

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

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
19 May 2022 (19.05.2022)



(10) International Publication Number
WO 2022/104109 A1

(51) International Patent Classification:

A61K 35/17 (2015.01) C07K 16/28 (2006.01)
A61P 35/00 (2006.01) C12N 5/0783 (2010.01)
C07K 14/705 (2006.01) A61K 39/00 (2006.01)

(21) International Application Number:

PCT/US2021/059204

(22) International Filing Date:

12 November 2021 (12.11.2021)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

63/113,318	13 November 2020 (13.11.2020)	US
63/143,180	29 January 2021 (29.01.2021)	US
63/189,029	14 May 2021 (14.05.2021)	US
63/229,022	03 August 2021 (03.08.2021)	US

(71) Applicant: CATAMARAN BIO, INC. [US/US]; 245 First Street, Cambridge, Massachusetts 02142 (US).

(72) Inventors: SURI, Vipin; c/o Catamaran Bio, Inc., 245 First Street, Cambridge, Massachusetts 02142 (US). REDDY, Bharat Duttala; c/o Catamaran Bio, Inc., 245 First Street, Cambridge, Massachusetts 02142 (US). BOSHAR, Mark, Ferris; c/o Catamaran Bio, Inc., 245 First Street, Cambridge, Massachusetts 02142 (US). RICHARDSON, Celeste, Jeanne; c/o Catamaran Bio, Inc., 245 First Street, Cambridge, Massachusetts 02142 (US). CHOI, Eugene, Dachee; c/o Catamaran Bio, Inc., 245 First Street, Cambridge, Massachusetts 02142 (US). WALSH, Meghan, Elizabeth; c/o Catamaran Bio, Inc., 245 First Street, Cambridge, Massachusetts 02142 (US). JOHNSON, Jennifer, Ann; c/o Catamaran Bio, Inc., 245 First Street, Cambridge, Massachusetts 02142 (US).

(74) Agent: ELRIFI, Ivor et al.; Cooley LLP, 1299 Pennsylvania Ave., NW, Suite 700, Washington, District of Columbia 20004 (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).

Declarations under Rule 4.17:

— as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))

Published:

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

(54) Title: GENETICALLY MODIFIED NATURAL KILLER CELLS AND METHODS OF USE THEREOF

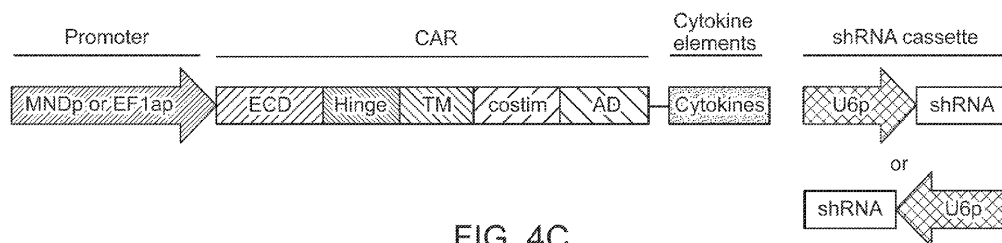


FIG. 4C

(57) Abstract: This disclosure describes genetically engineered natural killer (NK) cells, pharmaceutical compositions that include these NK cells, and methods of making and using these NK cells.

WO 2022/104109 A1