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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
2 July 2009 (02.07.2009)

PCT

(10) International Publication Number
WO 2009/080719 A1

(51) International Patent Classification:
*A61K 39/12* (2006.01) *A61K 47/18* (2006.01)
*A61K 39/21* (2006.01) *A61K 39/00* (2006.01)

(21) International Application Number:
PCT/EP2008/067945

(22) International Filing Date:
18 December 2008 (18.12.2008)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
61/015,767 21 December 2007 (21.12.2007) US
61/019,951 9 January 2008 (09.01.2008) US

(71) Applicant *(for all designated States except US)*: **GLAXOSMITHKLINE BIOLOGICALS S.A.** [BE/BE]; rue de l'Institut 89, B-1330 Rixensart (BE).

(72) Inventors; and
(75) Inventors/Applicants *(for US only)*: **LEMOINE, Dominique, Ingrid** [BE/BE]; GlaxoSmithKline Biologicals S.A., Rue de l'Institut 89, B-1330 Rixensart (BE). **PONSARD, Sophie, Valerie, Anne** [BE/BE]; GlaxoSmithKline Biologicals S.A., Rue de l'Institut 89, B-1330 Rixensart (BE).

(74) Agents: **LOVATT, Victoria, Jayne** et al.; GlaxoSmithKline, Corporate Intellectual Property (CN925.1), 980 Great West Road, Brentford Middlesex TW8 9GS (GB).

(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, 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, 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).

**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))*
— *of inventorship (Rule 4.17(iv))*

**Published:**
— *with international search report*
— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*
— *with sequence listing part of description published separately in electronic form and available upon request from the International Bureau*

(54) Title: VACCINE

(57) Abstract: A component for a HIV vaccine comprising: a) an immunogenic fusion protein comprising Nef or an immunogenic fragment or derivative thereof, and pl7 Gag and/or p24 Gag or immunogenic fragments or derivatives thereof, wherein when both p 17 and p24 Gag are present there is at least one HIV antigen or immunogenic fragment between them, and b) a stabilising agent selected from the group comprising or consisting of monothioglycerol, cysteine, N-acetyl cysteine or mixtures thereof. The invention also extends to HIV vaccines comprising the same and use in treatment/prevention of HIV.

WO 2009/080719 A1