



(51) International Patent Classification:
A61K 39/00 (2006.01)

(21) International Application Number:
PCT/US2020/025069

(22) International Filing Date:
26 March 2020 (26.03.2020)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
62/824,080 26 March 2019 (26.03.2019) US
62/931,103 05 November 2019 (05.11.2019) US
62/969,569 03 February 2020 (03.02.2020) US

(71) Applicant: **THE REGENTS OF THE UNIVERSITY OF CALIFORNIA** [US/US]; 1111 Franklin Street, 5th Floor, Oakland, CA 94607 (US).

(72) Inventors: **PRUSSAK, Charles, E.**; C/o The Regents Of The University Of California, 1111 Franklin Street, 5th Floor, Oakland, CA 94607 (US). **KIPPS, Thomas, J.**; C/o The Regents Of The University Of California, 1111 Franklin Street, 5th Floor, Oakland, CA 94607 (US). **WIDHOPE, George, F.**; C/o The Regents Of The University Of

California, 1111 Franklin Street, 5th Floor, Oakland, CA 94607 (US). **OH, Christopher, S.**; C/o The Regents Of The University Of California, 1111 Franklin Street, 5th Floor, Oakland, CA 94607 (US).

(74) Agent: **HETZER-EGGER, Claudia** et al.; Mintz Levin Cohn Ferris Glovsky And Popeo, P.C., 3580 Carmel Mountain Road, Suite 300, San Diego, CA 92130 (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, IR, IS, 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, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK,

(54) Title: CHIMERIC ANTIGEN RECEPTOR MODIFIED T-CELLS (CAR-T) FOR THE TREATMENT OF HEMATOLOGICAL AND SOLID TUMOR CANCERS

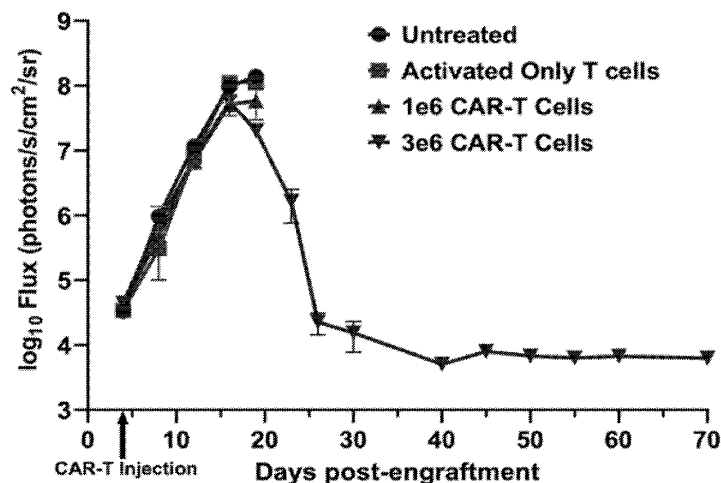


FIG. 13

(57) Abstract: Provided herein is a chimeric antigen receptor (CAR) and CAR-expressing immune cells that target human ROR1 expressed aberrantly on a tumor cancers.

[Continued on next page]

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).

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))*