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18 September 2008

(54) Title: NOVEL HETEROCYCLIC COMPOUNDS AS LASY ACTIVATORS

(57) Abstract: This invention provides a compound of formula (I), which is a free species and/or a pharmaceutically-acceptable salt or a stereoisomer of the compound of formula (I). Another aspect of the present invention provides the compound of the formula (I) as a Lipoic acid synthase (LASY) inducer

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INTERNATIONAL SEARCH REPORT

International application No

PCT/US07/79286

A CLASSIFICATION OF SUBJECT MATTER

IPC **C07D 209/14(** 2006 **0 1),209/12(** 2006 **0 l),A61 K 31/404(** 2006 0 1)

USPC 548/494,5 14/4 19

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)

U S 548/494,5 14/4 19

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)

EAST, STN CAPLUS

C DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropπate, of the relevant passages	Relevant to claim No
A	US 7, 196, 111 B2 (SHIPPS et al) 27 March 2007 (27 03 2007), cols 94-4 12	1

☐ 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 published on or after the international filing date

` L" document which may throw doubts on pno πt> cla um(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 dale or priority dale 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

08 June 2008 (08 06 2008)

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Name and mailing address of the ISA/US

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Form PCT/iSA/2 10 (second sheet) (April 2007)

INTERNATIONAL SEARCH REPORT

International application No

PCT/US07/79286

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
because they relate to subject matter not required to be searched by this Authority, namely

2 ☒ Claims Nos 2-6
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
Please See Continuation Sheet

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. Ill 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 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

Continuation of Box II Reason 2:
The numerous variables, e g Rl, R2, R3, R4, R5, W, Y, Z, A, B, etc and their voluminous and complex meanings and resulting permutations and combinations make it impossible to determine the full scope and complete meaning of the claimed subject matter As presented, the claimed subject matter cannot be regarded as being clear and concise description for which protection is sought As such, the listed claims do not comply with the requirements of PCT Article 6 Since it is impossible to carry out a meaningful search on the entirety of the claims, a search will be carried out on the first discernable invention, the invention of Example 1 at p 14 of the Specification, encompassed by Claim 1