

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

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
15 August 2024 (15.08.2024)



(10) International Publication Number
WO 2024/165075 A1

(51) International Patent Classification:

C07D 417/14 (2006.01) A61P 9/00 (2006.01)
A61K 31/454 (2006.01) A61P 11/00 (2006.01)
A61P 35/00 (2006.01)

(21) International Application Number:

PCT/CN2024/077138

(22) International Filing Date:

09 February 2024 (09.02.2024)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

PCT/CN2023/075491
10 February 2023 (10.02.2023) CN

(71) Applicant: **NANJING HUANBO BIOTECHNOLOGY CO., LTD.** [CN/CN]; No. 266 Puyun Road, Nanjing, Jiangsu 210000 (CN).

(72) Inventors: **XU, Zuling**; No. 266 Puyun Road, Nanjing, Jiangsu 210000 (CN). **CAI, Xin**; No. 266 Puyun Road, Nanjing, Jiangsu 210000 (CN).

(74) Agent: **AFD CHINA INTELLECTUAL PROPERTY LAW OFFICE**; Tower B, 21st Fl. Suite 2108, 38 Xueqing Road, Haidian District, Beijing 100083 (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, CV, CZ, DE, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IQ, IR, IS, IT, JM, JO, JP, KE, KG, KH, KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, MG, MK, MN, MU, 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, CV, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SC, 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, ME, 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: G PROTEIN-COUPLED RECEPTOR KINASE 2 (GRK2) DEGRADATION COMPOUNDS AND USE THEREOF

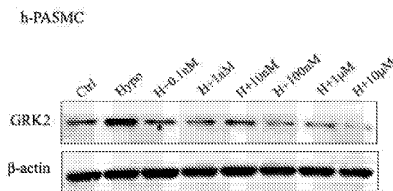


Figure 1

(57) Abstract: The present disclosure relates to G protein-coupled receptor kinase 2 (GRK2) degradation compounds and use thereof. Specifically, the present disclosure relates to novel compounds that degrade G protein-coupled receptor kinase 2 (GRK2) or a pharmaceutically acceptable salt, an isomer, an isotope, a prodrug, a solvate, or a polymorph thereof, pharmaceutical compositions comprising the same, kits comprising the same, and uses of the same in preventing or treating various diseases or conditions, e.g., diseases or conditions that are at least partially mediated by GRK2 or diseases or conditions that can be benefited from the degradation of GRK2.

WO 2024/165075 A1