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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
4 September 2008 (04.09.2008)

PCT

(10) International Publication Number
WO 2008/105978 A1

(51) International Patent Classification:
A61K 39/00 (2006.01) *A61P 35/00* (2006.01)

(21) International Application Number:
PCT/US2007/088457

(22) International Filing Date:
20 December 2007 (20.12.2007)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/876,222 20 December 2006 (20.12.2006) US

(71) Applicant *(for all designated States except US)*: **NOVARX** [US/US]; 6828 Nancy Ridge Drive, Suite 100, San Diego, CA 92121-2635 (US).

(72) Inventors; and
(75) Inventors/Applicants *(for US only)*: **FAKHRAI, Habib** [US/US]; 7992 Via Carpi, La Jolla, CA 92037 (US). **SHAWLER, Daniel, L.** [US/US]; 8324 Calle Calzada, San Diego, CA 92126 (US).

(74) Agent: **DELANEY, Karoline, A.**; Knobbe, Martens, Olson & Bear, LLP, 2040 Main Street, 14th Floor, Irvine, CA 92614 (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, 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, 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).

Declaration under Rule 4.17:
— *of inventorship (Rule 4.17(iv))*

Published:
— *with international search report*

WO 2008/105978 A1

(54) Title: UNIVERSAL TUMOR CELL VACCINE FOR ANTI CANCER THERAPEUTIC AND PROPHYLACTIC UTILIZATION

(57) Abstract: The invention provides a composition for stimulating an immune response in a patient having different types of cancer including those having adenocarcinoma comprising a combination of allogeneic tumor cells and / or tumor stem cells that are selected on the basis of secreting at least one immunosuppressive agent, e.g., TGF-β, and that are genetically modified to reduce or inhibit the expression of said at least one immunosuppressive agent, e.g., TGF-β, and that collectively express a spectrum of tumor associated antigens representative of colon, breast, lung, prostate, pancreas, kidney, endometrium, cervix, ovary, thyroid, and other glandular tissue carcinomas, as well as squamous, melanoma, central nervous system, and lymphomas and a physiologically acceptable carrier. The adenocarcinoma can be, for example, colon, breast, lung, prostate, pancreas, kidney, endometrium, cervix, ovary, thyroid, or other glandular tissue, as well as squamous, melanoma, central nervous system, and lymphomas. The invention also provides a composition containing said combination of allogeneic tumor cells and or tumor stem cells and an allogeneic cell expressing a cytokme or an antibody that inhibits an immune suppressive molecule.