

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

(19) World Intellectual Property
Organization

International Bureau

(43) International Publication Date
16 September 2021 (16.09.2021)



(10) International Publication Number
WO 2021/181122 A1

(51) International Patent Classification:

A61P 25/00 (2006.01) A61K 31/4192 (2006.01)
C07D 231/14 (2006.01) A61K 31/415 (2006.01)
C07D 249/16 (2006.01)

(21) International Application Number:

PCT/GB2021/050638

(22) International Filing Date:

15 March 2021 (15.03.2021)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

2003668.7 13 March 2020 (13.03.2020) GB

(71) Applicant: **HEPTARES THERAPEUTICS LIMITED**

[GB/GB]; Granta Park, Great Abington, Cambridge, Cambridgeshire CB21 6DG (GB).

(72) Inventors: **BUCKNELL, Sarah Joanne**; c/o Heptares

Therapeutics Limited, Granta Park, Great Abington, Cambridge, Cambridgeshire CB21 6DG (GB). **WATSON, Stephen Paul**; c/o Heptares Therapeutics Limited, Granta Park, Great Abington, Cambridge, Cambridgeshire CB21 6DG (GB). **O'BRIEN, Michael Alistair**; c/o Heptares Therapeutics Limited, Granta Park, Great Abington, Cambridge, Cambridgeshire CB21 6DG (GB).

(74) Agent: **STRATAGEM INTELLECTUAL PROPERTY MANAGEMENT LIMITED**; Meridian Court, Comberton

Road, Cambridge, Cambridgeshire CB23 2RY (GB).

(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, IT, 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).

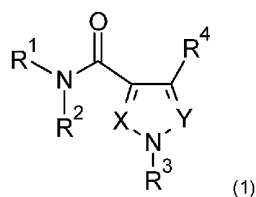
Published:

— with international search report (Art. 21(3))



WO 2021/181122 A1

(54) Title: GPR52 MODULATOR COMPOUNDS



(57) Abstract: The disclosures herein relate to novel compounds of Formula

(1); and salts thereof, wherein X, Y, R¹, R², R³ and R⁴ are defined herein, and their use in treating, preventing, ameliorating, controlling or reducing the risk of disorders associated with GPR52 receptors.