely:.

group 1: claims 1 to 5 and 11 to 23 and

group 2: claims 6 to 10.

The ISA held that group 1 concerned the preparation of robustaflavone and analogues thereof, new intermediates 9a and 9b as well as the preparation of compound 9b, while group 2 related to the preparation of compound 8. However, compound 8, which was the key compound for the preparation process of robustaflavone, was not new in view of document

(1) Chemical Abstracts, Volume 80, 14811d (1974).

Thus, this preparation process to robustaflavone was interrupted by an intermediate which was not new so that the special technical feature ruling the link between intermediate and final product was missing. The IPAF further stated that the different technical features were not so linked as to form a single general inventive concept. According to Rule 13.2 PCT read in the light of the Administrative Instructions, Annex B, Part 1, (g) (v), intermediates and final products shall not be separated, in the process leading from one to the other, by an intermediate which is not new. Therefore, this led to distinguish two different groups of inventions as mentioned above.

III. On 24 February 1999 the Applicant paid the additional search fee under protest (Rule 40.2(c) PCT). In support of the protest the Applicant submitted that claims 1 to 5 and 11 to 23 were directed to a process which employed the intermediate 8 while claims 6 to 10 were directed to a process for making intermediate 8. Because both claimed processes included intermediate 8 as either the end product or as an intermediate, the unity of invention existed between both groups of claims.

The Applicant requested that the additional search fee be refunded.

IV. On 29 April 1999 the ISA informed the Applicant that, after having performed the prior review pursuant to Rule 40.2(e) PCT, it found the IPAF completely justified and invited the Applicant to pay the protest fee within one month. The ISA's Review Panel confirmed the reasoning given in the IPAF and stated that the lack of unity lay in the finding that compound 8 was known in the art. Thus, in order to solve the problem

of preparing robustaflavone, it was not necessary to solve the subordinate problem of preparing compound 8. To perform the method of claim 1, compound 8 of the state of the art could be used as starting material. It was noted that compound 8 was the only technical feature shared by the two groups of inventions identified in the IPAF. This feature could, however, not be the special technical feature addressed in Rule 13.2 PCT as that compound *per se* was not novel and, hence, could not be the contribution the invention as a whole made over the prior art.

- V. On 28 May 1999 the Applicant paid the protest fee and submitted additionally that the known process for preparing compound 8 provided that compound only in poor yields while the present invention provided a new process for preparing this key intermediate.

Reasons for the Decision

1. The protest is admissible.
2. The communication containing the result of the prior review and inviting the Applicant to pay the protest fee does not reveal the composition of the Review Panel. Although this information should be available to the Applicant and to the Board in order to have a basis to see whether the review has been made by the appropriate body as prescribed by the President of the EPO (see OJ EPO 1992, 547), such invitation is to be considered correct if the correct composition has been shown otherwise (see decision W 6/96, 15 April 1997, point 1 of the reasons). In the present case, the copy

in the search file SA (E) 207403 indicates the three members of the Review Panel and bears their signatures. Thus, that Review Panel was correctly composed and was competent for inviting to pay the protest fee.

3. According to Rule 13.1 PCT, the international application shall relate to one invention only or to a group of inventions so linked as to form a single general inventive concept. If the ISA considers that the claims lack this unity, it is empowered to invite the Applicant to pay additional fees pursuant to Article 17(3)(a) PCT.

Lack of unity of invention may be directly evident *a priori*, i.e. before the examination of the merits of the claims in comparison with the state of the art revealed by the search. Alternatively, the ISA is also empowered to raise that objection *a posteriori*, i.e. after having taken into account the state of the art revealed by the search (see decision G 1/89, OJ EPO 1991, 155). In the present case, the ISA raised the objection of non-unity based on the prior art document (1) and was thus made *a posteriori*.

4. The objection of non-unity was based by the ISA on the ground that there is no common inventive concept linking the subject-matter of claims 1 to 5 and 11 to 23 (group 1) and that of claims 6 to 10 (group 2) since the intermediate compound 8 common to both groups of claims is not novel. While the Applicant emphasized that both groups share compound 8, the Board, nonetheless, holds in the present case that the mere fact that compound 8 is a starting compound in the process of claim 1 of group 1 and that compound 8 can be obtained by the process of claim 6 of group 2, is not in itself sufficient to establish unity of invention.

5. The ISA's conclusion is correct that intermediate compound 8 is disclosed in document (1) and that therefore this compound is known in the prior art. This fact has been conceded by the Applicant. Hence, compound 8 cannot serve as a common inventive concept between claims 1 to 5 and 11 to 23 (group 1), on the one hand, and claims 6 to 10 (group 2), on the other. Furthermore, the technical problem to be solved by the second group of inventions was to improve the yield of the known process for preparing compound 8, as submitted by the Applicant in his protest and as acknowledged in the application on page 7, lines 23 and 24, whereas the first group of inventions was intended to solve the different technical problem of providing a direct method for preparing robustaflavone, intermediates and analogues thereof as indicated in the application on page 4, lines 15 to 16.

According to Rule 13.2 PCT one and the same international application may relate to a group of inventions if there is a "technical relationship" among those inventions involving one or more of the same or corresponding "special technical features", i.e. such technical features that define a contribution which each of the claimed inventions makes over the prior art. However, a technical feature which already forms part of the prior art, as does compound 8, cannot by definition make a contribution over the art and therefore disqualifies as a unifying element in the sense of Rule 13.1 PCT. Thus, the fact that this compound is part of the prior art destroys the link between the contributions over the prior art made by the claimed invention according to group 1, on the one hand, and according to group 2, on the other.

For those reasons, in the circumstances of the present case, the Applicant's submission based on compound 8 fails to establish unity of invention for the present international application, as does the lack of any common technical problem underlying both groups of inventions.

6. The ISA relied moreover on the Administrative Instructions under the PCT to object to non-unity of the present international application.

Pursuant to Article 2 of the Agreement between the EPO and WIPO dated 7 October 1987 (OJ EPO 1987, 515) the international search shall be carried out in accordance with the Patent Cooperation Treaty, its Regulations and the Administrative Instructions; when carrying out the international search under the PCT, the International Search Guidelines shall guide it. Chapter VII-1 of those Search Guidelines stipulates that when assessing unity of invention in accordance with the provisions laid down in Rule 13.1 to 13.4 PCT, *inter alia* Annex B of the Administrative Instructions under the PCT are to be observed. It follows therefrom that in the assessment of unity the Administrative Instructions are binding not only for the ISA but also for the Board acting as the "three-member board" according to Rule 40.2(c) PCT (see decisions G 1/89, *loc cit.*; W 3/94, OJ EPO 1995, 775, point 10 of the reasons).

7. With respect to the unity of invention relating to the particular situation involving intermediate and final products, which is generally governed by Rule 13.2 PCT, the Administrative Instructions under the PCT stipulate in Part 1, (g) (v) of Annex B in particular that "the intermediate and final products shall not be separated, in the process leading from one to the other, by an

intermediate which is not new" wherein the term "intermediate" is intended to mean intermediate or starting products, as defined in section (g)(i) of that Part 1.

In the present case, compound 8 is both, the product obtained in the preparation process of claim 6 of group 2, which starts from compound 5b, and the starting product in the process of claim 1 of group 1 for preparing the final product robustaflavone. Hence, the overall process leading from the starting compound 5b, which is an "intermediate" in the sense of Annex B, Part 1, (g)(i), via compound 8 to the final product robustaflavone represents "the process leading from one to the other" in terms of Annex B, Part 1, (g)(v) of the Administrative Instructions, compound 8 being an intermediate therein.

However, compound 8 is disclosed in the prior art document (1) and therefore not novel. Thus, in the overall process leading from one to the other, the starting and the final product are separated by the intermediate 8 which is not new, with the consequence that the requirements of unity of invention as set out in particular in Annex B, Part 1, (g)(v) of the Administrative Instructions are not satisfied. While this instruction on non-unity appears to address in particular the situation when claims directed to those products *per se* are present, in the Board's judgement, it applies also to the present case of claims directed to their preparation processes. The absence of such product claims, whether deliberately or accidentally, may not alter the above conclusion of non-unity since the Administrative Instructions merely illustrate the provisions of Rule 13.2 PCT requiring the presence of a

technical feature not forming part of the prior art linking the different groups of invention, which is missing in the present case as set out in point 5 above.

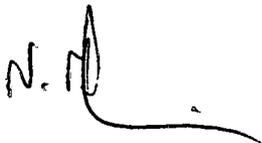
8. For the foregoing reasons, the Board comes to the conclusion that the inventions according to group 1 and group 2 do not form a single general inventive concept and, consequently, that the invitation made under Article 17(3)(a) and Rule 40.1 PCT to pay one additional search fee was justified.

Order

For these reasons it is decided that:

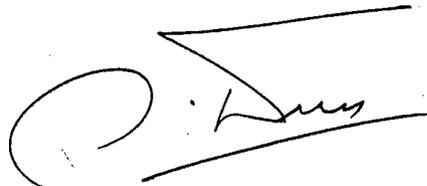
The protest is dismissed.

The Registrar:



N. Maslin

The Chairman:



A. Nuss

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