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Datasheet for the decision of 10 June 2026

Case Number: T 0134/25 - 3.3.07

Application Number: 21191393.4

Publication Number: 3981404

IPC: A61K31/485, A61K31/137, A61P25/00, A61P25/24, A61K9/00

Language of the proceedings: EN

Title of invention:
COMPOSITIONS AND METHODS COMPRISING BUPROPION OR RELATED COMPOUNDS AND DEXTROMETHORPHAN

Applicant:
Antecip Bioventures II LLC

Headword:
Bupropion and dextromethorphan III/ANTECIPP

Relevant legal provisions:
EPC Art. 56, 76(1), 123(2)

Keyword:
Inventive step - auxiliary request 10 (yes)
Amendments - auxiliary request 10 - added subject-matter (no)

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Beschwerdekammern

Boards of Appeal

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Case Number: T 0134/25 - 3.3.07

D E C I S I O N
of Technical Board of Appeal 3.3.07
of 10 June 2026

Appellant: (Applicant)	Antecip Bioventures II LLC 630 Fifth Avenue, Suite 2000 New York, NY 10111 (US)
Representative:	Murgitroyd & Company 165-169 Scotland Street Glasgow G5 8PL (GB)
Decision under appeal:	**Decision of the Examining Division of the European Patent Office posted/electronically transmitted on 14 August 2024 refusing European patent application No. 21191393.4 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chairman	A. Usuelli
Members:	M. Steendijk
	A. Jimenez

Summary of Facts and Submissions

I. The appeal was filed by the applicant (appellant) against the decision of the examining division to refuse European patent application EP 21 191 393.4, filed as a divisional application of the parent application EP 14 859 589.5.

II. The appealed decision was based on the claims of the main request filed on 1 July 2022, auxiliary requests 1-4 filed on 22 March 2024 and auxiliary requests 5-9 filed during the oral proceedings held on 8 July 2024.

The examining division cited *inter alia* the following documents:

D1: Journal of Clinical Psychopharmacology (2005), 25(3), 226-229
D4: WO2009/006194 A1
D6: WO2012/118562 A1
D8: Clinical Pharmacokinetics (2011), 50(8), 519-530

The examining division arrived at the following conclusions:

(a) Claim 1 of the main request defined a solid dosage form comprising bupropion and dextromethorphan for use in treating depression in a human that is an extensive metabolizer of dextromethorphan, wherein the dosage form contains 10-500 mg dextromethorphan and 10-1000 mg bupropion (or more specifically defined amounts within those ranges), which are administered at least once a day or twice daily for at least 3 days or for at least more specifically defined days, including at least 365 days or

longer. Dependent claim 4 of the main request specifically defined that the dosage form comprises 105 mg bupropion. The main request did not comply with Article 76(1) EPC due to the selection of the amount of 105 mg bupropion in claim 4.

The same objection applied to auxiliary requests 1-4.

(b) Auxiliary request 5 corresponded to the main request, except that dependent claim 4 was deleted.

The claimed subject-matter differed from the closest prior art, represented by document D4, in that quinidine was replaced by bupropion.

The comparison between the 60-fold increase of dextromethorphan plasma levels (AUC) observed with bupropion in Figures 5 and 6 of the application and the 43-fold increase by quinidine derivable from Table III of document D4 did not establish any improvement resulting from the substitution of quinidine by bupropion due to the difference in the doses used, the difference in the baseline levels, and the error margins reported in document D4. Moreover, the therapeutically beneficial effect depended on the absolute plasma levels of dextromethorphan, rather than on its fold increase. The objective technical problem was therefore the provision of an alternative treatment.

Documents D1 and D8 already described bupropion as an alternative CYP2D6 inhibitor which is suitable to increase dextromethorphan plasma levels. Document D8 indicated, in Figure 3, generally similar fold increases in plasma levels of victim

drugs in the presence of quinidine and bupropion. The higher increase in plasma levels of dextromethorphan from quinidine than from bupropion predicted in Figure 3 of document D8 was speculative and did not deter the skilled person from using bupropion instead of quinidine to increase dextromethorphan plasma levels. As bupropion was itself already known for the treatment of depression from document D6, it was obvious to combine bupropion with dextromethorphan as a solution to the problem of providing an alternative treatment. Auxiliary request 5 therefore did not comply with the requirement of inventive step.

(c) Auxiliary requests 6-9 did not comply with the requirement of inventive step for the same reasons as outlined for auxiliary requests 5.

III. With the statement of grounds of appeal, the appellant filed a main request and auxiliary requests 1-9, which correspond to the main request and auxiliary requests 1-9 on which the decision under appeal was based.

The appellant cited the following additional documents in its statement of grounds of appeal:

D9: "Consolidated Financial Results for the Third Quarter of the Fiscal Year Ending December 31, 2016" issued by Otsuka Holdings Company Limited
D10: "Consolidated Financial Results FY2016 Q3 (Nine Months Ended September 30, 2016)"
D11: "Otsuka Group Pipeline Information" (as of 30 September 2016)
D12: Wellbutrin - Bupropion HCI product information
D13: Nuedexta - Patient Information Leaflet

D14: Extended data set for trials disclosed in the application as filed
D15: Declaration of Michael Chen, PhD
D15a: Bioavailability Studies Submitted in NDAs or IND
D15b: Cicali et al 2020
D16: Psychiatric News: https://psychnews.psychiatryonline.org/doi/10.1176/appi.pn.2022.11.11.13
D17: WO2016/081027 A1

IV. In the communication pursuant to Article 15(1) RPBA the Board expressed *inter alia* the preliminary opinion that:

- the main request complies with Articles 76(1) and 123(2) EPC, and

- the efficacy of bupropion in co-administration with dextromethorphan in the treatment of major depressive disorder was unexpected, its efficacy in the treatment of treatment-resistant depression was not confirmed in document D16.

V. With its submission of 8 May 2026, the appellant filed a new auxiliary request 10 comprising a single claim and an adapted description. The claim of this request defines:

"A solid dosage form comprising bupropion, or pharmaceutically acceptable salt thereof, and dextromethorphan, or pharmaceutically acceptable salt thereof, for use in treating major depressive disorder in a human being that is an extensive metabolizer of dextromethorphan,

wherein the solid dosage form contains 10 mg to 500 mg, 30 mg to 350 mg, 20 mg to 50 mg, 30 mg to 60 mg, 40 mg to 50 mg, 40 mg to 42 mg, 42 mg to 44 mg, 44 mg to 46 mg, 46 mg to 48 mg, 48 mg to 50 mg, 50 mg to 200 mg, 50 mg to 70 mg, 80 mg to 100 mg, 60 mg, or 90 mg of dextromethorphan,

wherein the solid dosage form contains 10 mg to 1000 mg, 50 mg to 1000 mg, 50 mg to 100 mg, 40 mg to 90 mg, 200 mg to 300 mg, 70 mg to 95 mg, 100 mg to 200 mg, 105 mg to 200 mg, 110 mg to 140 mg, 50 mg to 150 mg, 180 mg to 220 mg, 200 mg, or 150 mg of bupropion;

and wherein the bupropion and dextromethorphan are administered at least once a day or twice daily for at least 3 days, at least 5 days, at least 7 days, at least 8 days, at least 14 days, at least 30 days, at least 60 days, at least 90 days, at least 180 days, at least 365 days, or longer."

This claim is based on claim 1 of the main request in which the therapeutic indication is limited to major depressive disorder.

The dependent claims of the main request are deleted in auxiliary request 10.

VI. The appellant's arguments can be summarized as follows:

Auxiliary request 10 was filed in response to the observations in the Board's communication under Article 15(1) RPBA, in which the Board expressed a partially positive assessment of the allowability of the subject-matter of the main request. Auxiliary request 10 rendered any remaining objections raised in the communication moot.

VII. The appellant requested that the decision under appeal be set aside and that a patent be granted on the basis the single claim and the amended description of auxiliary request 10. The main request and auxiliary requests 1-9 were withdrawn on the condition that the Board allow auxiliary request 10.

Reasons for the Decision

1. Admittance of documents D9-D16

In the grounds of appeal, the appellant relied on additional documents D9–D16 to support its case. These submissions directly address the issues underlying the appealed decision without giving rise to complications. The introduction of this new evidence can therefore be regarded as a justified response to the appealed decision. Accordingly, the Board admits documents D9–D16 into the appeal proceedings under Article 12(4) RPBA.

2. Auxiliary request 10

2.1 Admittance of auxiliary request 10

In its communication pursuant to Article 15(1) RPBA, the Board questioned whether the combination of bupropion and dextromethorphan shows efficacy in treating treatment-resistant depression as encompassed by the treatment of depression defined in the main request. Auxiliary request 10 addresses this new issue raised in the Board's communication by limiting the therapeutic indication to major depressive disorder. Moreover, auxiliary request 10 eliminates any issue

regarding the dependent claims. In the exercise of its discretion under Article 13(2) RPBA, the Board admits auxiliary request 10 into the appeal proceedings, as it clearly overcomes the issues raised by the Board and does not give rise to new objections. Auxiliary request 10 is therefore *prima facie* allowable, which constitutes exceptional circumstances for admitting it at this late stage of the appeal proceedings.

2.2 Allowability of auxiliary request 10

The parent application as originally filed and published as WO 2015/069809 discloses in claims 1 and 2 the treatment of depression by administering an antidepressant compound together with dextromethorphan to a patient who is an extensive metaboliser of dextromethorphan. It further discloses, in the context of this teaching, the specific combination of bupropion with dextromethorphan in a solid dosage form and its administration according to the dosage regimen now defined in auxiliary request 10 (paragraphs [00129], [00138], [00158] and [00179]). In addition, paragraph [0093] expressly identifies "major depression" as an example of an affective disorder treatable with such a combination. The skilled person would understand this reference to "major depression" as corresponding to the clinical indication of major depressive disorder, which is the therapeutic indication specified in auxiliary request 10. The parent application thus provides a direct and unambiguous basis for the combination of features defining auxiliary request 10, since the cited passages disclose, in combination, the bupropion/ dextromethorphan solid dosage form administered according to the claimed regimen for treating depression, with "major depression" expressly presented as an example within that disclosure. The same relevant

disclosure is present in the divisional application as originally filed. Consequently, the subject-matter of auxiliary request 10 is derivable from the parent application as filed and the divisional application as originally filed. Accordingly, auxiliary request 10 complies with Articles 76(1) and 123(2) EPC.

2.2.1 The subject-matter of auxiliary request 10 is directed to a dosage form comprising bupropion and dextromethorphan, or pharmaceutically acceptable salts thereof, for use in treating major depressive disorder. Document D4 and document D6 each represent suitable starting points for the assessment of inventive step. Document D4 discloses the co-administration of dextromethorphan with the CYP2D6 inhibitor quinidine for treating various disorders, including depression (see D4, page 48). The distinguishing feature over document D4 lies in the replacement of quinidine by bupropion or one of the defined metabolites thereof. Document D6 describes the therapeutic utility of bupropion in the treatment of depression. The distinguishing feature over document D6 lies in the co-administration with dextromethorphan.

The development of the quinidine/dextromethorphan combination for the treatment of major depressive disorder was discontinued for lack of sufficient evidence of efficacy (see D9, page 7; D10, page 19; D11, page 4). By contrast, the efficacy data reported for the bupropion/dextromethorphan combination in major depressive disorder show an improvement over bupropion alone, as reflected by greater reductions in MADRS scores (see D16, page 2, ASCEND trial).

In view of the level of efficacy demonstrated in document D16 for the bupropion/dextromethorphan

combination, the objective technical problem may be formulated as the provision of an improved treatment of major depressive disorder. Starting from either document D4 or document D6, the skilled person had no reason to expect that replacing quinidine with bupropion, or adding dextromethorphan to bupropion therapy, would result in the observed improvement. The subject-matter of auxiliary request 10 is therefore not obvious and involves an inventive step.

2.2.2 The description, as amended according to auxiliary request 10, is adapted to the subject-matter claimed.

3. The Board concludes that the patent application as amended according to auxiliary request 10 meets the requirements of the EPC. In accordance with the appellant's request, no decision on the main request and auxiliary requests 1-9 is therefore required.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.

2. The case is remitted to the Examining Division with the order to grant a patent in the following version:

   Description: pages 1-47 as filed on 8 May 2026

   Claim: claim 1 of auxiliary request 10 as filed on 8 May 2026

   Drawings: Sheets 1/11-11/11 as originally filed.

The Registrar: The Chairman:

A. Vottner A. Usuelli

Decision electronically authenticated