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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
30 July 2020 (30.07.2020)

WIPO | PCT

(10) International Publication Number
WO 2020/151671 A1

(51) International Patent Classification:
*A61K 31/58* (2006.01) *A61P 3/10* (2006.01)
*A61P 3/08* (2006.01)

(21) International Application Number:
PCT/CN2020/073283

(22) International Filing Date:
20 January 2020 (20.01.2020)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
62/795,917 23 January 2019 (23.01.2019) US

(71) Applicant: **GLYCOLYSIS BIOMED CO., LTD** [CN/CN]; Rm. 2, 9F., No. 54, Songjiang Rd., Zhongshan Dist., Taipei City, Taiwan 104 (CN).

(72) Inventors: **LEE, Feng Lin**; Rm. 2, 9F., No. 54, Songjiang Rd., Zhongshan Dist., Taipei City, Taiwan 104 (CN). **LIN, Lung Jr**; Rm. 2, 9F., No. 54, Songjiang Rd., Zhongshan Dist., Taipei City, Taiwan 104 (CN). **HSU, Jyh Shing**; Rm. 2, 9F., No. 54, Songjiang Rd., Zhongshan Dist., Taipei City, Taiwan 104 (CN). **HSU, Cheng Hsien**; Rm. 2, 9F., No. 54, Songjiang Rd., Zhongshan Dist., Taipei City, Taiwan 104 (CN). **HUANG, Yen Chun**; Rm. 2, 9F., No. 54, Songjiang Rd., Zhongshan Dist., Taipei City, Taiwan 104 (CN). **HUANG, Ya Chien**; Rm. 2, 9F., No. 54, Songjiang Rd., Zhongshan Dist., Taipei City, Taiwan 104 (CN). **LO, Chun Tsung**; Rm. 2, 9F., No. 54, Songjiang Rd., Zhongshan Dist., Taipei City, Taiwan 104 (CN). **LIAO, Hui Fang**; Rm. 2, 9F., No. 54, Songjiang Rd., Zhongshan Dist., Taipei City, Taiwan 104 (CN). **LIU, Yu Wen**; Rm. 2, 9F., No. 54, Songjiang Rd., Zhongshan Dist., Taipei City, Taiwan 104 (CN). **KAO, Yu Chi**; Rm. 2, 9F., No. 54, Songjiang Rd., Zhongshan Dist., Taipei City, Taiwan 104 (CN).

(74) Agent: **LUNG TIN INTELLECTUAL PROPERTY AGENT LTD.**; 18th Floor, Tower B, Grand Place No. 5 Huizhong Road, Chaoyang District, Beijing 100101 (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, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IR, IS, JO, JP, KE, KG, KH, KN, KP, KR, KW, 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, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, WS, 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))*

WO 2020/151671 A1

(54) Title: BETA-LACTAM COMPOUNDS OR SALTS THEREOF FOR USE IN LONG-ACTING PREVENTION OR TREATMENT OF A GLUCOSE METABOLISM DISORDER

(57) Abstract: Provided is a long-acting method for preventing or treating glucose metabolism disorders that includes administering a beta-lactam compound or a pharmaceutically acceptable salt thereof to a subject in need thereof. The method for preventing or treating glucose metabolism disorders has a long-acting effect that lasts more than two days even after medication has been stopped.