

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

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
22 December 2022 (22.12.2022)



(10) International Publication Number
WO 2022/266163 A2

(51) International Patent Classification:
C07K 14/525 (2006.01) C12N 15/11 (2006.01)
(21) International Application Number:
PCT/US2022/033524

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, 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).

(22) International Filing Date:
15 June 2022 (15.06.2022)

Declarations under Rule 4.17:

— as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))

(25) Filing Language: English

(26) Publication Language: English

Published:

— without international search report and to be republished upon receipt of that report (Rule 48.2(g))
— with sequence listing part of description (Rule 5.2(a))

(30) Priority Data:
63/211,766 17 June 2021 (17.06.2021) US

(71) Applicant: **KALIVIR IMMUNOTHERAPEUTICS, INC.** [US/US]; 240 Alpha Drive, Pittsburgh, Pennsylvania 15238 (US).

(72) Inventors: **THORNE, Stephen Howard**; c/o KaliVir Immunotherapeutics, Inc., 240 Alpha Drive, Pittsburgh, Pennsylvania 15238 (US). **ZHANG, Mingrui**; c/o KaliVir Immunotherapeutics, Inc., 240 Alpha Drive, Pittsburgh, Pennsylvania 15238 (US).

(74) Agent: **HENDRICKS, Diana G.** et al.; Greenberg Traurig, LLP, One International Place, Suite 2000, Boston, Massachusetts 02110 (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, 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, ME, MG, MK, MN, 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, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, ST, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ,

(54) Title: TNFSF-L FUSION PROTEINS AND USES THEREOF

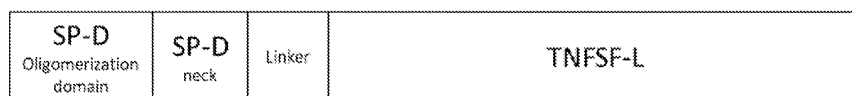


FIG. 1

(57) Abstract: The present disclosure provides for compositions comprising nucleic acids encoding for fusion proteins of the Tumor Necrosis Factor Super Family Ligands fused to oligomerization domains. Further provided are viral and non-viral vectors for delivery of such compositions. The present disclosure also provides for compositions comprising fusion proteins of the Tumor Necrosis Factor Super Family Ligands fused to oligomerization domains.

WO 2022/266163 A2