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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: NON-HUMAN ANIMAL MODELS OF TOLERANCE TO HEPATITIS C VIRUS IMMUNOGENES

(57) Abstract: This invention provides a model for the induction of immunological tolerance to antigens. The tolerance model of the invention can be used for screening candidate drugs effective in modulating tolerance. The invention also provides the use of such tolerance-modulating drugs as agents for the treatment of chronic illnesses, including chronic viral infections, such as HCV.



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INTERNATIONAL SEARCH REPORT

International Application No

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A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 A61K39/29 A61K39/00 C12N15/86 C12N15/861 A01K67/027
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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 7 A01K 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, BIOSIS

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 97 33979 A (GEN HOSPITAL CORP ;KAWAMURA TAKAO (US); LIANG T JAKE (US); SCHMIDT) 18 September 1997 (1997-09-18) page 13; claims 1-8	1,4,5, 8-11,31
Y		1-15, 21-25, 30,31
X	WO 98 09524 A (CHIRON CORP ;INDIANA UNIVERSITY (US)) 12 March 1998 (1998-03-12) page 5	1-3,5,6, 23,30
Y		1-15, 21-25, 30,31
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☒ 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
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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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02/01/2002

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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	WO 98 12332 A (SCRIPPS RESEARCH INST ;CHIRON CORP (US)) 26 March 1998 (1998-03-26)	13,15,23
Y	page 13-17; claims 1-23	1-15, 21-25, 30,31
X	WO 94 24267 A (CHU KETING ;ROBINSON WILLIAM S (US)) 27 October 1994 (1994-10-27)	1-6
Y	the whole document	1-15, 21-25, 30,31
Y	LEE A Y ET AL: "Quantification of the number of cytotoxic T cells specific for an immunodominant HCV-specific CTL epitope primed by DNA immunization" VACCINE, BUTTERWORTH SCIENTIFIC. GUILDFORD, GB, vol. 18, no. 18, March 2000 (2000-03), pages 1962-1968, XP004190080 ISSN: 0264-410X the whole document	1-15, 21-25, 30,31
A	DAVIS G L ET AL: "THERAPY FOR CHRONIC HEPATITIS C" GASTROENTEROLOGY CLINICS OF NORTH AMERICA, XX, XX, vol. 23, no. 3, 1 September 1994 (1994-09-01), pages 603-613, XP000600929 the whole document	1-15, 21-25, 30,31
A	DUSHEIKO G M: "NEW TREATMENTS FOR CHRONIC VIRAL HEPATITIS B AND C" BAILLIERES CLINICAL GASTROENTEROLOGY, BAILLIERES TINDALL, LONDON, GB, vol. 10, no. 2, 1 July 1996 (1996-07-01), pages 299-333, XP000610619 ISSN: 0950-3528 page 319-326	1-15, 21-25, 30,31
P,X	WO 01 30812 A (CHIRON CORP ;PALIARD XAVIER (US); SELBY MARK (US); HOUGHTON MICHAEL) 3 May 2001 (2001-05-03) the whole document	1-15, 21-25, 30,31

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box I.1

Although claims 16-28 are directed to a method of treatment of the human/animal body, and claims 1-15, 30-31 are directed to a diagnostic method practised on the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.

Continuation of Box I.1

Claims Nos.: 16-20, 26-29 completely, 1-15, 21-25, 30-31 partially

Rule 39.1(iv) PCT - Method for treatment of the human or animal body by therapy
Rule 39.1(iv) PCT - Method for treatment of the human or animal body by surgery

Continuation of Box I.2

Claims Nos.: 16-20, 26-29

Present claims 16-20, 26-29 relate to a "test agent" defined by reference to a desirable characteristic or property, namely the ability to modulate tolerance for an immunogen.

The claims cover all products/compounds/methods having this characteristic or property, whereas the application provides support within the meaning of Article 6 PCT and/or disclosure within the meaning of Article 5 PCT for only a very limited number of such products/compounds/methods. In the present case, the claims so lack support, and the application so lacks disclosure, that a meaningful search over the whole of the claimed scope is impossible. Independent of the above reasoning, the claims also lack clarity (Article 6 PCT). An attempt is made to define the product/compound/method/apparatus by reference to a result to be achieved. Again, this lack of clarity in the present case is such as to render a meaningful search over the whole of the claimed scope impossible. Consequently, the search has been carried out for those claims which appear to be clear, supported and disclosed, namely those claims which define specific agents, i.e. claims 21-25.

The applicant's attention is drawn to the fact that claims, or parts of claims, relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US 01/20554

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