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(54) **Title**: ANTI-VIRAL COMPOUNDS

(57) **Abstract**: The present invention relates to anti-HCV compounds, compositions comprising the same and methods of using the same to treat HCV infection.

INTERNATIONAL SEARCH REPORT

International application No.
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A. CLASSIFICATION OF SUBJECT MATTER

C07D 401/14(2006.01)i, C07D 401/12(2006.01)i, A61K 31/4439(2006.01)i, A61P 31/00(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 401/14; A61K 31/415; A61K 31/495; A01N 43/50

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)

eKOMPASS(KIPO internal), Google, PubMed

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 2010-096777 A1 (PRESIDIO PHARMACEUTICALS, INC.) 26 August 2010 See abstract, claims 1, 20, 22, 24, 26-28, 55, table 2.	1
X	WO 2010-065681 A1 (PRESIDIO PHARMACEUTICALS, INC.) 10 June 2010 See abstract, claims 1, 13, 19, 22, 25, 64.	1
A	WO 2010-096462 A1 (ENANTA PHARMACEUTICALS, INC.) 26 August 2010 See abstract, claims 1, 14, 17, 30, 33-34, 45, 61.	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 but published on or after the international filing date

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"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

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"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
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Information on patent family members

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 2010-096777 A1	26.08.2010	CA 2753313 A1	26.08.2010
WO 2010-065681 A1	10.06.2010	AU 2009-322387 A1	10.06.2010
		AU 2009-322393 A1	10.06.2010
		AU 2009-322400 A1	10.06.2010
		CA 2745119 A1	10.06.2010
		CA 2746004 A1	10.06.2010
		CA 2750577 A1	10.06.2010
		EP 2373167 A1	12.10.2011
		EP 2373168 A1	12.10.2011
		KR 10-2011-0098779 A	01.09.2011
		KR 10-2011-0098780 A	01.09.2011
		TW 201031654 A	01.09.2010
		TW 201033196 A	16.09.2010
		US 2011-237579 A1	29.09.2011
		WO 2010-065668 A1	10.06.2010
		WO 2010-065674 A1	10.06.2010
WO 2010-096462 A1	26.08.2010	US 2010-0221216 A1	02.09.2010
		US 2010-0226882 A1	09.09.2010
		US 2010-0226883 A1	09.09.2010