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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))

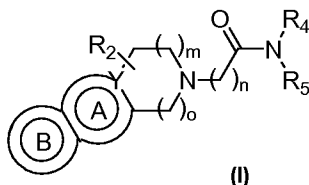
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(54) Title: PIPERAZINYL OXOALKYL TETRAHYDRO-BETA-CARBOLINES AND RELATED ANALOGUES



(57) Abstract: Piperazinyl oxoalkyl tetrahydro-beta-carbolines and related analogues of the formula (I): are provided, as are methods for their preparation and use. Such compounds may generally be used to modulate ligand binding to histamine H3 receptors in vivo or in vitro, and are particularly useful in the treatment of a variety of disorders in humans, domesticated companion animals and livestock animals. Pharmaceutical compositions and therapeutic methods are provided, as are methods for using such ligands for detecting histamine H3 receptors (e.g., receptor localization studies).

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**A. CLASSIFICATION OF SUBJECT MATTER***C07D 403/12(2006.01)i, C07D 403/08(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 8, C07D 403/12

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), WPI, USPTO, PAJ

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 2006072608 A2 (UNIVERSITA DEGLI STUDI DI SIENA) 13 July 2006 see the entire document.	1-12, 18-20, 22-27, 30, 31, 51
A	WO 2003048164 A2 (SCHERING CO.) 12 June 2003 see the entire document.	1-12, 18-20, 22-27, 30, 31, 51
A	WO 2000078716 A1 (TORAY INDUSTRIES, INC.) 28 Dec. 2000 see the entire document.	1-12, 18-20, 22-27, 30, 31, 51
A	US 5776963 A (HOECHST MARION ROUSSEL, INC.) 07 July 1998 see the entire document.	1-12, 18-20, 22-27, 30, 31, 51
A	WO 9823593 A1 (PFIZER INC.) 04 JUNE 1998 see the entire document.	1-12, 18-20, 22-27, 30, 31, 51

 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

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of citation or other special reason (as specified)

"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

"&amp;" document member of the same patent family

Date of the actual completion of the international search

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Name and mailing address of the ISA/KR

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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.: 37-41  
because they relate to subject matter not required to be searched by this Authority, namely:  
Claims 37-41 pertain to method for treating a condition responsive to H3 receptor modulation in a patient, 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 Regulations under the PCT, to search.
2.  Claims Nos.: 34, 36, 38-40, 44-47, 49 and 50  
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:  
- see the extra sheet for detail
3.  Claims Nos.: 13-17, 21, 28, 29, 32, 33, 35, 37, 41-43 and 48  
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.

- Continuation of Box No. II (Item 2)

The claims 34, 36, 38-40, 44-47, 49 and 50 are so unclear because claim 34 is a dependent claim of claim 33 (Unsearchable claim), claim 36 is a dependent claim of claim 35, claims 38-40 are dependent claims of claim 37 (Unsearchable claim), claim 44 is a dependent claim of claim 43 (Unsearchable claim), claim 45 is a dependent claim of claim 35 (Unsearchable claim), claims 46-47 are dependent claims of claim 45, and claims 49-50 are dependent claims of claim 48 (Unsearchable claim).

**INTERNATIONAL SEARCH REPORT**

Information on patent family members

International application No.

**PCT/US2008/068115**

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