

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

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
21 October 2021 (21.10.2021)



(10) International Publication Number
WO 2021/211454 A1

(51) International Patent Classification:

C12N 15/86 (2006.01) C12N 7/00 (2006.01)
A61P 31/12 (2006.01) C12N 15/11 (2006.01)

(21) International Application Number:

PCT/US2021/026880

(22) International Filing Date:

12 April 2021 (12.04.2021)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

63/009,298 13 April 2020 (13.04.2020) US

(71) Applicants: **FRED HUTCHINSON CANCER RESEARCH CENTER** [US/US]; 1100 Fairview Avenue North, Seattle, Washington 98109 (US). **UNIVERSITY OF WASHINGTON** [US/US]; 4545 Roosevelt Way NE, Suite 400, Seattle, Washington 98105 (US).

(72) Inventors: **LIEBER, Andre**; 4545 Roosevelt Way NE, Suite 400, Seattle, Washington 98105 (US). **KIEM, Hans-Peter**; 1100 Fairview Avenue North, Seattle, Washington 98109 (US). **WANG, Hongjie**; 4545 Roosevelt Way NE, Suite 400, Seattle, Washington 98105 (US).

(74) Agent: **HARDING, Tanya M.** et al.; Lee & Hayes, PC, 601 W. Riverside Avenue, Suite 1400, Spokane, Washington 99201 (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).

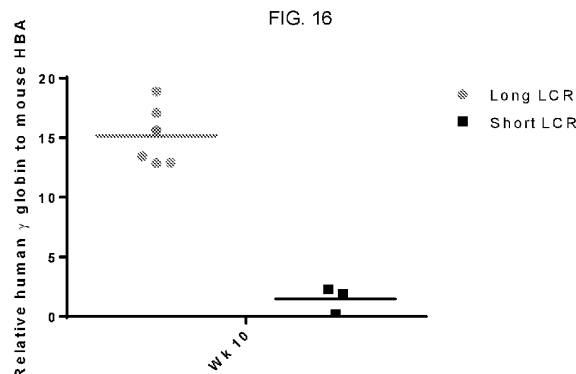
Declarations under Rule 4.17:

- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))
- 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))
- with sequence listing part of description (Rule 5.2(a))

(54) Title: INTEGRATION OF LARGE ADENOVIRUS PAYLOADS



(57) Abstract: The current disclosure provides recombinant adenoviral vectors and adenoviral genomes that can accommodate or that contain a large transposon payload, for instance a transposon payload of up to 40 kb. The adenoviral vectors and genomes can deliver the large transposon payload into a target genome, for instance for gene therapy.

WO 2021/211454 A1