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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
11 January 2007 (11.01.2007)

PCT

(10) International Publication Number
WO 2007/005359 A1

(51) International Patent Classification:
C07K 14/47 (2006.01) *A61K 38/04* (2006.01)

(21) International Application Number:
PCT/US2006/024744

(22) International Filing Date: 26 June 2006 (26.06.2006)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/695,526 30 June 2005 (30.06.2005) US

(71) Applicant *(for all designated States except US)*: **MERCK & CO., INC.** [US/US]; 126 East Lincoln Avenue, Rahway, New Jersey 07065-0907 (US).

(72) Inventors; and
(75) Inventors/Applicants *(for US only)*: **MACH, Henryk** [PL/US]; 126 East Lincoln Avenue, Rahway, New Jersey 07065-0907 (US). **NAWROCKI, Denise** [US/US]; 126 East Lincoln Avenue, Rahway, New Jersey 07065-0907 (US). **THIRIOT, David** [US/US]; 126 East Lincoln Avenue, Rahway, New Jersey 07065-0907 (US). **EVANS, Robert** [US/US]; 126 East Lincoln Avenue, Rahway, New Jersey 07065-0907 (US).

(74) Common Representative: **MERCK & CO., INC.**; 126 East Lincoln Avenue, Rahway, New Jersey 07065-0907 (US).

(81) Designated States *(unless otherwise indicated, for every kind of national protection available)*: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, 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, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, 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, 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*

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:** COMPOSITION AND METHOD FOR PRODUCING STABLE AMYLOID BETA OLIGOMERS OF HIGH MOLECULAR WEIGHT

(57) **Abstract:** The invention relates to a method for the preparation of a stable, soluble amyloid beta (Aβ) oligomer and composition thereof for use as an antigen for the generation of antibodies for the treatment of Alzheimer's disease and other conditions related to abnormal amyloid beta aggregation. The method which uses a pH in excess of 7.0 and high concentrations of Aβ, optionally includes the use of divalent anions or a helix-inducing solvent to form the oligomers. The stable, soluble Aβ oligomers produced by the method herein have a particle size of 10 to 100 nm in diameter, when measured by a dynamic light scattering technique, and a molecular weight of 100 to 500 kDa.

WO 2007/005359 A1