

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
27 October 2005 (27.10.2005)

PCT

(10) International Publication Number
WO 2005/100990 A3

(51) International Patent Classification:

G01N 33/68 (2006.01) A61P 29/00 (2006.01)
C12Q 1/68 (2006.01) A61P 35/00 (2006.01)
C07K 14/71 (2006.01) A61K 39/395 (2006.01)
G01N 33/72 (2006.01) A61K 38/00 (2006.01)
A61P 1/00 (2006.01) A61K 47/46 (2006.01)
A61P 3/00 (2006.01) A61K 31/70 (2006.01)

(21) International Application Number:

PCT/EP2005/003407

(22) International Filing Date: 1 April 2005 (01.04.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:

04008718.1 13 April 2004 (13.04.2004) EP

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(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, 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, HU, IE, IS, IT, LT, LU, MC, NL, 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
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

(88) Date of publication of the international search report:
2 March 2006

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 PURINOCEPTOR 2 TYPE Y (P2Y2)

(57) Abstract: The invention provides a human P2Y2 which is associated with the cardiovascular diseases, dermatological diseases, endocrinological diseases, metabolic diseases, cancer, gastroenterological diseases, inflammation, hematological diseases, respiratory diseases, muscle skeleton disorders, neurological diseases and urological diseases. The invention also provides assays for the identification of compounds useful in the treatment or prevention of cardiovascular diseases, dermatological diseases, endocrinological diseases, metabolic diseases, cancer, gastroenterological diseases, inflammation, hematological diseases, respiratory diseases, muscle skeleton disorders, neurological diseases and urological diseases. The invention also features compounds which bind to and/or activate or inhibit the activity of P2Y2 as well as pharmaceutical compositions comprising such compounds.



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INTERNATIONAL SEARCH REPORT

International Application No
PCT/EP2005/003407

A. CLASSIFICATION OF SUBJECT MATTER

G01N33/68 C12Q1/68 C07K14/71 G01N33/72 A61P01/00
A61P03/00 A61P29/00 A61P35/00 A61K39/395 A61K38/00
A61K47/46 A61K31/70

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)

C12N G01N C12Q A61P

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, 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 2003/113798 A1 (BURMER GLENNA C ET AL) 19 June 2003 (2003-06-19) cited in the application	1-17, 19-26
Y	the whole document, see especially paragraphs 97, 119, 131, and 349-366	18
X	WO 02/061087 A (LIFESPAN BIOSCIENCES, INC; BURMER, GLENNA, C; ROUSH, CHRISTINE, L; BRO) 8 August 2002 (2002-08-08)	1-21, 24-26
Y	the whole document, see especially seq. 217 and p. 31-59	18
X	US 6 500 938 B1 (AU-YOUNG JANICE ET AL) 31 December 2002 (2002-12-31) cited in the application	18
	the whole document, see especially patagraphs 24. 64-65 and 80	
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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

8 November 2005

Date of mailing of the international search report

03.01.2006

Name and mailing address of the ISA

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INTERNATIONAL SEARCH REPORT

International Application No

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category ^o	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 03/016475 A (THE GENERAL HOSPITAL CORPORATION; BAYER AG; WOOLF, CLIFFORD; D'URSO, D) 27 February 2003 (2003-02-27)	22,23
Y	the whole document, see especially claim 1 -----	1-18
X	WO 95/10538 A (THE UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL; THE CURATORS OF THE U) 20 April 1995 (1995-04-20)	19-21, 24-26
Y	the whole document, see especially pages 12-17 -----	1-18
P,X	WO 2004/040000 A (PRIMAL, INC; GAITANARIS, GEORGE, A; BERGMANN, JOHN, E; GRAGEROV, ALEXA) 13 May 2004 (2004-05-13) the whole document, see especially seq. 698 and pages 123-125 -----	1-26
P,X	WO 2004/047749 A (UNIVERSITY OF UTAH RESEARCH FOUNDATION; LUCERO, MARY; HEGG, COLLEEN) 10 June 2004 (2004-06-10) the whole document -----	1-26

INTERNATIONAL SEARCH REPORT

International application No.
PCT/EP2005/003407

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:

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 (partial)

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 (partial)

These claims concern methods which involve a P2Y2 for screening for therapeutic agents useful in the treatment of metabolic diseases (claims 1-17), a method for diagnosing said diseases (claim 18), pharmaceutical compositions for treatment of said diseases (claims 19-23) or use of regulators of a P2Y2 for the preparation of a pharmaceutical composition for the treatment of said diseases (claim 24), a method for the preparation of a pharmaceutical composition useful for the treatment of said diseases (claim 25) or use of a regulator of P2Y2 for the regulation of the activity of P2Y2 in a mammal having the said diseases.

2. claims: 1-26 (partial)

These claims concern methods which involve P2Y2 as a screening marker/diagnostic marker/therapeutic target (see above) in conjunction with cancer.

3. claims: 1-26 (partial)

These claims concern methods which involve P2Y2 as a screening marker/diagnostic marker/therapeutic target (see above) in conjunction with gastroenterological diseases.

4. claims: claims 1-26 (partial)

These claims concern methods which involve P2Y2 as a screening marker/diagnostic marker/therapeutic target (see above) in conjunction with inflammation.

5. claims: 1-26 (partial)

These claims concern methods which involve P2Y2 as a screening marker/diagnostic marker/therapeutic target (see above) in conjunction with neurological diseases.

INTERNATIONAL SEARCH REPORT

information on patent family members

International Application No

PCT/EP2005/003407

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