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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
29 November 2018 (29.11.2018)

WIPO | PCT

(10) International Publication Number
WO 2018/218240 A1

(51) International Patent Classification:
C12N 15/861 (2006.01) *C12N 7/00* (2006.01)

(21) International Application Number:
PCT/US2018/034888

(22) International Filing Date:
29 May 2018 (29.05.2018)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
62/511,822 26 May 2017 (26.05.2017) US

(71) Applicant: **EPICENTRX, INC.** [US/US]; 11099 North Torrey Pines Road, Suite 160, La Jolla, California 92037 (US).

(72) Inventors: **LARSON, Christopher**; 3815 Lebon Drive, Apt. 335, San Diego, California 92122 (US). **ORONSKY, Bryan**; 28540 Matadero Creek Lane, Los Altos Hills, California 94022 (US). **REID, Tony R.**; 5517 Carriage Court, San Diego, California 92130 (US).

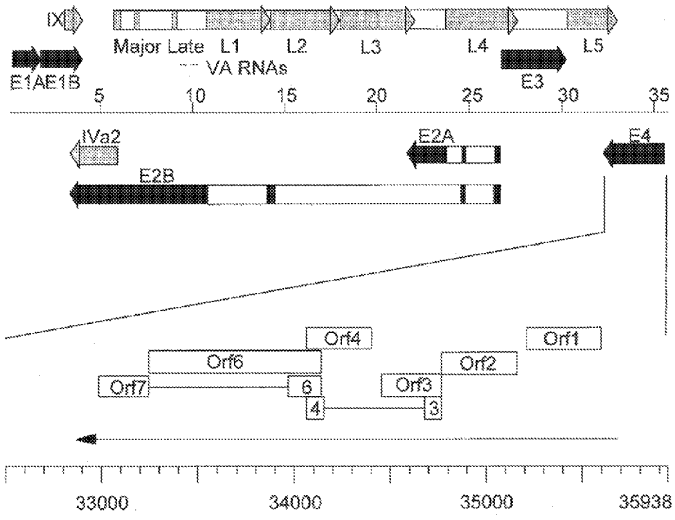
(74) Agent: **XUE, Xiaoxiao** et al.; COOLEY LLP, 1299 Pennsylvania Avenue, NW Suite 700, Washington, District of Columbia 20004-2400 (US).

(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,

(54) Title: RECOMBINANT ADENOVIRUSES CARRYING TRANSGENES

FIG. 1



(57) Abstract: Disclosed herein are recombinant adenoviruses with one or more nucleotide sequences inserted between two viral transcription units, formulations comprising the recombinant adenoviruses, and methods of treatment using the recombinant adenoviruses. In some embodiments, the one or more nucleotide sequences are inserted in an IX-E2 insertion site and/or an L5-E4 insertion site.

[Continued on next page]

WO 2018/218240 A1

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))*
— *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))*
— *with sequence listing part of description (Rule 5.2(a))*