

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
8 February 2007 (08.02.2007)

PCT

(10) International Publication Number
WO 2007/014895 A3

(51) International Patent Classification:

A61K 31/7056 (2006.01) A61P 3/04 (2006.01)
C07H 17/02 (2006.01) A61P 3/10 (2006.01)

(21) International Application Number:

PCT/EP2006/064715

(22) International Filing Date: 27 July 2006 (27.07.2006)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:

05016390.6 28 July 2005 (28.07.2005) 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, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, 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, LV, 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

(88) Date of publication of the international search report:
10 May 2007

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: METHODS FOR PREVENTING AND TREATING METABOLIC DISORDERS AND NEW PYRAZOLE-O-GLYCOSIDE DERIVATIVES

(57) Abstract: The invention relates to methods for preventing or treating metabolic disorders, for improving glycemic control, for preventing progression from impaired glucose tolerance, insulin resistance and/or from metabolic syndrome to type 2 diabetes mellitus, for preventing or treating of complications of diabetes mellitus, for reducing the weight, for preventing or treating the degeneration of pancreatic beta cells, for treating hyperinsulinemia and insulin resistance and diabetes type 1, in patients in need thereof by administering a pharmaceutical composition comprising a pyrazole-O-glycoside as defined in claim 1, or a prodrug thereof, or a pharmaceutically acceptable salt thereof.



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INTERNATIONAL SEARCH REPORT

International application No PCT/EP2006/064715

A. CLASSIFICATION OF SUBJECT MATTER
 INV. A61K31/7056 C07H17/02 A61P3/04 A61P3/10

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 C07H

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, CHEM ABS Data, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 2005/021566 A (BOEHRINGER INGELHEIM INTERNATIONAL GMBH; BOEHRINGER INGELHEIM PHARMA G) 10 March 2005 (2005-03-10)	
X	EP 1 500 403 A (AJINOMOTO CO., INC) 26 January 2005 (2005-01-26) the whole document	1-22
A	EP 1 364 957 A1 (KISSEI PHARMACEUTICAL [JP]) 26 November 2003 (2003-11-26)	

Further documents are listed in the continuation of Box C. See patent family annex.

* Special categories of cited documents :

<p>*A* document defining the general state of the art which is not considered to be of particular relevance</p> <p>*E* earlier document but published on or after the international filing date</p> <p>*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)</p> <p>*O* document referring to an oral disclosure, use, exhibition or other means</p> <p>*P* document published prior to the international filing date but later than the priority date claimed</p>	<p>*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</p> <p>*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</p> <p>*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.</p> <p>* & * document member of the same patent family</p>
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Date of the actual completion of the international search 13 February 2007	Date of mailing of the international search report 21/02/2007
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Name and mailing address of the ISA/ European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Authorized officer Bardili, Burkhart
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INTERNATIONAL SEARCH REPORT

International application No.
PCT/EP2006/064715

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.:
1-22 (parts)

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.
- 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: 1-20, 22 (parts)

Compounds, prodrugs, pharmaceutical compositions and medical/ pharmaceutical use of 4-benzyl-3-beta-D-glucopyranosyl pyrazole derivatives characterised by a trisubstituted 4-benzyl part, the substituents being selected from fluoro, methyl, methoxy and isopropoxy.

2. claims: 1-22 (parts)

Compounds, prodrugs, pharmaceutical compositions and medical/ pharmaceutical use of 4-benzyl-3-beta-D-glucopyranosyl pyrazole derivatives characterised by a disubstituted 4-benzyl part, the substituents being selected from fluoro and alkyl

3. claims: 1-22 (parts)

Compounds, prodrugs, pharmaceutical compositions and medical/ pharmaceutical use of 4-benzyl-3-beta-D-glucopyranosyl pyrazole derivatives characterised by a disubstituted 4-benzyl part, the substituents being selected from halogen and alkoxy.

4. claims: 1-20, 22 (parts)

Compounds, prodrugs, pharmaceutical compositions and medical/ pharmaceutical use of 4-benzyl-3-beta-D-glucopyranosyl pyrazole derivatives characterised by a disubstituted 4-benzyl part, the substituents being selected from halogen

5. claims: 1-13, 16-18, 22 (parts)

Compound, prodrugs thereof, pharmaceutical compositions and medical/ pharmaceutical use of 4-benzyl-3-beta-D-glucopyranosyl pyrazole derivatives characterised by a monosubstituted 4-benzyl part, the substituent being 4-ethinyl.

6. claims: 1-17,21, 22 (parts)

Prodrugs, pharmaceutical compositions and medical/ pharmaceutical use of 4-benzyl-3-beta-D-glucopyranosyl pyrazole derivatives characterised by a monosubstituted 4-benzyl part, the substituent being 4-ethyl.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

7. claims: 1-17,21, 22 (parts)

Prodrugs, pharmaceutical compositions and medical/
pharmaceutical use of 4-benzyl-3- beta-D-glucopyranosyl
pyrazole derivatives characterised by a monosubstituted
4-benzyl part, the substituent being 4-bromo.

8. claims: 5, 21, 22 (parts)

Prodrugs, pharmaceutical compositions and medical/
pharmaceutical use of 4-benzyl-3- beta-D-glucopyranosyl
pyrazole prodrugs characterised by a monosubstituted
4-benzyl part, the substituent being 4-isopropoxy.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/EP2006/064715

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