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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
22 November 2007 (22.11.2007)

PCT

(10) International Publication Number
WO 2007/131972 A1

(51) International Patent Classification:
A61K 39/385 (2006.01) *A61K 47/06* (2006.01)

(21) International Application Number:
PCT/EP2007/054604

(22) International Filing Date: 11 May 2007 (11.05.2007)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
06113895.4 12 May 2006 (12.05.2006) EP

(71) Applicants *(for all designated States except US)*: **CYTOS BIOTECHNOLOGY AG** [CH/CH]; Wagistrasse 25, CH-8952 Schlieren (CH). **LUDWIG MAXIMILIANS UNIVERSITÄT MÜNCHEN** [DE/DE]; Geschwister-Scholl-Platz 1, 80539 München (DE).

(72) Inventors; and

(75) Inventors/Applicants *(for US only)*: **LANG, Rainer** [DE/DE]; Aberlestr. 11, 81371 München (DE). **WINTER, Gerhard** [DE/DE]; Antdorfer Str. 18, 82377 Penzberg (DE). **VOGT, Lorenz** [CH/CH]; Engelsteinstrasse 20, CH-8344 Bäretswil (CH).

(74) Agent: **PFISTER-FU, Yixin**; Cytos Biotechnology AG, Wagistrasse 25, CH-8952 Schlieren (CH).

(81) Designated States *(unless otherwise indicated, for every kind of national protection available)*: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, 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, 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, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, 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*

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: NICOTINE-CARRIER VACCINE FORMULATION

(57) Abstract: The present invention is in the fields of medicine, public health, vaccine and drug formulation. The invention provides composition formulat ions comprising a nicotine- carrier conjugate and a stabilizer, wherein said stabilizer comprises a non-reducing disaccharide and a non-ionic surfactant. The composition formulations are stable after a long time of storage at room temperature.

WO 2007/131972 A1