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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
7 October 2010 (07.10.2010)

PCT

(10) International Publication Number
WO 2010/112461 A1

(51) International Patent Classification:
C07D 271/06 (2006.01) *A61P 37/00* (2006.01)
A61K 31/4245 (2006.01)

(21) International Application Number:
PCT/EP2010/054103

(22) International Filing Date:
29 March 2010 (29.03.2010)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
09157301.4 3 April 2009 (03.04.2009) EP
61/169,773 16 April 2009 (16.04.2009) US

(71) Applicant *(for all designated States except US)*: **MERCK SERONO S.A.** [CH/CH]; Centre industriel, CH-1267 Coinsins (CH).

(72) Inventors; and

(75) Inventors/Applicants *(for US only)*: **QUATTROPANI, Anna** [CH/CH]; Route de Chêne 2, CH-1207 Geneva (CH). **MONTAGNE, Cyril** [FR/FR]; 1, rue de Lyon, F-01630 Saint Genis-Pouilly (FR). **SAUER, Wolfgang** [DE/CH]; 71, chemin des Cornillons, CH-1292 Chambesy (CH). **CROSIGNANI, Stefano** [IT/FR]; 2, chemin de Champs-Fusy, F-01630 St Genis-Pouilly (FR). **BOMBRUN, Agnes** [FR/CH]; 71, chemin des Cornillons, CH-1292 Chambesy (CH).

(74) Agent: **DE LUCA, Giampiero**; Merck Serono S.A. - Intellectual Property, 9 chemin des Mines, CH-1202 Geneva (CH).

(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 (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, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declarations under Rule 4.17:

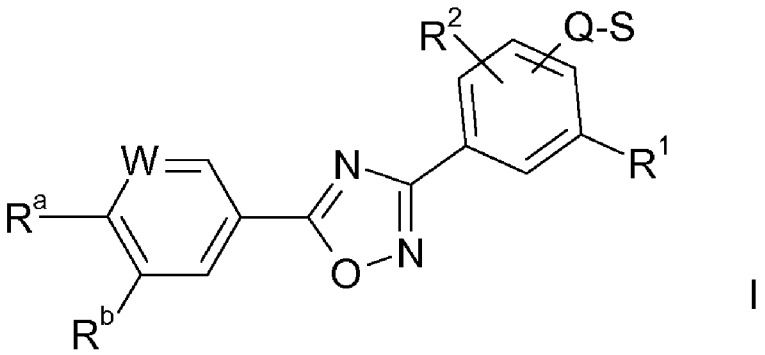
— *as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))*

— *of inventorship (Rule 4.17(iv))*

Published:

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

(54) Title: OXADIAZOLE DERIVATIVES



I

(57) Abstract: The invention relates to compounds of formula (I); wherein R^1, R^2, R^a, R^b, W, Q and S have the meanings given in claim 1. The compounds are useful e.g. in the treatment of autoimmune disorders, such as multiple sclerosis.

WO 2010/112461 A1