

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

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
27 February 2025 (27.02.2025)



(10) International Publication Number
WO 2025/042956 A1

(51) International Patent Classification:

C07D 231/16 (2006.01) A61P 43/00 (2006.01)
C07D 495/04 (2006.01) A61K 31/4162 (2006.01)
A61P 37/00 (2006.01)

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.

(21) International Application Number:

PCT/US2024/043176

(22) International Filing Date:

21 August 2024 (21.08.2024)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

63/578,039 22 August 2023 (22.08.2023) US

(71) Applicant: **OMEROS CORPORATION** [US/US]; 201
Elliott Avenue West, Seattle, Washington 98119 (US).

(72) Inventors: **CUTSHALL, Neil S.**; c/o Omeros Corporation, 201 Elliott Avenue West, Seattle, Washington 98119 (US). **HADD, Mark A.**; c/o Omeros Corporation, 201 Elliott Avenue West, Seattle, Washington 98119 (US). **KESHIPED-DY, Santosh Kumar**; c/o Omeros Corporation, 201 Elliott Avenue West, Seattle, Washington 98119 (US). **LEMUS, Robert H.**; c/o Omeros Corporation, 201 Elliott Avenue West, Seattle, Washington 98119 (US). **METZ, Markus**; c/o Omeros Corporation, 201 Elliott Avenue West, Seattle, Washington 98119 (US).

(74) Agent: **LIGON, Toby J.** et al.; Seed Intellectual Property Law Group LLP, Suite 5400, 701 Fifth Avenue, Seattle, Washington 98104-7064 (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,

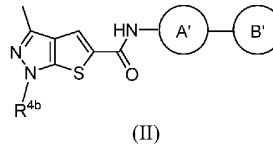
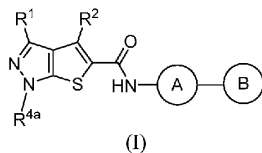
(84) Designated States (unless otherwise indicated, for every kind of regional protection available):

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))
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))

(54) Title: PDE 7 MODULATOR COMPOUNDS



(57) Abstract: Compounds having activity as modulators of phosphodiesterase 7 (PDE 7) are provided. The compounds have the following Structures (I) or (II): (I) (II) as a stereoisomer, enantiomer, or tautomer thereof or a mixture thereof; or a pharmaceutically acceptable salt, solvate or prodrug thereof, wherein each of R1, R2, R3, R4a, R4b, ring A, ring B, ring A' and ring B' (i.e., B, A', and B' as shown in Structure (I) and (II), respectively) are as defined herein. Methods associated with preparation and use of such compounds, pharmaceutical compositions comprising such compounds and methods to modulate the activity of phosphodiesterase 7 (PDE 7) are also provided.