

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

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
01 May 2025 (01.05.2025)



(10) International Publication Number
WO 2025/088175 A1

(51) International Patent Classification:

A61K 31/517 (2006.01)	A61K 31/5025 (2006.01)
A61K 31/337 (2006.01)	A61K 31/519 (2006.01)
A61K 31/407 (2006.01)	A61K 31/5375 (2006.01)
A61K 31/4184 (2006.01)	A61K 31/5377 (2006.01)
A61K 31/454 (2006.01)	A61K 31/551 (2006.01)
A61K 31/473 (2006.01)	A61K 39/00 (2006.01)
A61K 31/4745 (2006.01)	A61K 45/06 (2006.01)
A61K 31/496 (2006.01)	A61P 35/00 (2006.01)
A61K 31/4985 (2006.01)	A61K 41/00 (2020.01)
A61K 31/502 (2006.01)	

(21) International Application Number:

PCT/EP2024/080317

(22) International Filing Date:

25 October 2024 (25.10.2024)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

23205931.1	25 October 2023 (25.10.2023)	EP
23207212.4	31 October 2023 (31.10.2023)	EP
24185254.0	28 June 2024 (28.06.2024)	EP

(71) Applicant: **EISBACH BIO GMBH** [DE/DE]; Am Klopferspitz 19, 82152 Martinsried (DE).

(72) Inventors: **MENZER, William M.**; Max-Lebesch-Platz 34, 81377 München (DE). **SAHIRI, Katharina**; Lindenstr. 48, 85604 Zorneding (DE). **SCHOMBURG, Adrian**; Friedemann-Bach-Str. 95, 82166 Gräfelfing (DE).

(74) Agent: **SCHIEDER, Jens**; Zwicker Schnappauf & Partner Patentanwälte PartG mbB, Hansastr. 32, 80686 München (DE).

(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).

Published:

- with international search report (Art. 21(3))
- with sequence listing part of description (Rule 5.2(a))

(54) Title: ALC1 INHIBITORS FOR USE IN TREATING CANCER BY POTENTIATING THE EFFECTS OF SEVERAL CLASSES OF APPROVED CANCER DRUGS

(57) Abstract: The present invention relates to the use of small molecule compounds that allosterically inhibit ALC1 (CHD1L), in particular two classes allosteric inhibitors of ALC1 (CHD1L), of Formula (I) and Formula (II), that show a potentiating, preferably additive effect in the treatment of proliferative disease when combined with several classes of cancer drugs, namely inhibitors of Topoisomerase I, Topoisomerase II, ATM, ATR, Wee1, BRD, and MEK, or when combined with mitomycin C, paclitaxel, with ionizing radiation, or with an antibody drug conjugate with a tumor specific antibody conjugated to a TOP1 inhibitor. Furthermore, the present invention relates to said inhibitors of ALC1 of Formula (II) that show a synergistic effect in the treatment of pancreatic cancer or fallopian tube cancer when combined with a PARP inhibitor (Poly(ADP-ribose)-Polymerase inhibitor (PARPi)). By being synergistic with the function of said cancer drugs, said ALC1 inhibitors, in particular those of Formula (I) and Formula (II), potentiate the cancer cell killing properties of the aforementioned cancer drugs, in particular enabling therapeutic approaches where any of the aforementioned inhibitors is already used as part of the standard of care.

WO 2025/088175 A1