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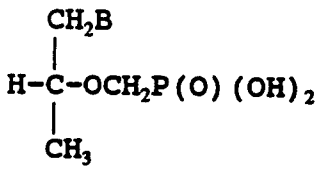
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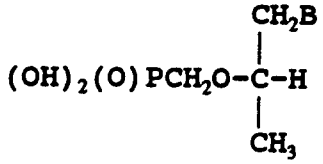
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23 June 1994 (23.06.94)

(54) Title: ANTIRETROVIRAL ENANTIOMERIC NUCLEOTIDE ANALOGS



(IA)



(IB)

(57) Abstract

Resolved enantiomers of formulae (IA) and (IB) wherein B is a purine or pyrimidine base or aza and/or deaza analogs thereof are useful in antiviral pharmaceutical compositions to treat retroviral infections.

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INTERNATIONAL SEARCH REPORT

International Application No
PCT/US 93/07360

A. CLASSIFICATION OF SUBJECT MATTER
IPC 5 C07F9/6561 A61K31/675 C07F9/6512 C07F9/6521 C07F9/40
C07D473/00 C07C43/04 C07D309/12

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)
IPC 5 C07F A61K C07D C07C

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)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	EP,A,0 452 935 (BRISTOL-MYERS SQUIBB COMPANY) 23 October 1991 cited in the application see the whole document	1-26, 37-66
X	see page 17 - page 20 cited in the application	34-36
Y	EP,A,0 253 412 (CESKOSLOVENSKA AKADEMIE VED) 20 January 1988 see the whole document	1-26, 37-66
Y	EP,A,0 130 126 (MERCK & CO. INC.) 2 January 1985 see the whole document	1-26, 37-66

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[X] Further documents are listed in the continuation of box C.

[X] Patent family members are listed in annex.

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Date of the actual completion of the international search	Date of mailing of the international search report
31 March 1994	19. 04. 94

Name and mailing address of the ISA	Authorized officer
European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax (+31-70) 340-3016	Beslier, L

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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.
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X	EP,A,0 368 410 (GIST-BROCADES N.V.) 16 May 1990 see page 21; example 24 see page 44; example 98	27
X	JOURNAL OF MEDICINAL CHEMISTRY vol. 8, no. 4 , 1965 , WASHINGTON US pages 502 - 506 HOWARD J. SCHAEFFER 'Enzyme Inhibitors. VIII. Studies on the Mode of Binding of Some 6-Substituted 9-(Hydroxyalkyl)purines to Adenosine Deaminase' see page 503, Chart I and page 504	30
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Int tional Application No
PCT/US 93/07360

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	DE,A,39 06 357 (BOEHRINGER MANNHEIM GMBH) 6 September 1990 see page 6; examples 1-a-b ---	32,33
X	AGRICULTURAL AND BIOLOGICAL CHEMISTRY vol. 50, no. 9 , 1986 , TOKYO JP pages 2261 - 2271 FUMIO SUGAWARA 'Stereoselective Synthesis of 1- and 2-O-alpha-D-Cellotriosyl-3-deoxy-2(R)- and 2(S)-glycerols Related to Rhynchosporoside' see pages 2261 and 2266, compounds 7 and 8 -----	32

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INTERNATIONAL SEARCH REPORT

...ernational application No.
PCT/US 93/ 07360

Box I Observations where certain claims were found unsearchable (Continuation of item 1 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 II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. Claims: 1-26,30,34-66
2. Claims:27-29
3. Claims:31-33

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 searches 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.:

Remark on Protest

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

☒ No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

Information on patent family members

Int ional Application No
PCT/US 93/07360

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INTERNATIONAL SEARCH REPORT

Information on patent family members

Int tional Application No
PCT/US 93/07360

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