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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
12 August 2021 (12.08.2021)

WIPO | PCT

(10) International Publication Number
WO 2021/155830 A1

(51) International Patent Classification:
C07K 14/705 (2006.01) *C12N 5/10* (2006.01)
C12N 15/12 (2006.01)

(21) International Application Number:
PCT/CN2021/075388

(22) International Filing Date:
05 February 2021 (05.02.2021)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
PCT/CN2020/074366
05 February 2020 (05.02.2020) CN

(71) Applicants: **TCRCURE BIOPHARMA CORP.** [US/US]; P.O. Box 2403, Chapel Hill, North Carolina 27515 (US). **GUANGDONG TCRCURE BIOPHARMA TECHNOLOGY CO., LTD.** [CN/CN]; Building 12, No. 6 Nanjiang Second Road, Zhujiang Avenue, Nansha District, Guangzhou, Guangdong 511400 (CN).

(72) Inventors: **ZHAO, Lixia**; 119 Parkarbor Ln, Cary, North Carolina 27519 (US). **CHEN, Rui**; 4104 Liddington Dr, Durham, North Carolina 27705 (US). **BRYSON, Paul**; 3442 Caroline Avenue, Culver, California 90232 (US). **LI, Si**; 28 E Linda Vista Ave, Alhambra, California 91801 (US). **WU, Haiyang**; Building 12, No. 6 Nanjiang Second Road, Zhujiang Avenue, Nansha District, Guangzhou, Guangdong 511400 (CN). **ZHOU, Jie**; Building 12, No. 6 Nanjiang Second Road, Zhujiang Avenue, Nansha District, Guangzhou, Guangdong 511400 (CN). **SU, Zhenbo**; Building 12, No. 6 Nanjiang Second Road, Zhujiang Avenue, Nansha District, Guangzhou, Guangdong 511400 (CN).

(74) Agent: **LINDA LIU & PARTNERS**; F16 Tower C, Beijing Global Trade Center, 36 North Third Ring East Road, Dongcheng District, Beijing 100013 (CN).

(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).

Published:
— *with international search report (Art. 21(3))*

(54) Title: ANTI-HPV T CELL RECEPTORS AND ENGINEERED CELLS

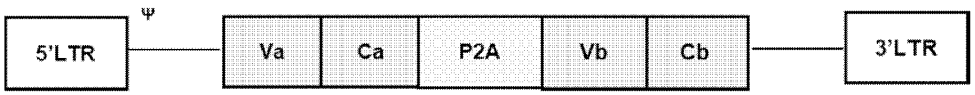

FIG. 1

(57) Abstract: T cell receptors that recognize or bind to human papilloma virus (HPV) antigens, genetically engineered cells and cell-based therapies are provided.

WO 2021/155830 A1