

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
29 September 2005 (29.09.2005)

PCT

(10) International Publication Number  
**WO 2005/090315 A1**

(51) International Patent Classification<sup>7</sup>: **C07D 233/54**,  
A61K 31/417, A61P 25/04

(21) International Application Number:  
PCT/US2005/008339

(22) International Filing Date: 14 March 2005 (14.03.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
60/553,342 15 March 2004 (15.03.2004) US

(71) Applicant (for all designated States except US):  
**JANSSEN PHARMACEUTICA, N. V.** [BE/BE];  
Turnhoutseweg 30, B-2340 Beerse (BE).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **BRESLIN, Henry, J.** [US/US]; 1974 Muhlenburg Drive, Lansdale, PA 19446 (US). **CAI, Chaozhong** [US/US]; 129 Banbury Avenue, N.

Wales, PA 19454 (US). **HE, Wei** [US/US]; 2002 Kestral Circle, Audubon, PA 19403 (US). **KAVASH, Robert, W.** [US/US]; 148 N. Keswick Avenue, Glenside, PA 19038 (US).

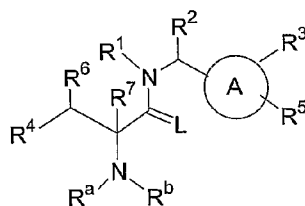
(74) Agents: **JOHNSON, Philip, S.** et al.; Johnson & Johnson, One Johnson & Johnson Plaza, New Brunswick, NJ 08933-7003 (US).

(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, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

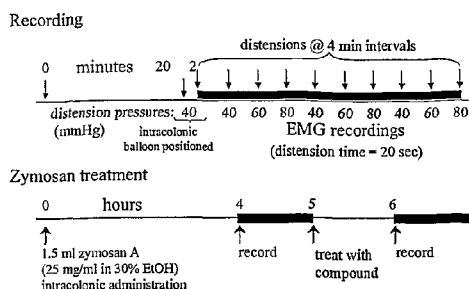
(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),

[Continued on next page]

(54) Title: NOVEL COMPOUNDS AS OPIOID RECEPTOR MODULATORS



(I)



(57) Abstract: The present invention is directed to novel opioid receptor modulators of Formula: (I). The invention further relates to methods for preparing such compounds, pharmaceutical compositions containing them, and their use in the treatment of disorders that may be ameliorated or treated by the modulation of opioid receptors.

WO 2005/090315 A1



European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, 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).

*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.*

**Published:**

— *with international search report*