



(51) International Patent Classification:
C12N 5/0783 (2010.01) A61K 35/17 (2015.01)
C07K 14/725 (2006.01)

(21) International Application Number:
PCT/US2021/029443

(22) International Filing Date:
27 April 2021 (27.04.2021)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
63/016,190 27 April 2020 (27.04.2020) US
63/052,360 15 July 2020 (15.07.2020) US

(71) Applicant: SANA BIOTECHNOLOGY, INC. [US/US];
188 East Blaine Street, Suite 400, Seattle, WA 98102 (US).

(72) Inventor: SCHREPFER, Sonja; 1 Tower Place, Suite 500,
South San Francisco, CA 94080 (US).

(74) Agent: NG, Jennifer, K. et al.; Morgan, Lewis & Bockius
LLP, One Market, Spear Street Tower, San Francisco, CA
94105 (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,

(54) Title: REPEAT DOSING OF HYPOIMMUNOGENIC CELLS

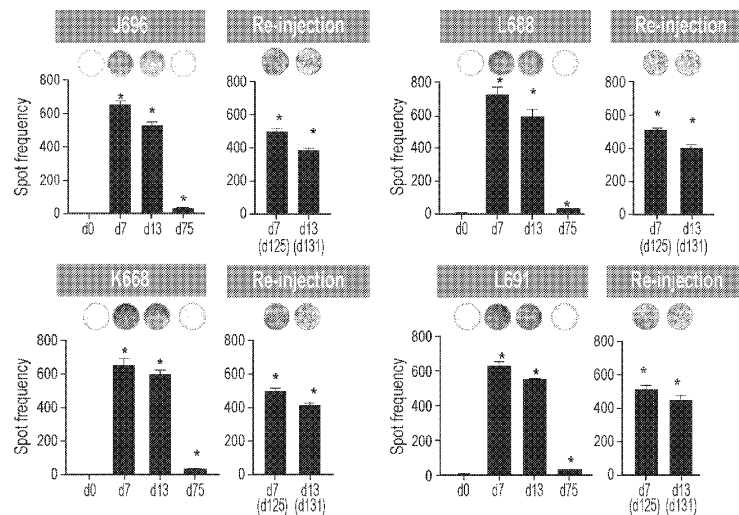


FIG. 1

(57) Abstract: Disclosed herein are methods of treating a disorder in a patient by administering immune evading cells. In some embodiments, the patient receives more than one administration of such cells. In some embodiments, the cells disclosed herein have reduced levels or activities of MHC I and/or MHC II human leukocyte antigens. In some embodiments, the cells are derived from primary T cells or pluripotent stem cells that evade immune recognition. In some embodiments, the cells comprise a chimeric antigen receptor.

[Continued on next page]

TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW,
KM, ML, MR, NE, SN, TD, TG).

Declarations under Rule 4.17:

- *as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))*
- *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))*

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))*

(88) Date of publication of the international search report:

09 December 2021 (09.12.2021)