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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
18 August 2022 (18.08.2022)

WIPO | PCT

(10) International Publication Number
WO 2022/173855 A1

(51) International Patent Classification:
A61K 31/472 (2006.01) *A61P 25/24* (2006.01)

(21) International Application Number:
PCT/US2022/015854

(22) International Filing Date:
09 February 2022 (09.02.2022)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
63/147,742 09 February 2021 (09.02.2021) US

(71) Applicant: **XENON PHARMACEUTICALS INC.** [CA/CA]; 200-3650 Gilmore Way, Burnaby, British Columbia V5G 4W8 (CA).

(71) Applicant *(for MW only)*: **RABINOWITZ, Stephen S.** [US/US]; Dechert LLP, Three Bryant Park, 1095 Avenue of the Americas, New York, New York 10036-6797 (US).

(72) Inventor: **PIMSTONE, Simon Neil**; 200-3650 Gilmore Way, Burnaby, British Columbia V5G 4W8 (CA).

(74) Agent: **RABINOWITZ, Stephen S.** et al.; 600 Atlantic Avenue, Boston, MA 02210 (US).

(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))*

(54) **Title:** VOLTAGE-GATED POTASSIUM CHANNEL OPENER FOR USE IN TREATING ANHEDONIA

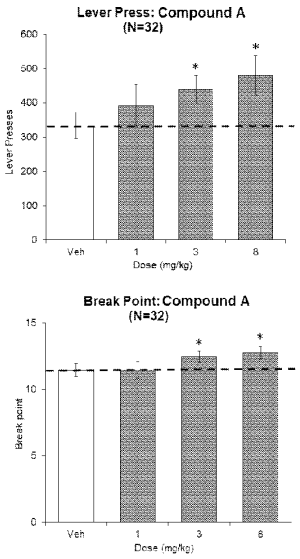


FIG. 1

(57) **Abstract:** The present disclosure is directed to, among other things, N-[4- (6-fluoro-3,4-dihydro-IH-isoquinolin-2-yl)-2,6-dimethylphenyl]-3,3- dimethylbutanamide (Compound A), which is a voltage-gated potassium channel opener, for use in a method of treating anhedonia in a subject, such as a human. The present disclosure is further directed to various improved means of administration of Compound A.

WO 2022/173855 A1