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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
14 August 2008 (14.08.2008)

PCT

(10) International Publication Number
WO 2008/097503 A3

(51) International Patent Classification:
*A61K 38/17* (2006.01) *A61P 25/00* (2006.01)
*A61K 48/00* (2006.01)

(21) International Application Number:
PCT/US2008/001444

(22) International Filing Date: 4 February 2008 (04.02.2008)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/898,992 2 February 2007 (02.02.2007) US

(71) Applicants *(for all designated States except US)*: **BIOGEN IDEC MA INC.** [US/US]; 14 Cambridge Center, Cambridge, MA 02142 (US). **CENTRE NATIONAL DE RECHERCHE SCIENTIFIQUE** [FR/FR]; 3 Rue Michel-ange, F-75794 Paris Cedex 16 (FR). **UNIVERSITY PIERRE AND MARIE CURIE** [FR/FR]; 4, Rue Jussieu, F-75252 Paris Cedex 05 (FR).

(72) Inventors; and

(75) Inventors/Applicants *(for US only)*: **CHEDOTAL, Alain** [FR/FR]; 23 Avenue Des Vergers, F-92340 Bourge La Reine (FR). **MI, Sha** [US/US]; 4 Vermon Road, Belmont, MA 02478 (US). **BERNARD, Frederic** [FR/FR]; 7, Rue Louis Rousseau, F-94200 Ivry-sur-seine (FR).

(74) Agents: **ELIZABETH, Haanes, 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, 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*
— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

(88) Date of publication of the international search report:
24 December 2008

WO 2008/097503 A3

(54) Title: USE OF SEMAPHORIN 6A FOR PROMOTING MYELINATION AND OLIGODENDROCYTE DIFFERENTIATION

(57) Abstract: The invention provides methods of treating diseases, disorsers or injuries involving demyelination and dysmyelination, including multiple sclerosis, by the administration of a Sema6A polypeptide.