

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

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
01 November 2018 (01.11.2018)



(10) International Publication Number
WO 2018/200389 A1

(51) International Patent Classification:

C12N 15/70 (2006.01) A61K 39/00 (2006.01)
C12N 15/81 (2006.01) A61K 39/12 (2006.01)
C07K 14/47 (2006.01) A61P 35/00 (2006.01)

(21) International Application Number:

PCT/US2018/028889

(22) International Filing Date:

23 April 2018 (23.04.2018)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

62/489,102 24 April 2017 (24.04.2017) US

(71) Applicant: NANTCELL, INC. [US/US]; 9920 Jefferson Boulevard, Culver City, California 90232 (US).

(72) Inventor: NIAZI, Kayvan; 9920 Jefferson Boulevard, Culver City, California 90232 (US).

(74) Agent: FESSENMAIER, Martin; 1920 Main Street, Suite 750, Irvine, California 92614 (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, 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, 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 amended claims (Art. 19(1))
- with sequence listing part of description (Rule 5.2(a))

(54) Title: TARGETED NEOEPITOPE VECTORS AND METHODS THEREFOR

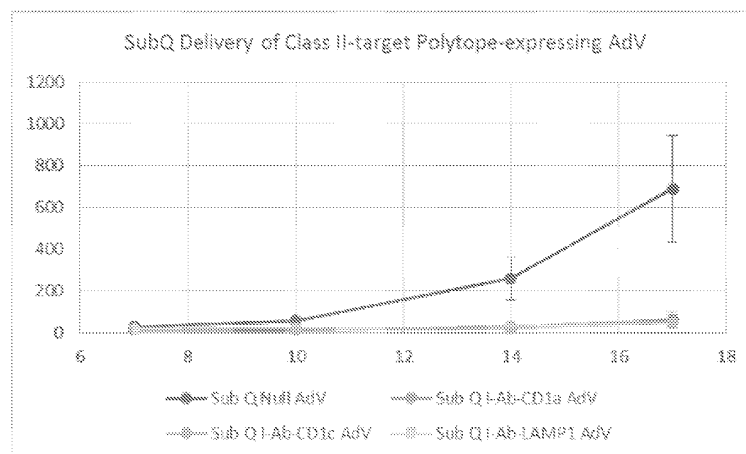


Figure 11A

(57) Abstract: Systems and methods are presented that allow for selection of tumor neoepitopes that are then used to generate recombinant nucleic acids that encode one or more polytopes that are optimized for proper trafficking and processing. In preferred methods, the polytopes are encoded in a plasmid and/or a viral expression system for use as a therapeutic agent.



WO 2018/200389 A1