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For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.

(54) Title: DIAGNOSTICS AND THERAPEUTICS FOR DISEASES ASSOCIATED WITH 5-HYDROXYTRYPTAMINE
(SEROTONIN) RECEPTOR 4 (5-HT₄)

(57) Abstract: The invention provides a human 5-HT₄ which is associated with the cardiovascular disorders, gastrointestinal and
liver diseases, inflammatory diseases, hematological disorders, respiratory diseases, neurological disorders and urological disorders.
The invention also provides assays for the identification of compounds useful in the treatment or prevention of cardiovascular disor-
ders, gastrointestinal and liver diseases, inflammatory diseases, hematological disorders, respiratory diseases, neurological disorders
and urological disorders. The invention also features compounds which bind to and/or activate or inhibit the activity of 5-HT₄ as
well as pharmaceutical compositions comprising such compounds.



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INTERNATIONAL SEARCH REPORT

International Application No
PCT/EP2004/005070

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 G01N33/50 G01N33/68

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 7 G01N

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, WPI Data, BIOSIS, Sequence Search

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6 331 401 B1 (GERALD CHRISTOPHE ET AL) 18 December 2001 (2001-12-18) col. 1, line 55 - col. 4, line 34, col. 10, line 30 - col. 14, line 27, col. 18, line 11 - col. 20, line 64, col. 33, lines 9 - 44, Seq Id No. 8 ----- -/--	1-22, 24-26

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in 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 document 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.
- *G* document member of the same patent family

Date of the actual completion of the international search

20 September 2004

Date of mailing of the international search report

16.03.05

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INTERNATIONAL SEARCH REPORT

International Application No
PCT/EP2004/005070

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	HINSCHBERGER ANTOINE ET AL: "New benzo(h)(1,6)naphthyridine and azepino(3,2-c)quinoline derivatives as selective antagonists of 5-HT ₄ receptors: Binding profile and pharmacological characterization." JOURNAL OF MEDICINAL CHEMISTRY, vol. 46, no. 1, 2 January 2003 (2003-01-02), pages 138-147, XP002296830 ISSN: 0022-2623 abstract, col. p. 138, col. 1, lines 1 - 20, p. 141, col. 2, line 60 - p. 143, col. 1, line 23, p. 145, col. 2, lines 5 - 67 -----	1-11, 19-21, 23-26
X	US 6 506 580 B1 (FISCHMEISTER RODOLPHE ET AL) 14 January 2003 (2003-01-14) Seq Id 4, col. 1, lines 30 - 45, col. 3, lines 24 - 30, col. 5, line 25 - col. 11, line 22 -----	1-26
X	DATABASE BIOSIS 'Online! BIOSCIENCES INFORMATION SERVICE, PHILADELPHIA, PA, US; 2002, BERGIS O E ET AL: "SL65.0155: A NOVEL 5 - HT ₄ RECEPTOR PARTIAL AGONIST WITH POTENT COGNITION ENHANCING PROPERTIES." XP002296831 Database accession no. PREV200300326995 abstract & SOCIETY FOR NEUROSCIENCE ABSTRACT VIEWER AND ITINERARY PLANNER, vol. 2002, 2002, pages Abstract No. 786.16 URL-http://sf, 32ND ANNUAL MEETING OF THE SOCIETY FOR NEUROSCIENCE; ORLANDO, FLORIDA, USA; NOVEMBER 02-07, 2002 -----	19-21, 24-26

INTERNATIONAL SEARCH REPORT

International application No.
PCT/EP2004/005070

Box 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:

Although claim 26 is directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.
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 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 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.:

1-26 (partly)

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box II.1

Although claim 26 is directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.

INTERNATIONAL SEARCH REPORT

International Application No
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			EP 1034264 A1	13-09-2000
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