

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
28 May 2009 (28.05.2009)

(10) International Publication Number
WO 2009/067607 A3

PCT

(51) International Patent Classification:

A61K 31/136 (2006.01) *A61P 25/18* (2006.01)
A61K 31/52 (2006.01)

(21) International Application Number:

PCT/US2008/084207

(22) International Filing Date:

20 November 2008 (20.11.2008)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

60/989,221 20 November 2007 (20.11.2007) US

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(81) Designated States (unless otherwise indicated, for every
kind of national protection available): AE, AG, AL, AM,

AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ,
CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ,
EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN,
HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR,
KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME,
MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO,
NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG,
SK, SL, SM, ST, SV, SY, TJ, TM, TN, TR, TT, TZ, UA,
UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every
kind of regional protection available): ARIPO (BW, GH,
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,
ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ,
TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE,
ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV,
MC, MT, NL, NO, PL, PT, RO, SE, SI, SK, TR), OAPI
(BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR,
NE, SN, TD, TG).

Published:

- with international search report (Art. 21(3))
- before the expiration of the time limit for amending the
claims and to be republished in the event of receipt of
amendments (Rule 48.2(h))

(88) Date of publication of the international search report:

13 August 2009

(54) Title: COMBINATIONS OF PDE4 INHIBITORS AND ANTIPSYCHOTICS FOR THE TREATMENT OF PSYCHOTIC DISORDERS

(57) Abstract: The invention relates to methods and compositions for treating a psychotic disorder or condition, associated with cognitive impairment. The pharmaceutical composition comprises: (a) an amount of an antipsychotic agent and (b) an amount of a PDE4 inhibitor compound, wherein the amounts of (a) and (b) are together effective in treating the cognitive impairment or psychotic disorder such as schizophrenia. The method of treatment comprises administering to a patient (a) an amount of a antipsychotic agent and (b) an amount of a PDE4 inhibitor compound, wherein the amounts of (a) and (b) are together effective in treating the psychotic disorder such as schizophrenia.



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INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2008/084207**A. CLASSIFICATION OF SUBJECT MATTER***A61K 31/136(2006.01)i, A61K 31/52(2006.01)i, A61P 25/18(2006.01)i*

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC as above

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
eKIPASS(KIPO internal), PubMed, "Keywords:antipsychotic agent, PDE4 inhibitor, cognitive impairment "**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

| Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|-----------|--|-----------------------|
| Y | US 2004/0204401 A1 (MIGALY, P et al.) 14 Oct 2004 See claims 3-5, 12 & Abstract | 1-9 |
| Y | KANES, S. J. et al., "Rolipram: a specific phosphodiesterase 4 inhibitor with potential antipsychotic activity", Neuroscience, 5 Jan 2007, Vol. 144, No.1, pp.239-46 See Abstract, Discussion & pages 239-240 | 1-9 |
| Y | US 6,699,890 B2 (SCHUMACHER, R. A. et al.) 2 Mar 2004 See all claims & Abstract | 1-9 |
| Y | US 7235579 B2 (LIU, R. et al.) 26 Jun 2007 See all claims & Abstract | 1-9 |
| Y | US 7087625 B2 (SCHUMACHER, R. A. et al.) 8 Aug 2006 See all claims & Abstract | 1-9 |
| A | US 06974837 B2 (JERUSSI et al.) 13 Dec 2005 See claims1, 3, Abstract, column5 lines 29-36, column 12 lines49 - column 18 lines22 | 1-9 |



Further documents are listed in the continuation of Box C.



See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

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"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search

05 JUNE 2009 (05.06.2009)

Date of mailing of the international search report

15 JUNE 2009 (15.06.2009)

Name and mailing address of the ISA/KR

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Government Complex-Daejeon, 139 Seonsa-ro, Seo-
gu, Daejeon 302-701, Republic of Korea

Facsimile No. 82-42-472-7140

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Telephone No. 82-42-481-5612



INTERNATIONAL SEARCH REPORT

International application No.

PCT/US2008/084207**Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)**

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.: 10-12
because they relate to subject matter not required to be searched by this Authority, namely:
Claims 10-12 pertain to methods for treatment (or screening) of the human body by therapy/diagnostic methods, and thus relate to a subject matter which this International Searching Authority is not required, under Article 17(2)(a)(i) of the PCT and Rule 39.1(iv) of the Regulation under the PCT, to search.
2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
3. ☒ Claims Nos.: 11
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
- ☐ The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- ☐ No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/US2008/084207

| Patent document cited in search report | Publication date | Patent family member(s) | Publication date |
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