



- (51) **International Patent Classification:**
C07D 471/04 (2006.01) *A61P 35/00* (2006.01)
A61K 31/437 (2006.01)
- (21) **International Application Number:**
PCT/US2014/029701
- (22) **International Filing Date:**
14 March 2014 (14.03.2014)
- (25) **Filing Language:** English
- (26) **Publication Language:** English
- (30) **Priority Data:**
61/798,856 15 March 2013 (15.03.2013) US
61/872,347 30 August 2013 (30.08.2013) US
- (72) **Inventors; and**
- (71) **Applicants :** **ZHANG, Jiazhong** [US/US]; c/o Plexxikon Inc., 91 Bolivar Drive, Suite A, Berkeley, CA 94710 (US). **BUELL, John** [US/US]; c/o Plexxikon Inc., 91 Bolivar Drive, Suite A, Berkeley, CA 94710 (US). **CHAN, Katrina** [US/US]; c/o Plexxikon Inc., 91 Bolivar Drive, Suite A, Berkeley, CA 94710 (US). **IBRAHIM, Prabha, N.** [US/US]; c/o Plexxikon Inc., 91 Bolivar Drive, Suite A, Berkeley, CA 94710 (US). **LIN, Jack** [US/US]; c/o Plexxikon Inc., 91 Bolivar Drive, Suite A, Berkeley, CA 94710 (US). **PHAM, Phuongly** [US/US]; c/o Plexxikon Inc., 91 Bolivar Drive, Suite A, Berkeley, CA 94710 (US). **SHI, Songyuan** [US/US]; c/o Plexxikon Inc., 91 Bolivar Drive, Suite A, Berkeley, CA 94710 (US). **SPEVAK, Wayne** [US/US]; c/o Plexxikon Inc., 91 Bolivar Drive, Suite A, Berkeley, CA 94710 (US). **WU, Guoxian** [US/US]; c/o Plexxikon Inc., 91 Bolivar Drive, Suite A, Berkeley, CA 94710 (US). **WU, Jeffrey** [US/US]; c/o Plexxikon Inc., 91 Bolivar Drive, Suite A, Berkeley, CA 94710 (US).
- (74) **Agents:** **TANNER, Lorna, L.** et al.; Sheppard Mullin Richter & Hampton LLP, 379 Lytton Avenue, Palo Alto, CA 94301-1479 (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, 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, 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))*
 - *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))*

(54) **Title:** HETEROCYCLIC COMPOUNDS AND USES THEREOF

(57) **Abstract:** Heterocyclic compounds of formula (I), methods for their preparation, pharmaceutical compositions containing such a compound and their therapeutic uses.

