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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
24 December 2008 (24.12.2008)

PCT

(10) International Publication Number
WO 2008/156728 A1

(51) International Patent Classification:
C12N 5/08 (2006.01)

(21) International Application Number:
PCT/US2008/007488

(22) International Filing Date: 16 June 2008 (16.06.2008)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:

60/929,151	15 June 2007 (15.06.2007)	US
60/929,152	15 June 2007 (15.06.2007)	US
60/955,204	10 August 2007 (10.08.2007)	US
60/996,093	1 November 2007 (01.11.2007)	US

(71) Applicant *(for all designated States except US)*: **NEURONYX, INC.** [US/US]; 1 Great Valley Parkway, Suite 20, Malvern, PA 19355 (US).

(71) Applicants and
(72) Inventors: **KOPEN, Gene** [US/US]; 609 Argyle Road, Wynnewood, PA 19096 (US). **WAGNER, Joseph** [US/US]; 1108 Dorset Drive, West Chester, PA 19382 (US). **RAGAGLIA, Vanessa** [US/US]; 123 Spring Tree Drive, Newtown Square, PA 19073 (US).

(72) Inventors; and
(75) Inventors/Applicants *(for US only)*: **HEIMBACH, Baron** [US/US]; 274 Lauriston Street, Philadelphia, PA 19128 (US). **GORE, Richard, S.** [US/US]; 1136 Ashbridge Road, West Chester, PA 19380 (US).

(74) Agents: **GOLDSTEIN, Jorge, A.** 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, 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, 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).

Published:
— *with international search report*

(54) **Title:** TREATMENT OF DISEASES AND DISORDERS USING SELF-RENEWING COLONY FORMING CELLS CULTURED AND EXPANDED IN VITRO

(57) **Abstract:** The present invention relates to methods and uses of cells for the prevention and treatment of a wide variety of diseases and disorders and the repair and regeneration of tissues and organs using low passage and extensively passaged in vitro cultured, self- renewing, colony forming somatic cells (CF-SC). For example, adult bone marrow-derived somatic cells (ABM-SC), or compositions produced by such cells, are useful alone or in combination with other components for treating, for example, cardiovascular, neurological, integumentary, dermatological, periodontal, and immune mediated diseases, disorders, pathologies, and injuries.

WO 2008/156728 A1