The invention relates to the compounds of formula (I) or its pharmaceutical acceptable salts, as well as polymorphs, solvates, enantiomers, stereoisomers and hydrates thereof. The pharmaceutical compositions comprising an effective amount of compounds of formula (I), and methods for the treatment of metabolic syndrome may be formulated for oral, buccal, rectal, topical, transdermal, transmucosal, intravenous, parenteral administration, syrup, or injection. Such compositions may be used to treat a medical condition associated with metabolic syndrome, such as diabetes mellitus, obesity, hyperinsulinemia, dyslipidemia, hypertension, hyperuricemia, gout, renal complications, diabetic neuropathy, myocardial infarction, stroke, diabetic retinopathy, diabetic peripheral neuropathy, diabetic gastroparesis, diabetic autonomic neuropathy, diabetic oculopathy, diabetic nephropathy, diabetic cardio-vascular complications.

Abstract:

A61P 4/02
A61K 31/549
A61P 3/00
A61K 25/00
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Title: COMPOSITIONS AND METHODS FOR THE TREATMENT OF METABOLIC SYNDROME
INTERNATIONAL SEARCH REPORT

A. CLASSIFICATION OF SUBJECT MATTER

See the extra sheet
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: C07D, A61K, 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 practicable, search terms used)

DATABASE: WPI, EPDOC, CNPAT(CN), CNKI(CN), REGISTRY, CAPLUS.

KEYWORDS: diazoxide, thiocytic acid, lipoic acid, eicosapentaeanoic acid, icosapent, docosahexaenoic acid, acetyl cysteine, acetylcysteine, salsalate, conjugate, structure search

C. DOCUMENTS CONSIDERED TO BE RELEVANT

<table>
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<th>Category*</th>
<th>Citation of document, with indication, where appropriate, of the relevant passages</th>
<th>Relevant to claim No.</th>
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<td>X</td>
<td>CN 101232886 A (SOLVAYPHARM GMBH) 30 July 2008 (30.07.2008) claim 1, 8, page 50</td>
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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 June 2013 (20.06.2013)

Date of mailing of the international search report
18 Jul. 2013 (18.07.2013)

Name and mailing address of the ISA/CN
The State Intellectual Property Office, the P.R.China
6 Xitucheng Rd., Jimen Bridge, Haidian District, Beijing, China 100088
Facsimile No. 86-10-62019451

Authorized officer
SHENQ Qian
Telephone No. (86-10)6241 1142

Form PCT/ISA/210 (second sheet) (July 2009)
**INTERNATIONAL SEARCH REPORT**

**Box No. Π 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. 4-5:
   because they relate to subject matter not required to be searched by this Authority, namely:
   
   Claims 4-5 relate to methods of treatment of the human or animal body that belong to subject-matter not required to be searched (Rule 39.1(iv) PCT).

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. ΠΙ 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 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.:

**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.
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CLASSIFICATION OF SUBJECT MATTER:

C07D 285/24 (2006.01) i
A61K 31/549 (2006.01) i
A61P 3/00 (2006.01) i
A61P 9/00 (2006.01) i
A61P 25/00 (2006.01) i
A61P 13/12 (2006.01) i