

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

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
07 March 2024 (07.03.2024)



(10) International Publication Number
WO 2024/050389 A1

(51) International Patent Classification:

A61K 45/06 (2006.01) A61P 29/00 (2006.01)
A61K 31/135 (2006.01) C07D 235/30 (2006.01)
A61K 31/27 (2006.01) C07D 405/04 (2006.01)
A61P 25/00 (2006.01) C07D 471/04 (2006.01)

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))

(21) International Application Number:

PCT/US2023/073125

(22) International Filing Date:

30 August 2023 (30.08.2023)

Published:

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

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

63/402,416 30 August 2022 (30.08.2022) US

(71) Applicant: BIOHAVEN THERAPEUTICS LTD.

[US/GB]; Biohaven Therapeutics Ltd., Ritter House, P.O.
Box 173, Road Town, Tortola, VG1110 (VG).

(72) Inventor: CORIC, Vladimir; Biohaven Therapeutics Ltd.,

c/o Biohaven Pharmaceuticals, Inc., 215 Church Street,
New Haven, Connecticut 06510 (US).

(74) Agent: ZUEV, Dmitry; Biohaven Therapeutics Ltd., c/o

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,

(54) Title: COMBINATION THERAPIES INCLUDING METAL CHANNEL ACTIVATORS AND NMDA RECEPTOR AN-
TAGONISTS

(57) Abstract: Provided is a pharmaceutical composition including a metal channel activator and an NMDA receptor antagonist. Also provided is a method of treating a depressive disorder, including administering the pharmaceutical composition. Also provided is a method of treating a neurological or neurodegenerative disorder, including administering the pharmaceutical composition. Also provided is a method of treating a pain disorder, including administering the pharmaceutical composition.



WO 2024/050389 A1