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(54) Title: HCV INHIBITORS COMPRISING BETA AMINO ACIDS AND THEIR USES

(57) Abstract: The present application describes organic compounds that are useful for the treatment, prevention and/or amelioration of human diseases.



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INTERNATIONAL SEARCH REPORT

International application No

PCT/US2007/066203

A. CLASSIFICATION OF SUBJECT MATTER

INV. C07K5/06 C07K5/08 C07K5/10 A61K38/00 A61P31/14

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)

C07K

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, WPI Data, CHEM ABS Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 03/101993 A (NEOGENESIS PHARMACEUTICALS INC [US]) 11 December 2003 (2003-12-11) Table 1; Compounds 381-388, 437, 482, 494, 495, 497, 499-514, 517, 518, 520-532 -----	1
X	WO 99/50230 A (VERTEX PHARMA [US]; TUNG ROGER D [US]; FARMER LUC J [US]; BHISETTI GOV) 7 October 1999 (1999-10-07) the whole document -----	1
X	US 2003/100768 A1 (HAN AMY QI [US] ET AL) 29 May 2003 (2003-05-29) the whole document -----	1
X	US 2004/053970 A1 (BROWN BRADLEY B [US] ET AL) 18 March 2004 (2004-03-18) paragraph [0170]; compound 8 ----- -/--	1,2

 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 document 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.
- *Z* document member of the same patent family

Date of the actual completion of the international search

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15/07/2008

Name and mailing address of the ISA/

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INTERNATIONAL SEARCH REPORT

International application No
PCT/US2007/066203

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2003/236262 A1 (BAKSHI RAMAN K [US] ET AL) 25 December 2003 (2003-12-25) compounds 16-28 -----	1,2,8
X	SISTO A ET AL: "Synthesis and biological evaluation of novel NK-1 tachykinin receptor antagonists: the use of cycloalkyl amino acids as a template." BIOPOLYMERS OCT 1995, vol. 36, no. 4, October 1995 (1995-10), pages 511-524, XP002466361 ISSN: 0006-3525 Compounds MEN 10741, MEN 10742, MEN 10744, MEN 10745 -----	1,2
X	FOTINS JURIS ET AL: "Creation and investigation of protein-core mimetics with parallel and antiparallel aligned amino acids." THE JOURNAL OF ORGANIC CHEMISTRY 27 MAY 2005, vol. 70, no. 11, 27 May 2005 (2005-05-27), pages 4452-4459, XP002466362 ISSN: 0022-3263 Compounds Figure 7 -----	1,2,8
X	HINE, JACK; TSAY, HWAI MIN: "Six-at-once dedeuteration of acetone-d6 in the presence of 3-exo-[(dimethylamino)methyl]-2-exo-norbor nanamine" JOURNAL OF ORGANIC CHEMISTRY, vol. 48, no. 21, 1983, pages 3797-3802, XP002466363 compound 6 -----	1,2

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2007/066203

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:

Although claims 65-81 and 84-97 are directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.
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:

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 fees, this Authority did not invite payment of 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.:

see annex

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.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1,4-7,30-97 (all in part) and 2, 8 (both completely)

Compounds comprising 1-amino-2-carboxylic acid amide-bicyclo[2.2.1]hept-an/-en and uses.

2. claims: 1,4-7,30-97 (all in part) and 3, 18-20 (all completely)

Compounds comprising 1-amino-2-carboxylic acid amide substituted C3-C7 cyclo(hetero)alkyl and uses.

3. claims: 1,4-7,30-97 (all in part) and 9, 16, 17 (all completely)

Compounds comprising 2-carboxylic acid amide-pyrrolidine and uses.

4. claims: 1,4-7,30-97 (all in part) and 10-15,24-27 (all completely)

Compounds according formula (II) and uses.

5. claims: 1,4-7,30-97 (all in part) and 21-23 (all completely)

Compounds comprising homoproline amides and uses.

6. claims: 1,4-7,30-97 (all in part) and 28, 29 (both completely)

Compounds comprising piperazine-2-carboxylic acid amide and uses.

7. claims: 1, 4-7, 30-97 (all in part)

Compounds according claim 1 not provided for in any invention as defined above and uses.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
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