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INTERNATIONAL SEARCH REPORT

Internatic Application No PCT/US 98/14688
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A. CLASSIFICATION OF SUBJECT MATTER
 IPC 6 C12N15/40 C07K14/18 C12Q1/70 C07K16/10 A61K39/29

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 6 C12N C07K C12Q 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)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	YOO B J ET AL: "Transfection of a differentiated human hepatoma cell line (Huh7) with in vitro-transcribed hepatitis C virus (HCV) RNA and establishment of a long-term culture persistently infected with HCV" JOURNAL OF VIROLOGY, vol. 69, no. 1, January 1995, pages 32-38, XP002022696 AMERICAN SOCIETY FOR MICROBIOLOGY US see the whole document --- -/--	1, 13-24, 33-35, 42, 43

Further documents are listed in the continuation of box C. Patent family members are listed in 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
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Date of the actual completion of the international search 12 January 1999	Date of mailing of the international search report 22/01/1999
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Name and mailing address of the ISA 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	Authorized officer <p style="text-align: center; font-weight: bold;">Cupido, M</p>
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INTERNATIONAL SEARCH REPORT

Internatic Application No

PCT/US 98/14688

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
E	WO 98 39031 A (UNIVERSITY OF WASHINGTON ;KOLYKHALOV A ; RICE C) 11 September 1998 see SEQ ID NO:1, representing a HCV H77 consensus sequence having 99.6% identity with the nucleic acid sequences in figures 4A-4F of the present application. ---	1,4,5, 13-24, 33-43
X	EP 0 516 270 A (JAPAN IMMUNO INC) 2 December 1992 see the whole document ---	23,24, 40,41
A	WO 97 08310 A (WASHINGTON UNIVERSITY) 6 March 1997 see page 15; figure 3 ---	1-43
P,X	YANAGI M ET AL: "Transcripts of a chimeric cDNA clone of hepatitis C virus genotype 1b are infectious in vivo" VIROLOGY, vol. 244, no. 1, 25 April 1998, pages 161-172, XP002089701 ORLANDO US see the whole document -----	1,6-10, 13-24, 33-43

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US 98/14688

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:
Remark: Although claim(s) 41 and 43
is(are) directed to a method of treatment of the animal
body, the search has been carried out and based on the alleged
effects of the composition.
2. Claims Nos.: 29 and 30
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:
The scope of claims 29 and 30 is so unclear and not well specified that
a meaningful search was not possible
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. 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.:

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

International application No

PCT/US 98/14688

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 9839031 A	11-09-1998	AU 6938698 A	22-09-1998
EP 0516270 A	02-12-1992	JP 5091884 A CA 2065690 A	16-04-1993 11-10-1992
WO 9708310 A	06-03-1997	AU 6909796 A CA 2230452 A EP 0856051 A	19-03-1997 06-03-1997 05-08-1998