

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
7 June 2007 (07.06.2007)

PCT

(10) International Publication Number
WO 2007/063391 A3

(51) International Patent Classification:

C07D 239/80 (2006.01) A61P 25/00 (2006.01)
A61K 31/522 (2006.01) A61P 25/02 (2006.01)

(21) International Application Number:

PCT/IB2006/003388

(22) International Filing Date:

23 November 2006 (23.11.2006)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

60/741,854 2 December 2005 (02.12.2005) US
60/791,186 10 April 2006 (10.04.2006) US

(71) Applicant (for all designated States except US): **PFIZER LIMITED** [GB/GB]; Ramsgate Road, Sandwich, Kent CT13 9NJ (GB).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **RAWSON, David, James** [GB/GB]; Pfizer Central Research and Development, Ramsgate Road, Sandwich, Kent CT13 9NJ (GB). **SWAIN, Nigel, Alan** [GB/GB]; Pfizer Central Research and Development, Ramsgate Road, Sandwich, Kent CT13 9NJ (GB).

(74) Agents: **DROUIN, Stéphane** et al.; Pfizer Global Research and Development, Ramsgate Road, Sandwich, Kent CT13 9NJ (GB).

(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, GT, 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, 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, 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:

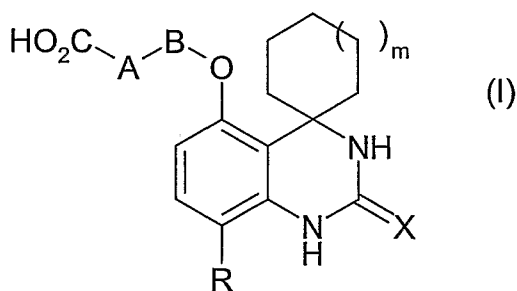
— with international search report

(88) Date of publication of the international search report:

13 September 2007

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: SPIROCYCLIC QUINAZOLINE DERIVATIVES AS PDE7 INHIBITORS



(57) Abstract: The invention provides compounds of formula (I): (I) wherein: m is 0, 1 or 2; X is O, S or N-CN; R is F, Cl or CN; A is a C₃₋₆ cycloalkylene group optionally substituted with a C₁₋₄ alkyl group; and B is a single bond or a C₁₋₂ alkylene group; or a pharmaceutically acceptable salt, solvate, polymorph or prodrug thereof. The compounds are PDE7 inhibitors and have a number of therapeutic applications, particularly in the treatment of pain, especially neuropathic pain.