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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
8 July 2010 (08.07.2010)

PCT

(10) International Publication Number
WO 2010/077986 A2

(51) International Patent Classification:
C12N 7/04 (2006.01) *A61K 39/145* (2006.01)

(21) International Application Number:
PCT/US2009/068321

(22) International Filing Date:
16 December 2009 (16.12.2009)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
61/122,961 16 December 2008 (16.12.2008) US

(71) Applicants *(for all designated States except US)*: **BAXTER INTERNATIONAL INC.** [US/US]; One Baxter Parkway, Deerfield, IL 60015 (US). **BAXTER HEALTHCARE S.A.** [CH/CH]; Thurgauerstrasse 130, CH-8152 Glattpark (opfikon) (CH).

(72) Inventors; and

(75) Inventors/Applicants *(for US only)*: **KISTNER, Otfried** [DE/AT]; Weyringergasse 27/16, A-1040 Vienna (AT). **FALKNER, Falko-Guenter** [DE/AT]; Neusiedlzeile 76A, A-2304 Orth/Donau (AT). **ERLICH, Hartmut** [DE/AT]; Dr. Heinrigh-Maier-Strasse 20/1, A-1180 Vienna (AT). **BARRETT, Noel** [IE/AT]; Steinwandgasse 6A, A-3400 Klosterneuburg/Weidling (AT).

(74) Agents: **NEVILLE, Katherine, L.** et al.; Marshall, Gerstein & Borun LLP, 233 S. Wacker Drive, Suite 6300, Sears Tower, Chicago, IL 60606-6357 (US).

(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, CL, 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, PE, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, 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, MK, MT, NL, NO, PL, PT, RO, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declarations under Rule 4.17:

— *as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))*

— *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))*

Published:

— *without international search report and to be republished upon receipt of that report (Rule 48.2(g))*

— *with sequence listing part of description (Rule 5.2(a))*

(54) **Title**: PRODUCTION OF VIRAL VACCINE

(57) **Abstract**: The present invention relates, in general, to materials and methods for production of an improved vaccine against influenza virus, wherein the vaccine comprises a reassortant virus having a hemagglutinin gene and a neuraminidase gene from the same influenza A virus subtype or influenza B strain of virus and internal genes from a different influenza A virus subtype or influenza B strain of virus. In one aspect, the HA and NA genes and the internal genes are from a highly pathogenic H5N1 strain of influenza A.

WO 2010/077986 A2