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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
9 July 2009 (09.07.2009)

PCT

(10) International Publication Number
WO 2009/085945 A1

(51) International Patent Classification:
A61K 31/423 (2006.01) *C07D 417/14* (2006.01)
A61K 31/428 (2006.01) *A61P 25/00* (2006.01)
C07D 413/14 (2006.01) *A61P 3/10* (2006.01)

(21) International Application Number:
PCT/US2008/087413

(22) International Filing Date:
18 December 2008 (18.12.2008)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
61/015,513 20 December 2007 (20.12.2007) US
12/337,433 17 December 2008 (17.12.2008) US

(71) Applicant *(for all designated States except US)*: **ABBOTT LABORATORIES** [US/US]; 100 Abbott Park Road, Abbott Park, Illinois 60064 (US).

(72) Inventors; and

(75) Inventors/Applicants *(for US only)*: **BLACK, Lawrence A.** [US/US]; 1173 Tamarack Lane, Libertyville, Illinois 60048 (US). **COWART, Marlon D.** [US/US]; 43 East Dahlia Lane, Round Lake Beach, Illinois 60073 (US). **GFESSER, Gregory A.** [US/US]; 110 Timber Lane, Lindenhurst, Illinois 60046 (US). **WAKEFIELD, Brian D.** [US/US]; 212 Albert Drive, Vernon Hills, Illinois 60061 (US). **ALTENBACH, Robert J.** [US/US]; 7405 North Oketo, Chicago, Illinois 60631 (US). **LIU, Huaqing** [CN/US]; 2230 Apple Hill Court South, Buffalo Grove, Illinois 60089 (US). **ZHAO, Chen** [US/US]; 1417 Castleton Road, Libertyville, Illinois 60048 (US). **HSIEH, Gin C.** [US/US]; 5331 - RFD, Long Grove, Illinois 60047 (US).

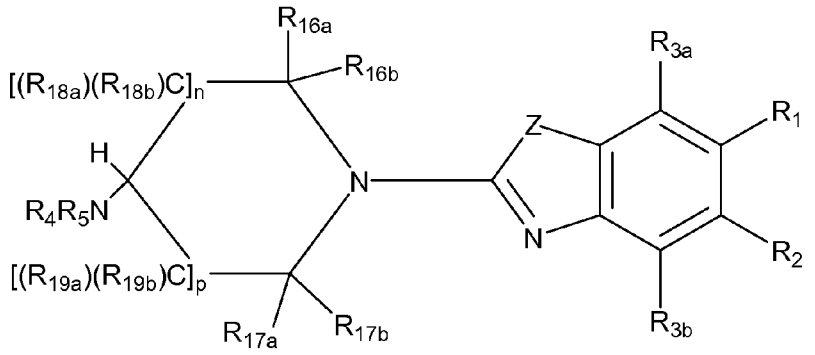
(74) Agents: **CHEN, Portia** et al.; Abbott Laboratories, Dept. 0377, Bldg. AP6A-1A, 100 Abbott Park Road, Abbott Park, Illinois 60064-6008 (US).

(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, 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, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, 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, HR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, NO, 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*

(54) Title: BENZOTHIAZOLE AND BENZOXAZOLE DERIVATIVES AND METHODS OF USE



(I)

(57) Abstract: Compounds of formula (I) are useful in treating conditions or disorders prevented by or ameliorated by histamine-3 receptor ligands. Also disclosed are pharmaceutical compositions of compounds of formula (I), methods for using such compounds and compositions, and a process for preparing the compounds.

WO 2009/085945 A1