

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

(19) World Intellectual Property
Organization

International Bureau

(43) International Publication Date
12 October 2023 (12.10.2023)



(10) International Publication Number
WO 2023/194911 A1

(51) International Patent Classification:

A61P 35/00 (2006.01) C07K 14/715 (2006.01)

A61K 39/00 (2006.01)

SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG).

(21) International Application Number:

PCT/IB2023/053431

(22) International Filing Date:

04 April 2023 (04.04.2023)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

2204927.4 04 April 2022 (04.04.2022) GB

63/482,752 01 February 2023 (01.02.2023) US

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))
- with sequence listing part of description (Rule 5.2(a))
- in black and white; the international application as filed contained color or greyscale and is available for download from PATENTSCOPE

(71) Applicant: GAMMADELTA THERAPEUTICS LTD
[GB/GB]; 1 Kingdom Street, London W2 6BD (GB).

(72) Inventors: KOVACS, Istvan; c/o Gammadelta Therapeutics Ltd, 1 Kingdom Street, London W2 6BD (GB). SIMOES, Andre Goncalo do Espirito Santo; c/o Gammadelta Therapeutics Ltd, 1 Kingdom Street, London W2 6BD (GB). ILLINGWORTH, Samuel; c/o Gammadelta Therapeutics Ltd, 1 Kingdom Street, London W2 6BD (GB). NUSSBAUMER, Oliver; c/o Gammadelta Therapeutics Ltd, 1 Kingdom Street, London W2 6BD (GB). EDWARDS, Sarah; c/o Gammadelta Therapeutics Ltd, 1 Kingdom Street, London W2 6BD (GB).

(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: CELLS EXPRESSING AN ANTI-MESOTHELIN CAR

(57) Abstract: Some aspects of the present disclosure are directed to engineered innate lymphoid cells comprising a heterologous targeting construct specific for mesothelin and uses thereof. Some aspects of the present disclosure are directed to polynucleotides encoding a chimeric antigen receptor (CAR) that specifically binds human mesothelin, host cells comprising the polynucleotide, and methods of treating a disease or condition in a subject using the same.

WO 2023/194911 A1