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AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH,
CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES,
FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN,
IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR,
LS, LT, LU, LY, MA, MD, MG, MK, MN, MW, MX, MY,
MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS,
RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN,
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FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, PL,
PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM,
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— of inventorship (Rule 4.17(iv))

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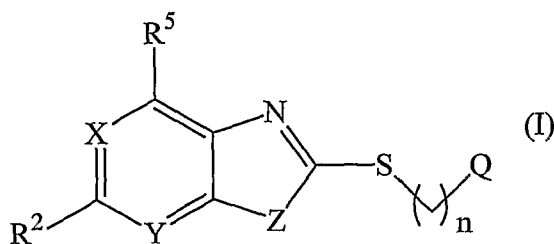
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For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.

(54) Title: NOVEL VIRAL REPLICATION INHIBITOR



(57) Abstract: The present invention relates to a pharmaceu-
tical composition for the treatment or prevention of viral infec-
tions comprising as an active principle at least one benzimidazole
conjugates derivatin havin the general formula (I). The inven-
tion also relates to processes for the preparation of compounds
according to the invention having above mentioned general for-
mula and their use as a medicine or to treat or prevent viral in-
fections.



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INTERNATIONAL SEARCH REPORT

International application No

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A. CLASSIFICATION OF SUBJECT MATTER

INV. C07D235/28 C07D401/12 C07D405/12 C07D413/12 C07D417/12
 C07D471/04 C07D473/40 C07H19/04 A61K31/343 A61K31/4184
 A61K31/423 A61K31/424 A61K31/428 A61K31/429 A61K31/70

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 C07H A61K

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	EP 0 335 646 A (SYNPHAR LAB INC [CA]) 4 October 1989 (1989-10-04) the whole document -----	1,4-14, 17-20
X	WO 95/29897 A (SEARLE & CO [US]; MOORMANN ALAN E [US]; BECKER DANIEL P [US]; FLYNN DA) 9 November 1995 (1995-11-09) the whole document -----	1,4-14, 17-20
X	WO 2004/074270 A2 (PFIZER [US]; BORCHARDT ALLEN JOHN [US]; GONZALEZ JAVIER [US]; LI HUI []) 2 September 2004 (2004-09-02) page 487; example I(3) -----	1,4-14, 17-20
X	WO 99/18073 A (BOEHRINGER INGELHEIM CA LTD [CA]; YOAKIM CHRISTIANE [CA]; CHABOT CATHE) 15 April 1999 (1999-04-15) compounds 106,109,139,141 -----	1,4-14, 17-20
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 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

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Authorized officer

Klein, Didier

INTERNATIONAL SEARCH REPORT

international application No

PCT/BE2007/000043

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 02/094796 A (AXXIMA PHARMACEUTICALS AG [DE]; PATO JANOS [HU]; KERI GYOERGY [HU]; OE) 28 November 2002 (2002-11-28) compound 74	1,4-14, 17-20
X	----- GARUTI L ET AL: "Synthesis and antiviral assays of some benzimidazole nucleosides and acyclonucleosides" IL FARMACO, ROME, IT, vol. 56, no. 11, 2001, pages 815-819, XP009088885 ISSN: 0014-827X compounds 1,5,7, 9,11,(9,11)A Scheme 1	1,4-6,8
Y		22
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X	----- LAWRENCE ET AL: "Recent results on biological activities of natural and synthetic analogs of S-adenosylhomocysteine" BIOCHEMISTRY OF S-ADENOSYLMETHIONINE AND RELATED COMPOUNDS: PROCEEDINGS, X, XX, 1982, pages 637-644, XP009088904 compound 7	1,4-6
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Y	Scheme A page 1136	22
X	----- ZOU ET AL: "Design, synthesis, and antiviral evaluation of 2-deoxy-D-ribosides of substituted benzimidazoles as potential agents for human cytomegalovirus infections" NUCLEOSIDES, NUCLEOTIDES AND NUCLEIC ACIDS, TAYLOR & FRANCIS, PHILADELPHIA, PA, US, vol. 19, no. 1-2, 2000, pages 125-153, XP009088883 ISSN: 1525-7770 compound 3G	1,4-6,8
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INTERNATIONAL SEARCH REPORT

International application No

PCT/BE2007/000043

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	SONG, BAO AN ET AL: "Indium-mediated facile synthesis of (6-chloro-3-pyridinyl)methyl heterocyclic thioether derivatives in aqueous media" CHINESE CHEMICAL LETTERS, 15(10), 1140-1142 CODEN: CCLEE7; ISSN: 1001-8417, 2004, XP009089005 compound 3A	1,4-14, 17-20
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A	RADA ET AL: "Antiviral activity of benzothiazole and benzothiazolinethione derivatives in cell cultures" ACTA VIROLOGICA, ACADEMIA PRAGUE, PRAGUE, CS, vol. 23, no. 3, 1979, pages 203-209, XP009088899 ISSN: 0001-723X compounds 5,6,8-11,15,20,26	1,4-14, 17-20
A	ADAVI, H. H. ET AL: ".alpha.-Cleavage during the oxidation of benzazolyl 4-coumarinylmethyl sulfides" JOURNAL OF THE INDIAN CHEMICAL SOCIETY, 81(11), 981-985 CODEN: JICSAH; ISSN: 0019-4522, 2004, XP009088919	1,4-14, 17-20
E	WO 2007/070600 A (GENELABS TECH INC [US]; SCHMITZ FRANZ ULRICH [US]; ROBERTS CHRISTOPHER) 21 June 2007 (2007-06-21) page 44; compound 5064	1,4-14, 17-20
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INTERNATIONAL SEARCH REPORT

International application No.
PCT/BE2007/000043

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.:
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 allsearchable 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(part),4(part),5,6(part)-14(part),
17(part),18,19(part)-22(part)

Compounds of claim 1 wherein X is CR1, Y is CR6, Z is NR7, compositions, uses according to claim 14, and processes for the preparation thereof.

2. claims:

1(part),6(part),7(part),9(part),
10(part)-14(part),19(part),20(part)

Compounds of claim 1 wherein X is CR1, Y is CR6, Z is O, compositions and uses thereof.

3. claims:

1(part),6(part),7(part),9(part),
10(part)-14(part),19(part),20(part)

Compounds of claim 1 wherein X is CR1, Y is CR6, Z is S, compositions and uses thereof.

4. claims:

1(part),2,(part),4(part),
6(part)-15(part),17(part),19(part),
20(part
) ,22(part)

Compounds of claim 1 wherein X is CR1, Y is N, Z is NR7, compositions, uses, and processes for the preparation thereof.

5. claims: 1(part),2(part),6(part)-15(part),19(part),20(part)

Compounds of claim 1 wherein X is CR1, Y is N, Z is O, compositions and uses thereof.

6. claims: 1(part),2(part),6(part)-15(part),19(part),20(part)

Compounds of claim 1 wherein X is CR1, Y is N, Z is S, compositions and uses thereof.

7. claims:

1(part),4(part),6(part)-14(part),
17(part),19(part),20(part),22(part
)

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Compounds of claim 1 wherein X is N, Y is CR6, Z is NR7, compositions, uses, and processes for the preparation thereof.

8. claims: 1(part),6(part)-14(part),19(part),20(part)

Compounds of claim 1 wherein X is N, Y is CR6, Z is O, compositions and uses thereof.

9. claims: 1(part),6(part)-14(part),19(part),20(part)

Compounds of claim 1 wherein X is N, Y is CR6, Z is S, compositions and uses thereof.

10. claims:

1(part),3(part),4(part),
6(part)-14(part),16(part),17(part),
19(part)
,20(part),22(part)

Compounds of claim 1 wherein X is N, Y is N, Z is NR7, compositions, uses, and processes for the preparation thereof.

11. claims:

1(part),3(part),6(part)-14(part),
16(part),19(part),20(part)

Compounds of claim 1 wherein X is N, Y is N, Z is O, compositions and uses thereof.

12. claims:

1(part),3(part),6(part)-14(part),
16(part),19(part),20(part)

Compounds of claim 1 wherein X is N, Y is N, Z is S, compositions and uses thereof.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/BE2007/000043

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