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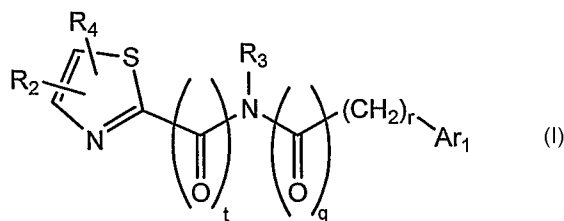
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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: THIAZOLE COMPOUNDS AND METHODS OF USE



inhibit assembly of the HCV replication complex. The invention also provides pharmaceutical compositions containing one or more compounds of Formula I, or a salt, solvate, or acylated prodrug of such compounds, and one or more pharmaceutically acceptable carriers, excipients, or diluents. The invention further comprises methods of treating patients suffering from certain infectious diseases by administering to such patients an amount of a compound of Formula I effective to reduce signs or symptoms of the disease. These infectious diseases include viral infections, particularly HCV infections. The invention is particularly includes methods of treating human patients suffering from an infectious disease, but also encompasses methods of treating other animals, including livestock and domesticated companion animals, suffering from an infectious disease. Methods of treatment include administering a compound of Formula I as a single active agent or administering a compound of Formula I in combination with one or more other therapeutic agent.

(57) Abstract: The present invention provides compounds, salts and hydrates of Formula I, wherein the variables Ar₁R₂, R₃, R₄, r, q, and t are defined herein. Certain compounds of Formula I described herein possess potent antiviral activity. The invention also provides compounds of Formula I that are potent and/or selective inhibitors of Hepatitis C virus replication. Certain compounds described herein

WO 2006/122011 A3

INTERNATIONAL SEARCH REPORT

International application No

PCT/US2006/017692

A. CLASSIFICATION OF SUBJECT MATTER

INV. A61K31/426 A61K31/427 A61P31/12 C07D487/04 C07D417/04
 C07D417/12 C07D417/14 C07D417/06 C07D513/04 C07D277/42
 C07D277/38

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 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 practical, search terms used)

EPO-Internal, WPI Data, BIOSIS, CHEM ABS Data, BEILSTEIN Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 3 458 526 A (DANIEL LEDNICER) 29 July 1969 (1969-07-29) column 1, line 18; claims 1,6,8-10,12,13; examples 5-9,11,12,24-32,36-38,40 column 4, line 31 - line 33	1-26
X	WO 2004/096798 A (SANOFI-AVENTIS; CARAYON, PIERRE; CASELLAS, PIERRE; FLOUTARD, DANIEL; F) 11 November 2004 (2004-11-11) page 91, line 16 - line 17; tables 4,5,7; compounds 176,177,178,180 page 90, line 30 - page 91, line 5 ----- -/--	1-26

 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.

"&" document member of the same patent family

Date of the actual completion of the international search

6 October 2006

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19. 03. 2007

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INTERNATIONAL SEARCH REPORT

International application No
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C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	SHIPPS G W ET AL: "Aminothiazole inhibitors of HCV RNA polymerase" BIOORGANIC & MEDICINAL CHEMISTRY LETTERS, OXFORD, GB, vol. 15, no. 1, 3 January 2005 (2005-01-03), pages 115-119, XP004694222 ISSN: 0960-894X page 115, right-hand column, paragraph 2; table 1; compounds 8-10,20-22	1-26
X	WO 02/094264 A (TULARIK INC; COLLINS, TASSIE; MAHMUD, HOSSEN; HOUZE, JONATHAN, B; HUAN) 28 November 2002 (2002-11-28) page 34, line 11 - line 15; claims 5,17,31; examples	1-26
X	DATABASE BEILSTEIN BEILSTEIN CROSSFIRE INSTITUT ZUR FOERDERUNG DER CHEMISCHEN WISSENSCHAFTEN, DE; Citation No. 6044277 BRN186912 1996, XP002401990 abstract	1-26
X	DATABASE CA [Online] CHEMICAL ABSTRACTS SERVICE, COLUMBUS, OHIO, US; PATHAK, VIJAI N. ET AL: "Synthesis and biological activities of some new 2-(N-arylamino)-4- (fluoroaryl)thiazoles" XP002401991 retrieved from STN Database accession no. 1980:550177 RNs 61383-57-1 74988-85-5 74988-92-4 74988-81-1 74988-82-2 61383-58-2 abstract & JOURNAL OF THE INDIAN CHEMICAL SOCIETY , 56(10), 1010-12 CODEN: JICSAH; ISSN: 0019-4522, 1979,	1-26
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INTERNATIONAL SEARCH REPORT

International application No

PCT/US2006/017692

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
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X	DD 271 258 A1 (KARL-MARX-UNIVERSITAET,DD) 30 August 1989 (1989-08-30) page 2, paragraph 2 - paragraph 4 page 4; claim 1 -----	1-26
X	EP 1 354 603 A (TAKEDA CHEMICAL INDUSTRIES, LTD) 22 October 2003 (2003-10-22) page 9, lines 30,33; claims 1,7-11; tables 12,13,27; compounds 23-75,23-80,23-88,23-284 -----	1-26
X	WO 97/24343 A (BOEHRINGER INGELHEIM PHARMACEUTICALS, INC; BOEHRINGER INGELHEIM LTD) 10 July 1997 (1997-07-10) page 161; table 1; compounds 35,36 page 160, line 5; claims -----	1-26
X	GB 1 481 465 A (SHIONOGI & CO LTD) 27 July 1977 (1977-07-27) example 37 -----	16-26
X	US 3 933 838 A (MANGHISI ET AL) 20 January 1976 (1976-01-20) column 4, line 16 - line 28; claim 1 -----	16-26
X	BAILEY N ET AL: "A convenient procedure for the solution phase preparation of 2-aminothiazole combinatorial libraries" BIOORGANIC & MEDICINAL CHEMISTRY LETTERS, OXFORD, GB, vol. 6, no. 12, 18 June 1996 (1996-06-18), pages 1409-1414, XP004134850 ISSN: 0960-894X figure 2; compound 1 -----	16-26
X	MISRA R N ET AL: "Synthesis and biological activity of N-aryl-2-aminothiazoles: potent pan inhibitors of cyclin-dependent kinases" BIOORGANIC & MEDICINAL CHEMISTRY LETTERS, OXFORD, GB, vol. 14, no. 11, 7 June 2004 (2004-06-07), pages 2973-2977, XP004841326 ISSN: 0960-894X compounds 11,12 -----	16-26

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INTERNATIONAL SEARCH REPORT

International application No
PCT/US2006/017692

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	MOZZICONACCI JEAN-CHRISTOPHE ET AL: "Optimization and validation of a docking-scoring protocol; application to virtual screening for COX-2 inhibitors." JOURNAL OF MEDICINAL CHEMISTRY. 24 FEB 2005, vol. 48, no. 4, 24 February 2005 (2005-02-24), pages 1055-1068, XP002401982 ISSN: 0022-2623 table 4; compound 1 -----	16-26
X	US 2004/053982 A1 (PRESS NEIL JOHN ET AL) 18 March 2004 (2004-03-18) paragraph [0092]; claims; examples 1,3,6,7 -----	16-26
X	WO 2004/014884 A (F. HOFFMANN-LA ROCHE AG) 19 February 2004 (2004-02-19) page 9, line 25 - page 14, line 20; claim 1; examples B,P -----	16-26
X	US 2002/016471 A1 (SALITURO FRANCESCO ET AL) 7 February 2002 (2002-02-07) paragraph [0115] -----	16-26
X	US 2 474 194 A (THURSTON JACK THEO) 21 June 1949 (1949-06-21) examples 1,2 -----	16-26
X	US 3 467 666 A (MARTIN DEXTER ET AL) 16 September 1969 (1969-09-16) column 3, line 1 - line 33; examples 1-10 -----	16-26
X	GB 2 022 085 A (PFIZER INC) 12 December 1979 (1979-12-12) claims; examples 4,6,9 -----	16-26
X	DATABASE BEILSTEIN BEILSTEIN CROSSFIRE INSTITUT ZUR FOERDERUNG DER CHEMISCHEN WISSENSCHAFTEN, DE; Citation No. 5525052 BRN 4204132 1990, XP002401992 abstract -----	16-26
X	DATABASE BEILSTEIN BEILSTEIN CROSSFIRE INSTITUT ZUR FOERDERUNG DER CHEMISCHEN WISSENSCHAFTEN, DE; BRN 14269 1932, XP002401993 abstract -----	16-26
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INTERNATIONAL SEARCH REPORT

International application No
PCT/US2006/017692

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	DATABASE BEILSTEIN BEILSTEIN CROSSFIRE INSTITUT ZUR FOERDERUNG DER CHEMISCHEN WISSENSCHAFTEN, DE; BRN 14823 1959, XP002401994 abstract -----	16-26
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X	DATABASE BEILSTEIN BEILSTEIN CROSSFIRE INSTITUT ZUR FOERDERUNG DER CHEMISCHEN WISSENSCHAFTEN, DE; BRN 989080 1976, XP002401996 abstract -----	16-26

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2006/017692

Box 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 1-15, 21-24 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 compounds.
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 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 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.:

see annex

Remark on Protest

The additional search fees were accompanied by the applicant's protest.

No protest accompanied the payment of additional search fees.

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

1. claims: 1-26(part)

Monocyclic thiazole compounds with $t=0$ and $q=0$.

2. claims: 1,10,16,17,19-26(part)

Monocyclic thiazole compounds with $t=1$ and $q=0$

3. claims: 1,10,16,17,19-26(part)

Monocyclic thiazole compounds with $t=0$ and $q=1$

4. claims: 1-26(part)

Fused thiazole compounds

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

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