

(10) International Publication Number
WO 2014/206150 A1(43) International Publication Date
31 December 2014 (31.12.2014)

(51) International Patent Classification:

C07D 471/06 (2006.01) A61K 31/18 (2006.01)
A61K 31/437 (2006.01) A61P 35/00 (2006.01)
A61P 31/00 (2006.01)

(21) International Application Number:

PCT/CN2014/077395

(22) International Filing Date:

13 May 2014 (13.05.2014)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

61/840,559 28 June 2013 (28.06.2013) US

(71) Applicant: ABBVIE INC. [US/US]; 1 North Waukegan Road, North Chicago, Illinois 60064 (US).

(71) Applicant (for LC only): ABBVIE PHARMACEUTICAL TRADING (SHANGHAI) CO., LTD. [CN/CN]; Part 418, No.458 North Fu Te Road, Waigaoqiao Bond Area, Shanghai (CN).

(72) Inventors: WANG, Le; 338 East Colonial Drive, Vernon Hills, Illinois 60061 (US). DAI, Yujia; 1557 Camden Drive, Gurnee, Illinois 60031 (US). HOLMS, James; 1239 Pine Grove Avenue, Gurnee, Illinois 60031 (US). LIU, Dachun; 1276 Georgetown Way, Vernon Hills,

Illinois 60061 (US). MCCLELLAN, William; 1212 N. Sheridan Road, Waukegan, Illinois 60085 (US). MCDANIEL, Keith; 26029 W. Laurel Ct., Wauconda, Illinois 60084 (US). HASVOLD, Lisa; 552 Shakespeare Drive, Grayslake, Illinois 60030 (US). FIDANZE, Steven D.; 231 Galway Street, Grayslake, Illinois 60030 (US). SHEPPARD, George; 807 Locust, Wilmette, Illinois 60091 (US). MARJANOVIC, Jasmina; 814 W. Sunnyside, Apt.2B, Chicago, IL 60640 (US).

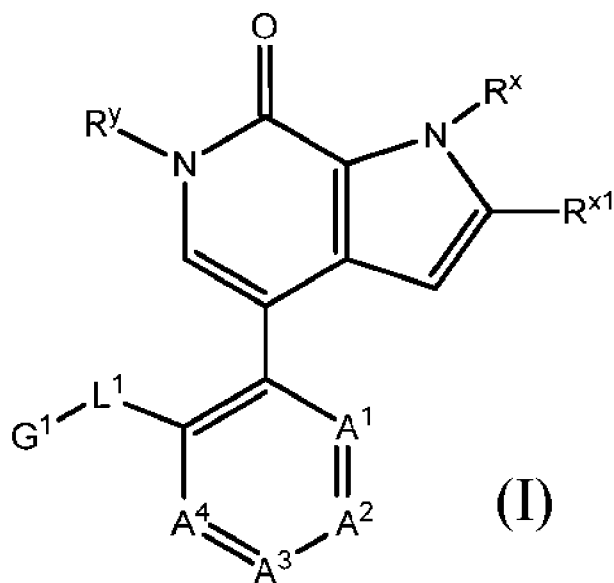
(74) Agent: CHINA PATENT AGENT (H.K.) LTD.; 22/F., Great Eagle Center, 23 Harbour Road, Wanchai, Hong Kong (CN).

(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, BN, 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, IR, IS, JP, KE, KG, 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, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, 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,

[Continued on next page]

(54) Title: BROMODOMAIN INHIBITORS

(57) Abstract: The present invention provides for compounds of formula (I), wherein R^x, R^y, R^{x1}, L¹, G¹, A¹, A², A³, and A⁴ have any of the values defined in the specification, and pharmaceutically acceptable salts thereof, that are useful as agents in the treatment of diseases and conditions, including inflammatory diseases, cancer, and AIDS. Also provided are pharmaceutical compositions comprised of one or more compounds of formula (I).



GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, SZ, TZ,
UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ,
TM), European (AL, 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, RS, SE, SI, SK,

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

Published:

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