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

(54) Title: DIAGNOSTICS AND THERAPEUTICS FOR DISEASES ASSOCIATED WITH G PROTEIN-COUPLED P2Y PURINORECEPTOR 9 (P2Y9)

(57) Abstract: The invention provides a human P2Y9 which is associated with the cancer disorders, hematological disorders, inflammatory diseases, neurological diseases, cardiovascular diseases and urological diseases. The invention also provides assays for the identification of compounds useful in the treatment or prevention of cancer disorders, hematological disorders, inflammatory diseases, neurological diseases, cardiovascular diseases and urological diseases. The invention also features compounds which bind to and/or activate or inhibit the activity of P2Y9 as well as pharmaceutical compositions comprising such compounds.

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INTERNATIONAL SEARCH REPORT

International Application No
PCT/EP2004/005554

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 G01N33/68 C07K14/705

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 C07K

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, EMBASE, BIOSIS, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 0 853 126 A (SMITHKLINE BEECHAM CORP) 15 July 1998 (1998-07-15) cited in the application the whole document -----	1-26
X	WO 02/061087 A (ROUSH CHRISTINE L ; BROWN JOSEPH P (US); BURMER GLENNA C (US); LIFESPA) 8 August 2002 (2002-08-08) the whole document ----- -/--	1-26

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
- "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)
- "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

28 September 2004

Date of mailing of the international search report

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Name and mailing address of the ISA

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INTERNATIONAL SEARCH REPORT

 International Application No
 PCT/EP2004/005554

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	O'DOWD B F ET AL: "Cloning and chromosomal mapping of four putative novel human G-protein-coupled receptor genes" GENE: AN INTERNATIONAL JOURNAL ON GENES AND GENOMES, ELSEVIER SCIENCE PUBLISHERS, BARKING, GB, vol. 187, no. 1, 10 March 1997 (1997-03-10), pages 75-81, XP004093242 ISSN: 0378-1119 the whole document -----	1-26
A	JANSSENS R ET AL: "Cloning of a human heptahelical receptor closely related to the P2Y5 receptor" BIOCHEMICAL AND BIOPHYSICAL RESEARCH COMMUNICATIONS, ACADEMIC PRESS INC. ORLANDO, FL, US, vol. 236, 9 July 1997 (1997-07-09), pages 106-112, XP002124833 ISSN: 0006-291X the whole document -----	1-26
A	WO 02/068591 A (KORNACKER MICHAEL ; SQUIBB BRISTOL MYERS CO (US); BARBER LAUREN (US);) 6 September 2002 (2002-09-06) the whole document -----	1-26

INTERNATIONAL SEARCH REPORT

International application No.
PCT/EP2004/005554

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 (part)

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

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

1. claims: 1-26(part)

Method of screening for therapeutical agents useful in the treatment of alzheimer; method for diagnosing alzheimer; pharmaceutical compositions comprising agents which bind/regulate the activity of a P2Y9 polypeptide for the treatment of alzheimer; pharmaceutical compositions for the treatment of alzheimer comprising the P2Y9 polypeptide; method for preparing a pharmaceutical composition useful for the treatment of alzheimer.

2. claims: 1-26(part)

Method of screening for therapeutical agents useful in the treatment of cancer; method for diagnosing cancer; pharmaceutical compositions comprising agents which bind/regulate the activity of a P2Y9 polypeptide for the treatment of cancer; pharmaceutical compositions for the treatment of cancer comprising the P2Y9 polypeptide; method for preparing a pharmaceutical composition useful for the treatment of cancer.

3. claims: 1-26(part)

Method of screening for therapeutical agents useful in the treatment of urological disorders; method for diagnosing urological disorders; pharmaceutical compositions comprising agents which bind/regulate the activity of a P2Y9 polypeptide for the treatment of urological disorders; pharmaceutical compositions for the treatment of urological disorders comprising the P2Y9 polypeptide; method for preparing a pharmaceutical composition useful for the treatment of urological disorders.

INTERNATIONAL SEARCH REPORT

Information on patent family members

Internat Application No
PCT/EP2004/005554

Patent document cited in search report	A	Publication date	Patent family member(s)	Publication date
EP 0853126	A	15-07-1998	US 6010877 A CA 2219960 A1 EP 0853126 A2 JP 10201492 A	04-01-2000 10-07-1998 15-07-1998 04-08-1998
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