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- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))

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07 March 2019 (07.03.2019)

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see Notice of 07 March 2019 (07.03.2019)

(54) Title: COMPOUNDS, COMPOSITIONS AND METHODS FOR TREATING OR PREVENTING A SYMPTOM ASSOCIATED WITH GOUT OR HYPERURICEMIA

(57) Abstract: The inventive subject matter provides compounds, compositions and methods for lowering serum acid (sUA) for the treatment of gout, and having reduced liver toxicity, associated with CYP2C9 metabolic pathway.



WO 2018/017368 A9

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2017/041763**A. CLASSIFICATION OF SUBJECT MATTER****C07D 307/80(2006.01)i, A61K 31/343(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)

C07D 307/80; A61K 31/165; A61K 31/34; A61K 31/426; A61K 31/428; A61K 9/28; A61K 9/36; C07D 417/10; C12P 17/04

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Korean utility models and applications for utility models

Japanese utility models and applications for utility models

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

eKOMPASS(KIPO internal), STN (Registry, CAplus), Google & Keywords:gout, hyperuricemia, URAT1, CYP2C9, benzbromarone

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	DE 19624292 A1 (MERCKLE GMBH) 02 January 1998 See figure 1.	1
A		2-20, 31, 32, 36-43
X	LEE, M.-H. H. et al., 'A benefit-risk assessment of benzbromarone in the treatment of gout', Drug Safety, 2008, Vol. 31, No. 8, pages 643-665 See abstract; pages 644, 645, 650; figure 1.	1-18, 31, 32, 36-40 , 42, 43
Y		19, 20, 41
Y	US 2014-0357683 A1 (TAKEDA PHARMACEUTICALS U.S.A., INC. et al.) 04 December 2014 See claim 1.	19, 20, 41
A	US 2007-0185195 A1 (ENDOU, H. et al.) 09 August 2007 See the whole document.	1-20, 31, 32, 36-43
A	US 2012-0184587 A1 (KOBASHI, S. et al.) 19 July 2012 See the whole document.	1-20, 31, 32, 36-43
A	US 2008-0305169 A1 (MIKI, K. et al.) 11 December 2008 See the whole document.	1-20, 31, 32, 36-43



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 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

20 October 2017 (20.10.2017)

Date of mailing of the international search report

09 January 2019 (09.01.2019)

Name and mailing address of the ISA/KR

International Application Division

Korean Intellectual Property Office

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INTERNATIONAL SEARCH REPORTInternational application No.
PCT/US2017/041763**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.: 21-30, 33-35
because they relate to subject matter not required to be searched by this Authority, namely:
Claims 21-30 and 33-35 pertain to methods for treatment of the human body by therapy and thus relate to a subject matter which this International Searching Authority is not required to search under PCT Article 17(2)(a)(i) and Rule 39.1(iv).
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 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 fees, this Authority did not invite payment of any additional fees.
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.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/US2017/041763

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
DE 19624292 A1	02/01/1998	None	
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INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/US2017/041763Patent document
cited in search reportPublication
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date

WO 2007-138998 A1

06/12/2007