

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

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
20 March 2025 (20.03.2025)



(10) International Publication Number
WO 2025/059398 A1

(51) International Patent Classification:

A61P 25/08 (2006.01) C07D 471/04 (2006.01)
C07C 235/08 (2006.01) A61K 31/33 (2006.01)

(21) International Application Number:

PCT/US2024/046522

(22) International Filing Date:

13 September 2024 (13.09.2024)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

63/583,020 15 September 2023 (15.09.2023) US
63/597,747 10 November 2023 (10.11.2023) US
63/652,365 28 May 2024 (28.05.2024) US
63/688,094 28 August 2024 (28.08.2024) US

(71) Applicant: **BIOHAVEN THERAPEUTICS LTD.**
[US/GB]; Ritter House, P.O. BOX 173 Road Town, Tortola,
VG1110 (VG).

(72) Inventors: **AWSARE, Bharat**; Biohaven Pharmaceuticals,
Inc., 215 Church Street, New Haven, Connecticut 06510
(US). **BOZIK, Michael E.**; Biohaven Pharmaceuticals,
Inc., 215 Church Street, New Haven, Connecticut 06510
(US). **DWORETZKY, Steven I.**; Biohaven Pharmaceu-
ticals, Inc., 215 Church Street, New Haven, Connecticut
06510 (US). **QURESHI, Irfan**; Biohaven Pharmaceuticals,
Inc., 215 Church Street, New Haven, Connecticut 06510
(US).

(74) Agent: **ZUEV, Dmitry**; Biohaven Pharmaceuticals, Inc.,
215 Church Street, New Haven, Connecticut 06510 (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, 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).

Declarations under Rule 4.17:

- as to applicant's entitlement to apply for and be granted a
patent (Rule 4.17(ii))
- as to the applicant's entitlement to claim the priority of the
earlier application (Rule 4.17(iii))

Published:

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

WO 2025/059398 A1

(54) Title: M ETHODS OF TREATING EPILEPSY AND RELATED DISORDERS WITH POTENT AND SELECTIVE
POTASSIUM CHANNEL ACTIVATORS

(57) Abstract: Disclosed is a method of administering a Kv7 channel activator or a pharmaceutically acceptable salt thereof to a person
without producing an adverse event that is commonly associated with an antiseizure medication in that person. Also disclosed is a
method of treating a medical condition in a patient without producing an adverse event that is commonly associated with an antiseizure
medication, the method including administering to the patient in need of such treatment a therapeutically effective amount of a Kv7
channel activator or a pharmaceutically acceptable salt thereof.