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Declarations under Rule 4.17:

- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))
- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))

Published:

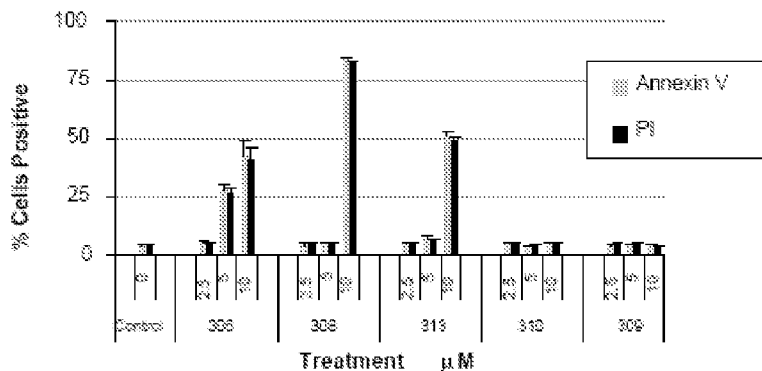
- with international search report (Art. 21(3))

[Continued on next page]

(54) Title: SELECTIVE INHIBITORS OF HISTONE DEACETYLASE

FIGURE 1

Annexin V Jurkat:
Compounds 306, 308, 313, 310, 309



(57) Abstract: Described herein are compounds and pharmaceutical compositions containing such compounds, which inhibit the activity of histone deacetylase 8 (HDAC8). Also described herein are methods of using such HDAC8 inhibitors, alone and in combination with other compounds, for treating diseases or conditions that would benefit from inhibition of HDAC8 activity.

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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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1 April 2010

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2009/040709**A. CLASSIFICATION OF SUBJECT MATTER***C07D 235/06(2006.01)i, C07D 235/08(2006.01)i, C07D 235/10(2006.01)i, C07D 235/12(2006.01)i, C07D 235/14(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 235/06; A61K 31/343; A61K 31/4439; A61P 35/02; C07D 209/04; C07D 235/26

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

(Chinese Patents and application for patent)

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

eKOMPASS(KIPO internal) & Keywords: benzimidazole, indole, azaindole, carboxylic hydroxyamide & histone deacetylase

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X Y	US 2005-0137234 A1 (JEROME BRESSI et al.) 23 June 2005 See [0123], compound 95,96,98,100, claims	1-8, 10-20, 21-30 ,45-47 9,50-51,55-56
Y A	WO 2005-028447 A1 (S*BIO PTE LTD et al.) 31 March 2005 See p.2, compound 15,80	9,50-51,55-56 1-8, 10-20, 21-30 ,45-47
Y	US 2007-0281934 A1 (BUGGY et.al.) 06 December 2007 See claim 20	50-51,55-56
A	DAI YUJIA et.al., Bioorganic & Medicinal Chemistry Letters, 2003, vol.13, pp.1897-1901 See table 3-4	1-30,45-47,50-51 ,55-56
A	LEE S. et.al., Bioorg Med Chem Lett. 1 Sep 2007, vol.17, No.17, pp.4895-900 See figure 1	1-30,45-47,50-51 ,55-56

 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 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

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Name and mailing address of the ISA/KR

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Government Complex-Daejeon, 139 Seonsa-ro, Seo-
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INTERNATIONAL SEARCH REPORT

International application No.

PCT/US2009/040709**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.: 48-49,52-54
because they relate to subject matter not required to be searched by this Authority, namely:
Claims 48-49,52-54 pertain to methods for treatment of the human body by therapy methods, and thus relate to a subject matter which this International Searching Authority is not required, under Article 17(2)(a)(i) of the PCT and Rule 39.1(iv) of the Regulation under the PCT, to search.
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:

Group 1: Claims 1-30 and 45-47(part), 50-51(part), 55-56(part)

Inventions related to a composition having a structure of Formula I, II or V (ex. benzimidazole-6-carboxylic acid hydroxyamide, indole-6-carboxylic acid hydroxyamide, azaindole-6-carboxylic acid hydroxyamide) or a pharmaceutical composition comprising them.

Group 2: Claims 31-44 and 45-47(part), 50-51(part), 55-56(part)

Inventions related to a composition having a structure of Formula B or IIb (ex. pyrrole-2-yl-N-hydroxyacylamide) or a pharmaceutical composition comprising them.

(* claims 48-49 and 52-54 have found to be unsearchable under Article 17(2)(b))

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.:
1-30,45-47(part),50-51(part),55-56(part)

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/US2009/040709

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2005-0137234 A1	23.06.2005	None	
WO 2005-028447 A1	31.03.2005	AU 2004-274382 A1 AU 2004-274382 A1 BR P10414581A CA 2539766-A1 EP 1673349 A1 EP 1673349 A4 JP 2007-505942 A JP 2007-505942 T KR 10-2007-0030162 A US 2007-0043043 A1	31.03.2005 21.09.2004 07.11.2006 31.03.2005 28.06.2006 23.01.2008 15.03.2007 15.03.2007 15.03.2007 22.02.2007
US 2007-0281934 A1	06.12.2007	WO 2007-109178 A2 WO 2007-109178 A3 WO 2007-109178 A9	27.09.2007 31.07.2008 16.10.2008