



(51) International Patent Classification:

A61K 47/26 (2006.01) A61K 39/00 (2006.01)
A61K 47/46 (2006.01) A61P 31/04 (2006.01)
A61K 9/48 (2006.01) A61P 31/12 (2006.01)
A61K 31/7032 (2006.01) A61P 35/00 (2006.01)

(21) International Application Number:

PCT/IB2024/053714

(22) International Filing Date:

16 April 2024 (16.04.2024)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

63/459,940 17 April 2023 (17.04.2023) US

(71) Applicant: **ENGINEIC MOLECULAR DELIVERY
PTY LTD** [AU/AU]; Building 2, 25 Sirius Road, Lane Cove
West, Sydney, New South Wales 2066 (AU).

(72) Inventors: **BRAHMBHATT, Himanshu**; c/o Engeneic
Molecular Delivery PTY Ltd, Building 2, 25 Sirius Road,
Lane Cove West, Sydney, New South Wales 2066 (AU).
MACDIARMID, Jennifer; c/o Engeneic Molecular Deliv-

ery PTY Ltd, Building 2, 25 Sirius Road, Lane Cove West,
Sydney, New South Wales 2066 (AU).

(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: COMPOSITIONS AND METHODOLOGY FOR DELIVERY OF ALPHA-GALACTOSYLCERAMIDE COMPOUNDS

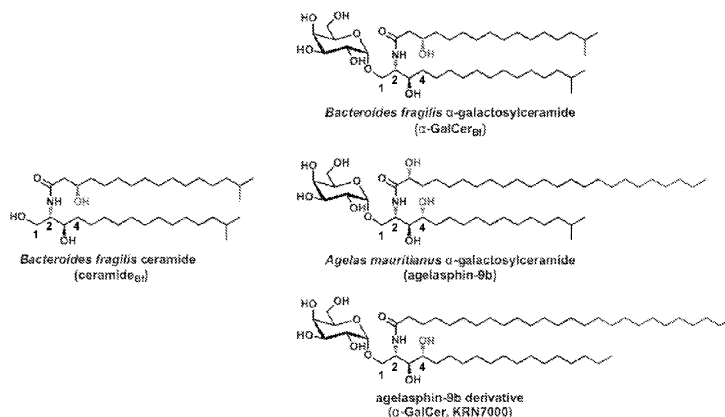


FIG. 1

(57) Abstract: Compositions and methods are described for treating a disease, such as cancer or a viral or bacterial infection. More specifically, the provided compositions comprise encapsulated CD1d-restricted invariant Natural Killer T cell antigen, a bacterial α-galactosylceramide.

[Continued on next page]

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))*
- *in black and white; the international application as filed contained color or greyscale and is available for download from PATENTSCOPE*