



(51) International Patent Classification:

A61K 35/17 (2015.01) C07K 16/28 (2006.01)
A61P 35/00 (2006.01) C07K 14/705 (2006.01)
C07K 14/725 (2006.01)

(21) International Application Number:

PCT/US2021/070460

(22) International Filing Date:

27 April 2021 (27.04.2021)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

63/015,769 27 April 2020 (27.04.2020) US

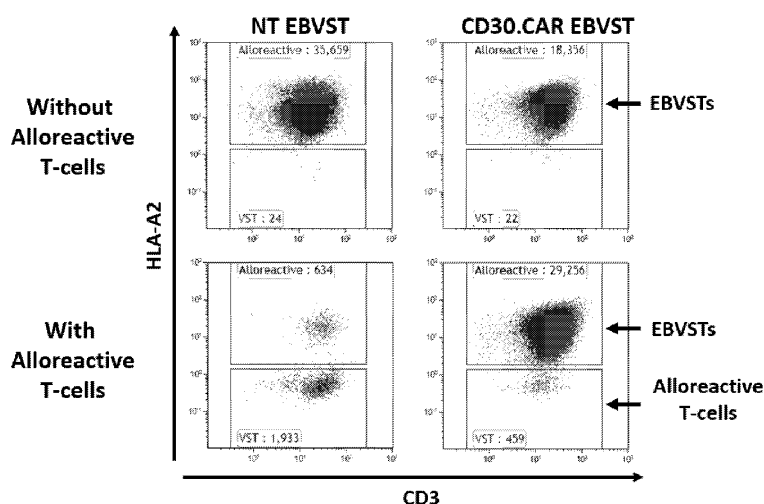
(71) Applicant: BAYLOR COLLEGE OF MEDICINE
[US/US]; One Baylor Plaza, Houston, Texas 77030 (US).(72) Inventors: QUACH, David H.; c/o Baylor College of
Medicine, One Baylor Plaza, Houston, Texas 77030 (US).
ROONEY, Cliona M.; c/o Baylor College of Medicine,
One Baylor Plaza, Houston, Texas 77030 (US). RAMOS,
Carlos A.; c/o Baylor College of Medicine, One Baylor
Plaza, Houston, Texas 77030 (US).(74) Agent: BRUNER, Kyle; Norton Rose Fulbright US LLP,
1301 McKinney Suite 5100, Houston, Texas 77010 (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, IT, 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,
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: TREATMENT AND PREVENTION OF CANCER USING VIRUS-SPECIFIC IMMUNE CELLS EXPRESSING
CHIMERIC ANTIGEN RECEPTORS

Figure 1

(57) **Abstract:** Treatment and prevention of cancer using virus-specific immune cells, comprising a chimeric antigen receptor (CAR) or nucleic acid encoding a CAR, wherein the CAR comprises: (i) an antigen-binding domain which binds specifically to CD30, (ii) a transmembrane domain, and (iii) a signalling domain, wherein the signalling domain comprises: (a) an amino acid sequence derived from the intracellular domain of CD28, and (b) an amino acid sequence comprising an immunoreceptor tyrosine-based activation motif (ITAM), is disclosed.

[Continued on next page]

Published:

- *with international search report (Art. 21(3))*
- *with sequence listing part of description (Rule 5.2(a))*