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Declarations under Rule 4.17:

- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))
- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))

Published:

- with international search report (Art. 21(3))
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11 March 2010

(54) Title: COMPOSITIONS COMPRISING (R) -VERAPAMIL HAVING MT1 RECEPTOR ACTIVITY

(57) Abstract: The present invention is directed to compositions and to methods comprising a composition comprising a therapeutically effective amount of a pharmaceutically active agent such as (R)-verapamil, a derivative thereof, or a pharmaceutically acceptable salt thereof, wherein the composition treats and/or manages at least one condition having MT1 receptor activity and releases the pharmaceutically active agent, a derivative thereof or a pharmaceutically acceptable salt thereof to exhibit a primary activity on the MT1 receptor such as, exhibiting at least five times more activity on the MT1 receptor compared with the MT2 receptor.



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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER		
INV.	A61K31/00	A61K31/277 A61K45/06 A61P29/00 A61P27/06
	A61P1/12	
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)		
A61K		
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 practical, search terms used)		
EPO-Internal, BIOSIS, MEDLINE, EMBASE, WPI Data		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2004/063784 A1 (KELLY JOHN [IE] ET AL KELLY JOHN [IE] ET AL) 1 April 2004 (2004-04-01) figure 2 abstract	1-8, 12-15, 17-27, 31-34, 36-41
X	BYRNE S: "VERAPAMIL IN THE TREATMENT OF IRRITABLE BOWEL SYNDROME" JOURNAL OF CLINICAL PSYCHIATRY, PHYSICIANS POSTGRADUATE PRESS, INC, US, vol. 48, no. 9, 1 September 1987 (1987-09-01), page 388, XPO09007568 ISSN: 0160-6689 the whole document	1-8, 12-15, 17-27, 31-34, 36-41
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<input checked="" type="checkbox"/>	Further documents are listed in the continuation of Box C.	<input checked="" type="checkbox"/> 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	*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	
E earlier document but published on or after the international filing date	*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	
L document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	*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.	
O document referring to an oral disclosure, use, exhibition or other means	*&* document member of the same patent family	
P document published prior to the international filing date but later than the priority date claimed		
Date of the actual completion of the international search	Date of mailing of the international search report	
22 October 2009	27/01/2010	
Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel: (+31-70) 340-2040, Fax: (+31-70) 340-3016	Authorized officer Bonzano, Camilla	

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C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P,X	DEVANE J ET AL: "T1304 Pharmacology of R-Verapamil: A Novel Therapy in IBS" GASTROENTEROLOGY, ELSEVIER, PHILADELPHIA, PA, vol. 134, no. 4, 1 April 2008 (2008-04-01), pages A-527, XP023434257 ISSN: 0016-5085 [retrieved on 2008-04-01] the whole document -----	1-8, 12-15, 17-27, 31-34, 36-41
P,X	WO 2008/029300 A (AGI THERAPEUTICS RES LTD [IE]; DEVANE JOHN [IE]; KELLY JOHN [IE]; MART) 13 March 2008 (2008-03-13) claims 1-3 -----	1-9, 11-28, 30-41

INTERNATIONAL SEARCH REPORT

International application No.
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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.:
because they relate to subject matter not required to be searched by this Authority, namely:

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.:
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:

see additional sheet

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 fees, this Authority did not invite payment of additional fees.
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.:

see annex

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.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-8,12-27,31-41 (partially), 9,11,28,30

1. Use of a compound having an activity on the MT1 receptor, namely (R)-verapamil, for treating the conditions having MT1 receptor activity: motility linked or secretory linked gastrointestinal conditions, irritable bowel syndrome, gastric hypermotility, hypertonic lower esophageal sphincter, cyclic vomiting. claims 9,11,28,30

2. claims: 1-8,12-27,31-41 (partially)

Use of a compound having an activity on the MT1 receptor, namely (R)-verapamil, for treating the conditions having MT1 receptor activity: migraine headaches, cluster headaches,

3. claims: 1-8,12-27,31-41 (partially), 10,29

Use of a compound having an activity on the MT1 receptor, namely (R)-verapamil, for treating the conditions having MT1 receptor activity: increased intraocular pressure.

4. claims: 1-8,12-27,31-41 (partially)

Use of a compound having an activity on the MT1 receptor, namely (R)-verapamil, for treating the conditions having MT1 receptor activity: primary pulmonary hypertension,

5. claims: 1-8,12-27,31-39 (partially)

Use of a compound having an activity on the MT1 receptor, namely (R)-verapamil, for treating the conditions having MT1 receptor activity: restenosis.

6. claims: 1-8,12-27,31-41 (partially)

Use of a compound having an activity on the MT1 receptor, namely (R)-verapamil, for treating the conditions having MT1 receptor activity: asthma, chronic obstructive pulmonary disease.

7. claims: 1-8,12-27,31-41 (partially)

Use of a compound having an activity on the MT1 receptor, namely (R)-verapamil, for treating the conditions having MT1 receptor activity: prostatic hyperplasia,

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

8. claims: 1-8,12-27,31-41 (partially)

Use of a compound having an activity on the MT1 receptor, namely (R)-verapamil, for treating the conditions having MT1 receptor activity: generalized anxiety disorder, panic disorders, obsessive compulsive disorders, alcoholism, depression, sleep disorders, anorexia nervosa.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No PCT/IB2008/002678
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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2004063784 A1	01-04-2004	AU 2002351118 A1	04-05-2004
		CA 2499290 A1	22-04-2004
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		WO 2004032919 A1	22-04-2004
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