



(51) International Patent Classification:
C07K 16/28 (2006.01)

(21) International Application Number:
PCT/US2015/033473

(22) International Filing Date:
1 June 2015 (01.06.2015)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
62/006,313 2 June 2014 (02.06.2014) US

(71) Applicant: THE UNITED STATES OF AMERICA, AS
REPRESENTED BY THE SECRETARY, DEPART-
MENT OF HEALTH AND HUMAN SERVICES
[US/US]; Office of Technology Transfer, National Insti-
tutes of Health, 6011 Executive Boulevard, Suite 325,
MSC 7660, Bethesda, Maryland 20892-7660 (US).

(72) Inventor: KOCHENDERFER, James N.; 8500 Rose-
wood Drive, Bethesda, Maryland 20814 (US).

(74) Agents: KOLOM, Melissa E. et al.; LEYDIG, VOIT &
MAYER, LTD., Two Prudential Plaza, Suite 4900, 180
North Stetson Avenue, Chicago, Illinois 60601-6731 (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, DK, DM,
DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT,
HN, HR, HU, ID, IL, IN, IR, IS, JP, KE, KG, KN, KP, KR,
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).

Published:

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

(54) Title: CHIMERIC ANTIGEN RECEPTORS TARGETING CD-19

(57) Abstract: The invention is directed to a chimeric antigen receptor (CAR) directed against CD19, which comprises an amino acid sequence of any one of SEQ ID NO: 1- SEQ ID NO: 13. The invention also provides T-cells expressing the CAR and methods for destroying malignant B-cells.

