



(51) International Patent Classification:

C07K 14/015 (2006.01) C12N 7/00 (2006.01)
C12N 15/86 (2006.01) A61K 35/76 (2015.01)

(21) International Application Number:

PCT/SG2024/050151

(22) International Filing Date:

13 March 2024 (13.03.2024)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

10202300688R 13 March 2023 (13.03.2023) SG

(71) Applicant: **AGENCY FOR SCIENCE, TECHNOLOGY AND RESEARCH** [SG/SG]; 1 Fusionopolis Way, #20-10 Connexis North Tower, Singapore 138632 (SG).

(72) Inventors: **MELIANI, Mohamed Amine**; c/o Genome Institute of Singapore, 60 Biopolis Street, Genome #02-01, Singapore 138672 (SG). **SEAH, Yu Fen Samantha**; c/o Genome Institute of Singapore, 60 Biopolis Street, Genome #02-01, Singapore 138672 (SG). **TRACZYK, Anna**; c/o Genome Institute of Singapore, 60 Biopolis Street, Genome #02-01, Singapore 138672 (SG). **CHEW, Wei Leong**; c/o

Genome Institute of Singapore, 60 Biopolis Street, Genome #02-01, Singapore 138672 (SG).

(74) Agent: **SPRUSON & FERGUSON (ASIA) PTE LTD**;

P.O. Box 1531, Robinson Road Post Office, Singapore 903031 (SG).

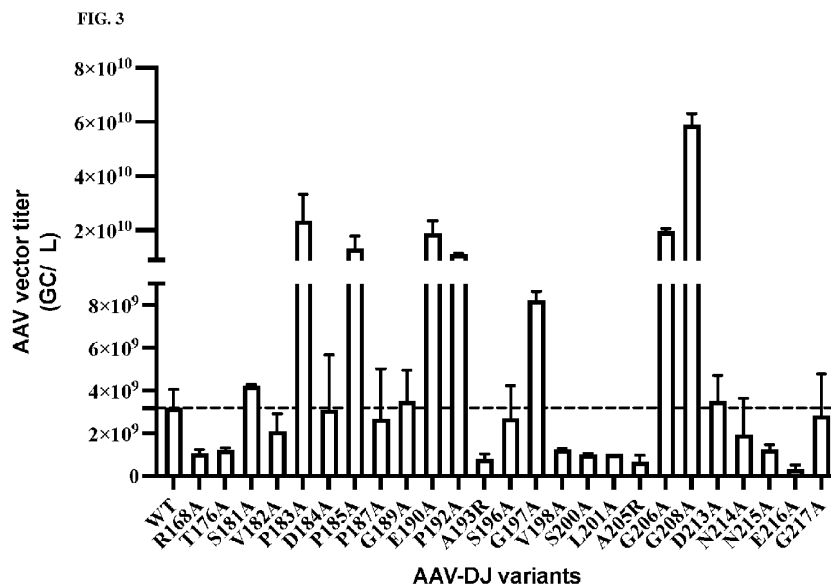
(81) Designated States (*unless otherwise indicated, for every kind of national protection available*): AE, AG, AL, AM,

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, MU, 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,

GH, GM, KE, LR, LS, MW, MZ, NA, RW, SC, 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,

(54) Title: ENGINEERED ADENO-ASSOCIATED VIRUSES



(57) Abstract: Disclosed herein are compositions comprising at least one modified adeno-associated viral (AAV) capsid protein. Also disclosed herein are adeno-associated virus particles comprising the AAV capsid proteins disclosed herein. In one example, the compositions, nucleic acids, vectors, host cells and adeno-associated virus particles disclosed herein are used in therapy.

[Continued on next page]

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).

Declarations under Rule 4.17:

— *of inventorship (Rule 4.17(iv))*

Published:

— *with international search report (Art. 21(3))*

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