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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
19 January 2012 (19.01.2012)

PCT

(10) International Publication Number
WO 2012/009254 A1

(51) International Patent Classification:
A61K 39/395 (2006.01) *C07K 16/22* (2006.01)

(21) International Application Number:
PCT/US2011/043511

(22) International Filing Date:
11 July 2011 (11.07.2011)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
61/364,112 14 July 2010 (14.07.2010) US

(71) Applicant *(for all designated States except US)*: **REGENERON PHARMACEUTICALS, INC** [US/US]; 777 Old Saw Mill River Road, Tarrytown, NY 10591 (US).

(72) Inventors; and

(75) Inventors/Applicants *(for US only)*: **WALSH, Scott** [US/US]; 302 Watch Hill Drive, Tarrytown, NY 10591 (US). **POTOCKY, Terra** [US/US]; 5800 Arlington Avenue, Apartment 19W, Bronx, NY 10471 (US). **DIX, Daniel** [US/US]; 55 Memory Trail, Lagrangeville, NY 12540 (US). **SIVENDRAN, Renuka** [LK/US]; 490 Broadway, Apartment 2R, Dobbs Ferry, NY 10522 (US).

(74) Agent: **MALLON, Veronica**; Regeneron Pharmaceuticals, Inc., 777 Old Saw Mill River Road, Tarrytown, NY 10591 (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, CL, 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, PE, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, 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, LR, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— *with international search report (Art. 21(3))*

— *with sequence listing part of description (Rule 5.2(a))*

WO 2012/009254 A1

(54) **Title**: STABILIZED FORMULATIONS CONTAINING ANTI-NGF ANTIBODIES

(57) **Abstract**: The present invention provides pharmaceutical formulations comprising a human antibody that specifically binds to human nerve growth factor (hNGF). The formulations may contain, in addition to an anti-hNGF antibody, at least one non-ionic surfactant, at least one sugar, and acetate. The pharmaceutical formulations of the present invention exhibit a substantial degree of antibody stability after storage for several months.