(57) Abstract: The invention is a compound, composition, use for and a method of treating *Flaviviridae* (Hepadnavirus, Flavivirus, Pestivirus) infections, including BVDV and HCV, or abnormal cellular proliferation, including malignant tumors, in a host including animals, and especially humans, using a β-D or β-L nucleoside of general formula (1) - (XX), or their pharmaceutically acceptable salt or prodrug thereof.
Published:  
— with international search report

(88) Date of publication of the international search report: 11 March 2004

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.
# INTERNATIONAL SEARCH REPORT

**International application No.**

PCT/US03/04379

## A. CLASSIFICATION OF SUBJECT MATTER

**IPC(7)**: C07D 487/64, 239/52, 239/34, 239/46; A61K 31/34, 31/52; A61P 35/00

**US CL.**: 536/27.1, 27.14; 514/266, 269

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)

U.S.: 536/27.1, 27.14; 514/266, 269

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)

CASONLINE, EAST

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

<table>
<thead>
<tr>
<th>Category *</th>
<th>Citation of document, with indication, where appropriate, of the relevant passages</th>
<th>Relevant to claim No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>TOYOTA ET AL. Addition of molecular fluorine to 2-azabicyclo[2.2.1]hept-5-en-3-one and related compounds: Synthesis of difluorinated carbocyclic nucleosides. Tetrahedron 52(31), 8783-8798. See entire document especially the schemes 1-7 and examples.</td>
<td>1-3</td>
</tr>
</tbody>
</table>

☐ Further documents are listed in the continuation of Box C. ☐ See patent family annex.

- *"A"* document defining the general state of the art which is not considered to be of particular relevance
- *"E"* earlier application or patent 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**

13 August 2003 (13.08.2003)

**Date of mailing of the international search report**

01 OCT 2003

**Name and mailing address of the ISA/US**

Mail Stop PCT, Attn: ISA/US
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

Faxsimile No. (703)305-3230

**Authorized officer**

[Signature]

[Name]

[Title]

[Address]

[Telephone No. (703)308-1235]

Form PCT/ISA/210 (second sheet) (July 1998)