(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
31 December 2008 (31.12.2008)

PCT

(10) International Publication Number
WO 2009/001217 A3

(51) International Patent Classification:
A61K 39/145 (2006.01) *A61P 31/16* (2006.01)

(21) International Application Number:
PCT/IB2008/002238

(22) International Filing Date:
27 June 2008 (27.06.2008)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/937,515 27 June 2007 (27.06.2007) US

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(81) Designated States *(unless otherwise indicated, for every kind of national protection available)*: AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States *(unless otherwise indicated, for every kind of regional protection available)*: ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, NO, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— *with international search report (Art. 21(3))*

— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))*

(88) Date of publication of the international search report:
13 August 2009

WO 2009/001217 A3

(54) Title: LOW-ADDITIVE INFLUENZA VACCINES

(57) Abstract: An influenza vaccine lacks at least three of: a mercurial preservative; an antibiotic; formaldehyde; and egg-derived materials. In some embodiments, the vaccine includes none of these four components.

INTERNATIONAL SEARCH REPORT

International application No
PCT/IB2008/002238

A. CLASSIFICATION OF SUBJECT MATTER
INV. A61K39/145 A61P31/16

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)
A61P 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, BIOSIS, WPI Data, EMBASE

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2006/252132 A1 (YANG CHIN-FEN [US] ET AL) 9 November 2006 (2006-11-09) paragraphs [0007], [0078], [0118], [0152], [0154]	1,7,9,11
Y	the whole document	5-11
X	EP 1 605 052 A (MG PMC LLC [US] PROTEIN SCIENCES CORP [US]) 14 December 2005 (2005-12-14) paragraphs [0045], [0072]; example 12	1,7,10, 11
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[X] Further documents are listed in the continuation of Box C.

[X] See patent family 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

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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

"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	Date of mailing of the international search report
5 June 2009	30/06/2009

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, Fax: (+31-70) 340-3016	Perez, Franck

INTERNATIONAL SEARCH REPORT

International application No
PCT/IB2008/002238

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	WO 2007/052061 A (NOVARTIS VACCINES & DIAGNOSTIC [IT]; O'HAGAN DEREK [IT]) 10 May 2007 (2007-05-10) page 7, line 22 - line 29	6,8
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X	ID BIOMEDICAL CORPORATION OF QUEBEC: "Highlights of prescribing information Flulaval"[Online] 2006, pages 1-12, XP002513142 Retrieved from the Internet: URL:http://www.fda.gov/CBER/label/flulavalLB.pdf> [retrieved on 2009-02-03] the whole document	1,5-11
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Y	MERTEN O-W ET AL: "PRODUCTION OF INFLUENZA VIRUS IN SERUM-FREE MAMMALIAN CELL CULTURES" DEVELOPMENTS IN BIOLOGICAL STANDARDIZATION, KARGER, BASEL, CH, vol. 98, 1 January 1997 (1997-01-01), pages 23-37, XP000909398 ISSN: 0301-5149 the whole document	4,12

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INTERNATIONAL SEARCH REPORT

International application No
PCT/IB2008/002238

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	KESSLER N ET AL: "SUITABILITY OF MDCK CELLS GROWN IN A SERUM-FREE MEDIUM FOR INFLUENZA VIRUS PRODUCTION" DEVELOPMENTS IN BIOLOGICAL STANDARDIZATION, KARGER, BASEL, CH, vol. 98, 1 January 1999 (1999-01-01), pages 13-21,73/74, XP001097586 ISSN: 0301-5149 the whole document ----	4,12

INTERNATIONAL SEARCH REPORT

International application No.
PCT/IB2008/002238

Box No. 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. ☐ 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 No. 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:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers allsearchable claims.

2. ☐ As all searchable claims could be searched without effort justifying an additional fees, this Authority did not invite payment of additional fees.

3. ☒ As only some of the required additional search fees were timely paid by the applicant, this international search reportcovers only those claims for which fees were paid, specifically claims Nos.:

1, 4, 5-11 (in part), 12

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 and, where applicable, the payment of a protest fee.

☐ The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.

☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1, 5-11 (in part)

An influenza vaccine devoid of antibiotic, formaldehyde and egg-derived materials.

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2. claims: 2, 5-11 (in part)

An influenza vaccine devoid of antibiotic, formaldehyde and mercurial preservative.

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3. claims: 3, 5-11 (in part)

An influenza vaccine devoid of antibiotic, egg-derived material and mercurial preservative.

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4. claims: 4, 5-11 (in part), 12

An influenza vaccine devoid of antibiotic, formaldehyde, mercurial preservative and egg-derived material. Process of preparation thereof.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No
PCT/IB2008/002238

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