



- (51) **International Patent Classification:**
C07D 487/04 (2006.01) *A61P 25/16* (2006.01)
A61K 31/519 (2006.01)
- (21) **International Application Number:**
PCT/CN2015/000055
- (22) **International Filing Date:**
28 January 2015 (28.01.2015)
- (25) **Filing Language:** English
- (26) **Publication Language:** English
- (30) **Priority Data:**
PCT/CN2014/000139
29 January 2014 (29.01.2014) CN
- (71) **Applicant: GLAXOSMITHKLINE INTELLECTUAL PROPERTY DEVELOPMENT LIMITED** [GB/GB]; 980 Great West Road, Brentford Middlesex TW8 9GS (GB).
- (71) **Applicant (for PG only): GLAXOSMITHKLINE (CHINA) R&D COMPANY LIMITED** [CN/CN]; Building 3, 898 Halei Road, Zhangjiang High Tech Park, Pudong New Area, Shanghai 201203 (CN).
- (72) **Inventors: DING, Xiao;** GlaxoSmithKline (China) R&D Co., Ltd., Building 3, 898 Halei Road, Zhangjiang High Tech Park, Pudong New Area, Shanghai 201203 (CN). **LIU, Qian;** GlaxoSmithKline (China) R&D Co., Ltd., Building 3, 898 Halei Road, Zhangjiang High Tech Park, Pudong New Area, Shanghai 201203 (CN). **SANG, Yingxia;** GlaxoSmithKline (China) R&D Co., Ltd., Building 3, 898 Halei Road, Zhangjiang High Tech Park, Pudong New Area, Shanghai 201203 (CN). **STASI, Luigi Piero;** GlaxoSmithKline (China) R&D Co., Ltd., Building 3, 898 Halei Road, Zhangjiang High Tech Park, Pudong New Area, Shanghai 201203 (CN). **WAN, Zehong;** GlaxoSmithKline

(China) R&D Co., Ltd., Building 3, 898 Halei Road, Zhangjiang High Tech Park, Pudong New Area, Shanghai 201203 (CN). **ZHAO, Baowei;** GlaxoSmithKline (China) R&D Co., Ltd., Building 3, 898 Halei Road, Zhangjiang High Tech Park, Pudong New Area, Shanghai 201203 (CN). **EDGE, Colin Michael;** GlaxoSmithKline, Gunnels Wood Road, Stevenage, Hertfordshire SG1 2NY (GB).

- (74) **Agent: KING & WOOD MALLESONS;** 20th Floor, East Tower, World Financial Centre, No.1 Dongsanhuan Zhonglu, Chaoyang District, Beijing 100020 (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, 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, ST, 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))

(54) **Title:** COMPOUNDS

(57) **Abstract:** The present invention relates to novel compounds that inhibit LRRK2 kinase activity, processes for their preparation, to compositions containing them and to their use in the treatment of or prevention of diseases characterized by LRRK2 kinase activity, for example Parkinson's disease, Alzheimer's disease and amyotrophic lateral sclerosis (ALS).



WO 2015/113452 A1