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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
13 December 2007 (13.12.2007)

PCT

(10) International Publication Number
WO 2007/142781 A1

(51) International Patent Classification:
A61K 9/127 (2006.01) *G01N 33/53* (2006.01)
A61K 39/00 (2006.01)

(21) International Application Number:
PCT/US2007/011407

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

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/800,163 15 May 2006 (15.05.2006) US
60/844,352 14 September 2006 (14.09.2006) US

(71) Applicant *(for all designated States except US)*: **GEORGETOWN UNIVERSITY** [US/US]; 37th And O Streets, N.W., Washington, DC 20057 (US).

(72) Inventors; and
(75) Inventors/Applicants *(for US only)*: **CHANG, Esther, H.** [US/US]; 10244 Democracy Boulevard, Potomac, MD 20854 (US). **PIROLLO, Kathleen, F.** [US/US]; 547 Anderson Avenue, Rockville, MD 20850 (US).

(74) Agents: **DEL BUONO, Brian, J.** et al.; Sterne, Kessler, Goldstein & Fox P.L.L.C., 1100 New York Avenue, N.W., Washington, DC 20005-3934 (US).

(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, 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, 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).

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*

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:** PREPARATION OF ANTIBODY OR AN ANTIBODY FRAGMENT-TARGETED IMMUNOLIPOSOMES FOR SYSTEMIC ADMINISTRATION OF THERAPEUTIC OR DIAGNOSTIC AGENTS AND USES THEREOF

(57) **Abstract:** A method of preparing an antibody- or antibody fragment-targeted cationic immunoliposome or polymer complex comprises the steps of (a) preparing an antibody or antibody fragment; (b) mixing said antibody or antibody fragment with a cationic liposome to form a cationic immunoliposome or with a cationic polymer to form a polyplex; and (c) mixing said cationic immunoliposome or said polyplex with a therapeutic or diagnostic agent to form said antibody- or antibody fragment-targeted cationic immunoliposome or polymer complex.

WO 2007/142781 A1