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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
25 January 2007 (25.01.2007)

PCT

(10) International Publication Number
WO 2007/011820 A2

(51) International Patent Classification:
A61K 31/55 (2006.01) *C07D 403/02* (2006.01)
C07D 487/02 (2006.01)

(21) International Application Number:
PCT/US2006/027574

(22) International Filing Date: 17 July 2006 (17.07.2006)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/700,057 15 July 2005 (15.07.2005) US

(71) Applicants *(for all designated States except US)*: **AMR TECHNOLOGY, INC.** [US/US]; 5429 Main Street, P.O. Box 2587, Manchester Center, VT 05255-2587 (US). **BRISTOL-MYERS SQUIBB COMPANY** [US/US]; Lawrenceville-Princeton Road, Princeton, VT 05255-2587 (US).

(72) Inventors: **MOLINO, Bruce, F.**; 14 Cygnet Circle, Slingerlands, NY 12159 (US). **LIU, Shuang**; 302 Polsinelli Drive, Schenectady, NY 12303 (US). **SAMBANDAM, Aruna**; 64 Mansion Boulevard, Apt. G, Delmar, NY 12054 (US). **GUZZO, Peter, R.**; 1146 Millington Road, Niskayuna, NY 12309 (US). **HU, Min**; 2519 Vermont View Drive, Watervliet, NY 12189 (US). **ZHA, Congxiang**; 105 Heartland Drive, Schenectady, NY 12303 (US). **NACRO, Kassoum**; 37 West Colleen Drive, Albany, NY 12205 (US). **MANNING, David, D.**; 442 Van Patten Road, Duanesburg, NY 12056 (US). **ISHERWOOD, Matthew, L.**; 19 Ridge Road, Delmar, NY 12054 (US). **FLEMING, Kristen, N.**; 11 Schuyler Court, Clifton Park, NY 12065 (US). **CUI, Wenge**; 3 Cold Springs Drive, Clifton Park, NY 12065 (US). **OLSON, Richard, E.**; 221 Meetinghouse Lane, Orange, CT 06477 (US).

(74) Agents: **CHOI, Alice, Y.** et al.; Nixon Peabody LLP, Clinton Square, P.O. Box 31051, Rochester, NY 14603-1051 (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, 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, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

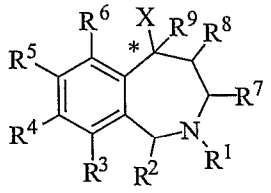
(84) Designated States *(unless otherwise indicated, for every kind of regional protection available)*: ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, 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:
— *without international search report and to be republished upon receipt of that report*

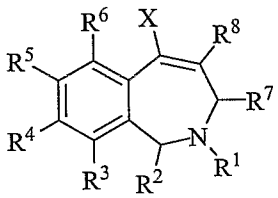
For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: ARYL-AND HETEROARYL-SUBSTITUTED TETRAHYDROBENZAZEPINES AND USE THEREOF TO BLOCK REUPTAKE OF NOREPINEPHRINE, DOPAMINE, AND SEROTONIN

I(A-E)



(II)



(57) Abstract: The compounds of the present invention are represented by the following aryl- and heteroaryl-substituted tetrahydrobenzazepine and dihydrobenzazapine derivatives having formulae I(A-E) and formula (II) where the carbon atom designated * is in the R or S configuration, and the substituents X and R^1-R^9 are as defined herein.

WO 2007/011820 A2