

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

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
24 August 2023 (24.08.2023)



(10) International Publication Number
WO 2023/158990 A1

(51) International Patent Classification:

A61K 48/00 (2006.01) C07K 14/475 (2006.01)
C12N 15/86 (2006.01)

(21) International Application Number:

PCT/US2023/062531

(22) International Filing Date:

14 February 2023 (14.02.2023)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

63/310,865 16 February 2022 (16.02.2022) US
63/316,705 04 March 2022 (04.03.2022) US

(71) Applicant: ADVERUM BIOTECHNOLOGIES, INC.

[US/US]; 100 Cardinal Way, Redwood City, California
94063 (US).

(72) Inventors: **DO, Joanna**; 100 Cardinal Way, Redwood
City, California 94063 (US); **TURPCU, Adam**; 100 Cardi-
nal Way, Redwood City, California 94063 (US).

(74) Agent: **LEITZEL, Adelaide**; 4100 Redwood Rd.
20A-203, Oakland, California 94619 (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, CV, CZ, DE, DJ, DK, DM,
DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT,
HN, HR, HU, ID, IL, IN, IQ, IR, IS, IT, JM, JO, JP, KE,
KG, KH, KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, LU,
LY, MA, MD, 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, CV,

(54) Title: METHOD OF REDUCING CST FLUCTUATION IN NEOVASCULAR AMD BY A RECOMBINANT ADE-
NO-ASSOCIATED VIRUS

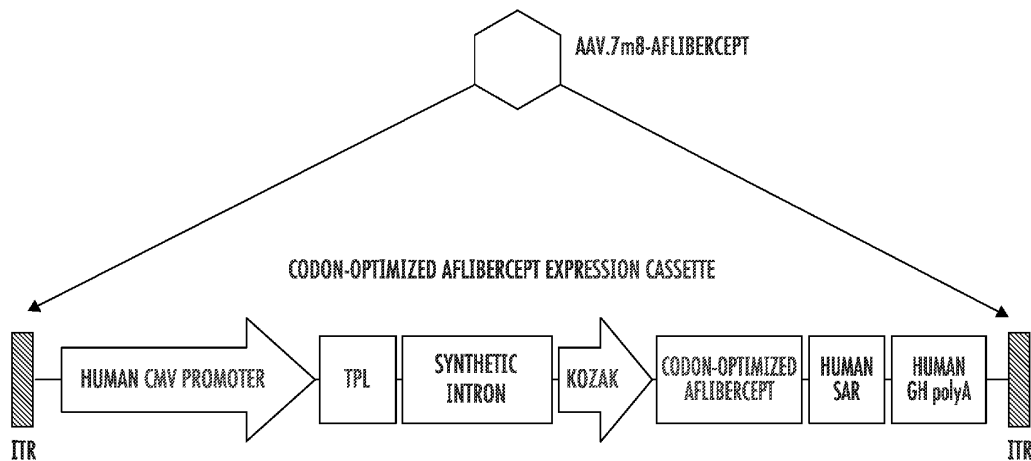


FIG. 1C

(57) Abstract: Provided are methods for treating an ocular neovascular disease in an individual by reducing Auction of central subfoveal thickness (CST) or central retinal thickness (CRT), comprising administering a unit dose of recombinant adeno-associated virus (rAAV) particles to an eye of the individual, wherein the rAAV particles comprise: a) a nucleic acid encoding a polypeptide comprising an amino acid sequence with at least about 95% identity to the amino acid sequence of SEQ ID NO: 35 and Ranked by AAV2 inverted terminal repeats (ITRs), and b) an AAV2 capsid protein comprising an amino acid sequence LGETTRP (SEQ ID NO: 14) inserted between positions 587 and 588 of the capsid protein, wherein the amino acid residue numbering corresponds to an AAV2 VP1 capsid protein.

[Continued on next page]

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, ME, 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 sequence listing part of description (Rule 5.2(a))