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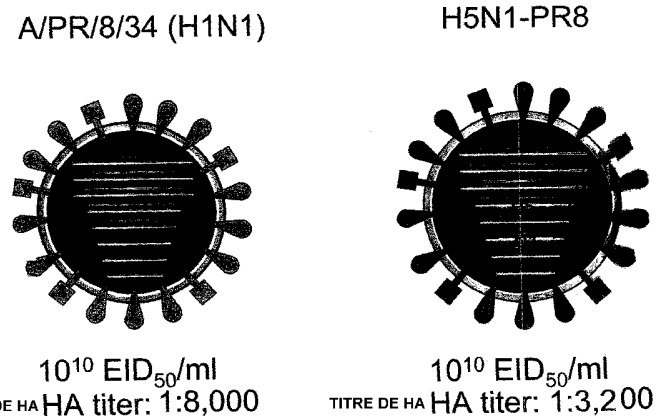
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(88) Date of publication of the international search report: 24 March 2005

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: HIGH TITER RECOMBINANT INFLUENZA VIRUSES FOR VACCINES AND GENE THERAPY



(57) Abstract: The invention provides a composition useful to prepare high titer influenza viruses, e.g., in the absence of helper virus, which includes a sequence from a high titer influenza virus isolate.

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INTERNATIONAL SEARCH REPORT

International Application No
PCT/US2004/016680

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 C12N7/02 C12N7/04 C12N15/86

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 C12N

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, PAJ, BIOSIS

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	SCHICKLI J H ET AL: "Plasmid-only rescue of influenza A virus vaccine candidates." PHILOSOPHICAL TRANSACTIONS OF THE ROYAL SOCIETY OF LONDON. SERIES B, BIOLOGICAL SCIENCES. 29 DEC 2001, vol. 356, no. 1416, 29 December 2001 (2001-12-29), pages 1965-1973, XP002314283 ISSN: 0962-8436 page 1965 - page 1968; figures 1,2; table 1 page 1972 -/--	1-10,12, 13, 15-17, 22-31, 36-42

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

[X] 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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"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

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"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	Date of mailing of the international search report
20 January 2005	02/02/2005

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	Steffen, P

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
	& NEUMANN G ET AL: "Generation of influenza A viruses entirely from cloned cDNAs" PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF USA, NATIONAL ACADEMY OF SCIENCE. WASHINGTON, US, vol. 96, August 1999 (1999-08), pages 9345-9350, XP002150093 ISSN: 0027-8424	
X	HOFFMANN E ET AL: "Eight-plasmid system for rapid generation of influenza virus vaccines" VACCINE, BUTTERWORTH SCIENTIFIC. GUILDFORD, GB, vol. 20, no. 25-26, 19 August 2002 (2002-08-19), pages 3165-3170, XP004374556 ISSN: 0264-410X page 3166 - page 3169; figure 1; tables 1-3 & HOFFMANN E ET AL: "A DNA TRANSFECTION SYSTEM FOR GENERATION OF INFLUENZA A VIRUS FROM EIGHT PLASMIDS" PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF USA, NATIONAL ACADEMY OF SCIENCE. WASHINGTON, US, vol. 97, no. 11, 23 May 2000 (2000-05-23), pages 6108-6113, XP000982038 ISSN: 0027-8424	1-10, 12-17, 22-32, 36-40,42
X	SUBBARAO KANTA ET AL: "Evaluation of a genetically modified reassortant H5N1 influenza A virus vaccine candidate generated by plasmid-based reverse genetics." VIROLOGY. 5 JAN 2003, vol. 305, no. 1, 5 January 2003 (2003-01-05), pages 192-200, XP002314284 ISSN: 0042-6822 page 193 - page 195; figure 1; tables 1,2 page 198 & FODOR E ET AL: "Rescue of influenza A virus from recombinant DNA" JOURNAL OF VIROLOGY, THE AMERICAN SOCIETY FOR MICROBIOLOGY, US, vol. 73, no. 11, November 1999 (1999-11), pages 9679-9682, XP002151487 ISSN: 0022-538X	1-10,12, 13, 15-17, 22-31, 36-42

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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	NEUMANN G ET AL: "Plasmid-driven formation of influenza virus-like particles" JOURNAL OF VIROLOGY, THE AMERICAN SOCIETY FOR MICROBIOLOGY, US, vol. 74, no. 1, January 2000 (2000-01), pages 547-551, XP002140119 ISSN: 0022-538X page 547 - page 548; figures 1,2 page 550	1-10,12, 13, 15-40,42
X	HOFFMANN E ET AL: "Rescue of influenza B virus from eight plasmids" PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF USA, NATIONAL ACADEMY OF SCIENCE. WASHINGTON, US, vol. 99, no. 17, 20 August 2002 (2002-08-20), pages 11411-11416, XP002973258 ISSN: 0027-8424 page 11412 - page 11415; figure 1	1-17, 22-32, 36-40,42
X	WO 00/60050 A (KAWAOKA YOSHIHIRO ; NEUMANN GABRIELE (US); WISCONSIN ALUMNI RES FOUND) 12 October 2000 (2000-10-12) page 1 - page 12; claims; figures 1-3,8; examples 1,2	1-10,12, 13,15-42
T	NEUMANN GABRIELE ET AL: "Generation of influenza A virus from cloned cDNAs--historical perspective and outlook for the new millenium." REVIEWS IN MEDICAL VIROLOGY. 2002 JAN-FEB, vol. 12, no. 1, January 2002 (2002-01), pages 13-30, XP002314285 ISSN: 1052-9276 page 20 - page 24; figures 3,4	1-42

INTERNATIONAL SEARCH REPORT

national application No.
PCT/US2004/016680

Box 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. [X] Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

Although claim 41 is directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.

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 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:

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/US2004/016680

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 0060050 A	12-10-2000	AU 4073300 A	23-10-2000
		BR 0009580 A	02-01-2002
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		CN 1350578 T	22-05-2002
		EP 1185615 A2	13-03-2002
		JP 2003528570 T	30-09-2003
		WO 0060050 A2	12-10-2000
		US 2003035814 A1	20-02-2003