

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

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
17 October 2019 (17.10.2019)



(10) International Publication Number
WO 2019/200325 A1

(51) International Patent Classification:

C07K 14/725 (2006.01) G01N 33/569 (2006.01)
C07K 14/705 (2006.01) C07K 16/30 (2006.01)
C07K 16/28 (2006.01) A61K 39/00 (2006.01)
C12Q 1/6886 (2018.01) A61P 35/00 (2006.01)

(21) International Application Number:

PCT/US2019/027332

(22) International Filing Date:

12 April 2019 (12.04.2019)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

62/656,825	12 April 2018 (12.04.2018)	US
62/827,770	01 April 2019 (01.04.2019)	US
62/831,946	10 April 2019 (10.04.2019)	US

(71) Applicant: **KITE PHARMA, INC.** [US/US]; 2400 Broadway, Santa Monica, CA 90404 (US).

(72) Inventors: **ROSSI, John, M.**; c/o Kite Pharma, Inc., 2400 Broadway, Santa Monica, CA 90404 (US). **BOT, Adrian**; c/o Kite Pharma, Inc., 2400 Broadway, Santa Monica, CA 90404 (US).

(74) Agent: **BARBIC, Andrej** et al.; Proskauer Rose LLP, One International Drive, Boston, MA 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, 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, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, 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, 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).

(54) Title: CHIMERIC RECEPTOR T CELL TREATMENT USING CHARACTERISTICS OF THE TUMOR MICROENVIRONMENT

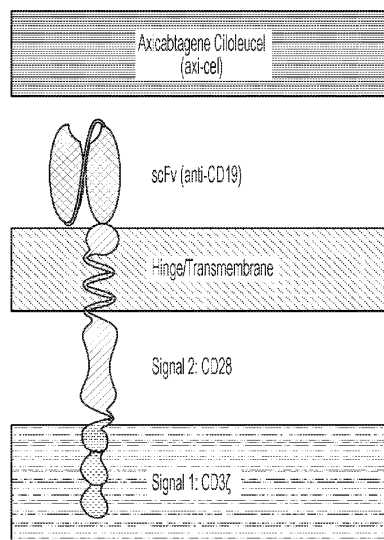


FIG. 1

(57) Abstract: The disclosure provides methods of treating a malignancy comprising administering an effective dose of a chimeric receptor (e.g., CAR or TCR) genetically modified T cell immunotherapy. Some aspects of the disclosure relate to methods of characterizing the pre-infusion tumor microenvironment and determining an effective dose of a T cell immunotherapy.

WO 2019/200325 A1

[Continued on next page]

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))*