



(51) International Patent Classification:

C07D 413/14 (2006.01) *A61P 3/04* (2006.01)
C07D 401/04 (2006.01) *C07D 413/12* (2006.01)
A61K 31/506 (2006.01) *A61K 31/421* (2006.01)
A61P 3/10 (2006.01)

(21) International Application Number:

PCT/KR2015/007715

(22) International Filing Date:

24 July 2015 (24.07.2015)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

10-2014-0146462 27 October 2014 (27.10.2014) KR
 10-2015-0090708 25 June 2015 (25.06.2015) KR

(71) Applicant: **DONG-A ST CO., LTD.** [KR/KR]; 64 Cheonho-daero, Dongdaemun-gu, Seoul 130-823 (KR).

(72) Inventors: **YANG, Jae Sung**; 1-1107, 137 Saimdang-ro, Seocho-gu, Seoul 137-859 (KR). **BAEK, Gye Rim**; 807-203, 141 Hanbora 2-ro, Giheung-gu, Yongin-si, Gyeonggi-do 446-808 (KR). **KIM, Yoon Jung**; 201, 3-36 Hanbora 2-ro 48beon-gil, Giheung-gu, Yongin-si, Gyeonggi-do 446-904 (KR). **AHN, Chi Young**; 322-306, 1340 Yangjae-daero, Gangdong-gu, Seoul 134-771 (KR). **LEE, Jae Young**; 2202-1703, 80 Dogbaek 7-ro, Giheung-gu, Yongin-si, Gyeonggi-do 446-728 (KR). **JUNG, Il Hoon**; 106-704, 311 Anyangcheonseo-ro, Manan-gu, Anyang-si, Gyeonggi-do 430-710 (KR). **KIM, Mi Kyung**; 6121-2204, 76 Central town-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do 443-270 (KR). **KANG, So Mi**; 201-201, 58 Hanbora 1-ro 21beon-gil, Giheung-gu, Yongin-si, Gyeonggi-do 446-801 (KR). **LEE, Hyo Ju**; A-1508, 22 Neuti-ro, Bundang-gu, Seongnam-si, Gyeonggi-do 463-842 (KR). **CHAE, Yu Na**; 306-901, 220 Seongbok 2-ro, suji-gu, Yongin-si, Gyeonggi-do 448-140 (KR). **CHEONG, Ye Hwang**; 407, 11 Na-kseongdaeyeok 12-gil, Gwanak-gu, Seoul 151-817 (KR).

KIM, Tae Hyung; 405, 50 Seonyudong 1-ro, Yeongdeungpo-gu, Seoul 150-804 (KR). **YANG, Eun Kyoung**; 201, 32 Nambusunhwan-ro 247na-gil, Gwanak-gu, Seoul 151-812 (KR). **SON, Moon Ho**; 202-702, 207 Pangyowon-ro, Bundang-gu, Seongnam-si, Gyeonggi-do 463-956 (KR). **SHIN, Chang Yell**; 303-605, 32 Ttukseom-ro 35-gil, Gwangjin-gu, Seoul 143-773 (KR).

(74) Agent: **YOU ME PATENT AND LAW FIRM**; 115 Teheran-ro, Gangnam-gu, Seoul 135-912 (KR).

(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, 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))
- 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: COMPOUND HAVING GPR119 AGONISTIC ACTIVITY, METHOD FOR PREPARING THE SAME, AND PHARMACEUTICAL COMPOSITION INCLUDING THE SAME AS EFFECTIVE COMPONENT

(57) Abstract: The present invention relates to a novel compound having a GPR1 19 agonistic activity, a method for preparing the same, and a pharmaceutical composition including the same as an effective component. The present invention has an effective hypoglycemic action and an effect on pancreatic beta cells, and also improves lipid metabolism which is a chronic cardiovascular risk factor, thereby having a treatment and/or prevention effect of a metabolic disease such as diabetes.

