(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 2008/106116 A3

(51) International Patent Classification:
C07K 16/28 (2006.01) *A61P 37/00* (2006.01)
A61K 39/395 (2006.01)

(21) International Application Number:
PCT/US2008/002498

(22) International Filing Date:
26 February 2008 (26.02.2008)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/903,693 27 February 2007 (27.02.2007) US

(71) Applicant *(for all designated States except US)*: **GENENTECH, INC.** [US/US]; 1 DNA Way, South San Francisco, CA 94080 (US).

(72) Inventors; and
(75) Inventors/Applicants *(for US only)*: **LAMHAMEDI-CHERRADI, Salah-eddine** [MA/US]; 2217 Rocky Cove Court, Pearland, TX 77584 (US). **YAO, Zhengbin** [US/US]; 2002 Stanwich Drive, Berwyn, PA 19312 (US). **SINGH, Sanjaya** [US/US]; 4 Owl Ridge Lane, Sandy Hook, CT 06482 (US).

(74) Agents: **CORUZZI, Laura, A.** et al.; Jones Day, 222 East 41st Street, New York, NY 10017-6702 (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*
— *with sequence listing part of description published separately in electronic form and available upon request from the International Bureau*

(88) Date of publication of the international search report:
16 October 2008

(54) Title: ANTAGONIST OX40 ANTIBODIES AND THEIR USE IN THE TREATMENT OF INFLAMMATORY AND AUTOIMMUNE DISEASES

(57) Abstract: The present invention relates to antagonist antibodies directed against human OX40 receptor (CD 134) and fragments thereof, including the amino acid sequences of antagonist antibodies and the nucleic acids that encode the antibodies. Also included in the present invention are antigen binding regions (CDRs) derived from the light and/or heavy chain variable regions of said antibodies. Another aspect of the present invention is the use of anti-OX40 antagonist antibodies in the treatment of inflammatory and autoimmune diseases. The present invention also relates to humanized sequences of an antagonist antibody AlO and epitope mapping of the binding site of the antibody.

WO 2008/106116 A3