

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

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
29 January 2026 (29.01.2026)



(10) International Publication Number
WO 2026/024223 A1

(51) International Patent Classification:

A61K 31/381 (2006.01) C07D 333/70 (2006.01)
A61K 31/343 (2006.01) C07D 307/85 (2006.01)
A61P 35/00 (2006.01)

(21) International Application Number:

PCT/SG2025/050475

(22) International Filing Date:

14 July 2025 (14.07.2025)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

10202402227Y 25 July 2024 (25.07.2024) SG
10202500210T 23 January 2025 (23.01.2025) SG

(71) Applicant: **AGENCY FOR SCIENCE, TECHNOLOGY AND RESEARCH** [SG/SG]; 1 Fusionopolis Way, #20-10, Connexis North, Singapore 138632 (SG).

(72) Inventors: **TAN, Yaw Sing**; c/o Agency for Science, Technology and Research, 1 Fusionopolis Way, #20-10, Connexis North, Singapore 138632 (SG). **HAN, Weiping**; c/o Agency for Science, Technology and Research, 1 Fusionopolis Way, #20-10, Connexis North, Singapore 138632 (SG). **NG, Tze Yang Justin**; c/o Agency for Science, Technology and Research, 1 Fusionopolis Way, #20-10, Connexis North, Singapore 138632 (SG). **ONG, Qunxiang**; c/o Agency for Science, Technology and Research, 1 Fusionopolis Way, #20-10, Connexis North, Singapore 138632 (SG).

(74) Agent: **DAVIES COLLISON CAVE ASIA PTE. LTD.**; 10 Collyer Quay #07-01, Ocean Financial Centre, Singapore 049315 (SG).

(54) Title: SMALL MOLECULE INHIBITORS AND METHODS THEREOF

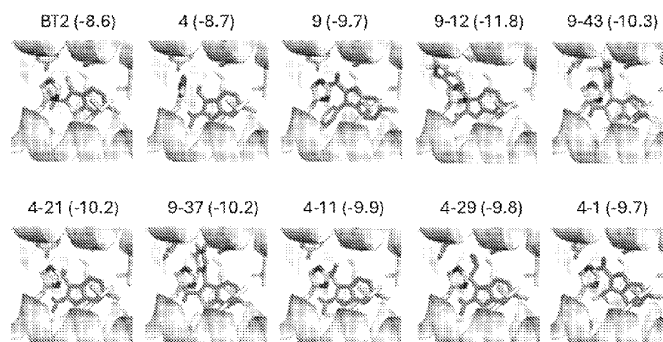
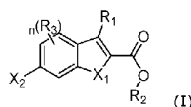


Figure 6



(57) **Abstract:** The present disclosure concerns a method of treating a disease or condition associated with branched-chain ketoacid dehydrogenase kinase (BDK) in a subject in need thereof, comprising administering a therapeutically effective amount of a compound of Formula (I) or a pharmaceutically acceptable salt, solvate or prodrug thereof, wherein R₁ is selected from optionally substituted alkyl, optionally substituted alkoxy, optionally substituted cycloalkyl, aryl optionally substituted with alkyl, alkenyl, halogen, oxo, alkoxy or acyloxy; and R₂ is selected from H, optionally substituted alkyl or optionally substituted aryl; R₃ is selected from halo, oxo, nitro, optionally substituted alkyl, optionally substituted alkoxy, optionally substituted amino; Xi is selected from O or S; X₂ is halo; and n is an integer selected from 0 to 3.

[Continued on next page]

(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, UY, 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))*