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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
17 March 2005 (17.03.2005)

PCT

(10) International Publication Number
WO 2005/023872 A1

(51) International Patent Classification[7]: C07K 16/28, C12N 5/10, 15/13, 5/12

(21) International Application Number:
PCT/EP2004/010047

(22) International Filing Date:
9 September 2004 (09.09.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/501,681 10 September 2003 (10.09.2003) US
03029659.4 23 December 2003 (23.12.2003) EP

(71) Applicant *(for all designated States except US)*: **F. HOFFMANN-LA ROCHE AG** [CH/CH]; Grenzacherstrasse 124, CH-4070 Basel (CH).

(72) Inventors; and

(75) Inventors/Applicants *(for US only)*: **BARTKE, Ilse** [DE/DE]; Eichenstrasse 25a, 82347 Bernried (DE). **CARR, Francis** [GB/GB]; Birchlea, The Holdings, Balmedie, Aberdeenshire AB23 8XU (GB). **CHIZZONITE, Anthony** [US/US]; 104 Richards Road, South Kent, CT 06785 (US). **EUGUI, Elsie** [AR/US]; 2513 Hastings Dr., Belmont, CA 94002 (US). **FERTIG, Georg** [DE/DE]; Wolfbauerweg 6, 82377 Penzberg (DE). **HAMILTON, Anita** [GB/GB]; 130 Kings Gate, Aberdeen AB15 4EQ (GB). **LANZENDOERFER, Martin** [DE/DE]; Waldeslust 4, 81377 Muenchen (DE). **RUEGER, Petra** [DE/DE]; Auf der Leiten 4, 82377 Penzberg (DE). **SCHUMACHER, Ralf** [DE/DE]; Hochfeldstrasse 78, 82377 Penzberg (DE). **TRUITT, Theresa** [US/US]; 109 Garner Avenue, Bloomfield, NJ 07003 (US).

(74) Agent: **SCHREINER, Siegfried**; Roche Diagnostics GmbH, Patent Department Pharma (TR-E), Postfach 11 52, 82372 Penzberg (DE).

(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, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, 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, IT, LU, 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*
— *with (an) indication(s) in relation to deposited biological material furnished under Rule 13bis separately from the description*

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: ANTIBODIES AGAINST INTERLEUKIN-1 RECEPTOR AND USES THEREOF

(57) Abstract: An antibody binding to human IL-1R and inhibiting the binding of human IL-1 to IL-1R, characterized in that said antibody is obtainable from hybridoma cell line MAK<h-IL-1RI>2D8 (DSM ACC 2601) or is a chimeric, humanized or T cell epitope depleted antibody variant or a fragment of said antibody showing an IC50 value of 35 pM or lower for the inhibition of IL-1 mediated secretion of Il-8 and IL-6 in human fibroblast cells like MRC5 (ATCC CCL 171) has advantageous properties for the treatment of inflammatory diseases.

WO 2005/023872 A1