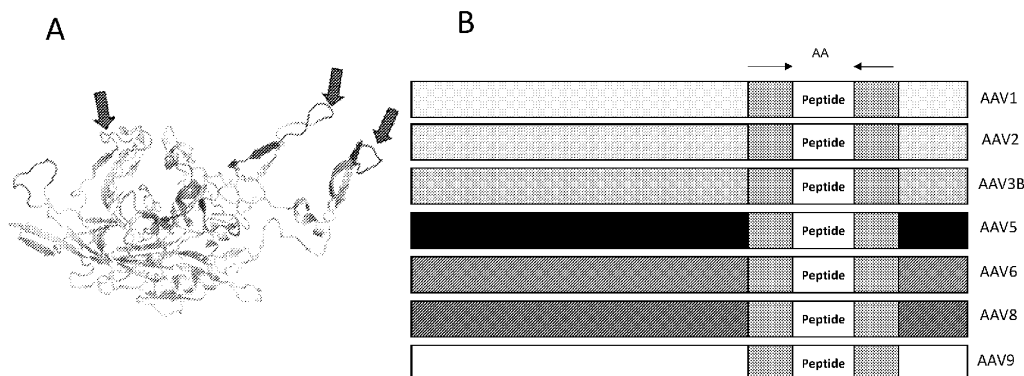




- (51) **International Patent Classification:**  
*C07K 14/005* (2006.01) *C12N 15/86* (2006.01)
- (21) **International Application Number:**  
PCT/US2020/029964
- (22) **International Filing Date:**  
24 April 2020 (24.04.2020)
- (25) **Filing Language:** English
- (26) **Publication Language:** English
- (30) **Priority Data:**  
62/839,421 26 April 2019 (26.04.2019) US  
62/915,386 15 October 2019 (15.10.2019) US  
62/939,094 22 November 2019 (22.11.2019) US
- (71) **Applicant:** SANGAMO THERAPEUTICS, INC.  
[US/US]; 501 Canal Boulevard, Suite A100, Richmond, CA 94804 (US).
- (72) **Inventors:** McGOVERN, Kyle; c/o Sangamo Therapeutics, Inc., 501 Canal Boulevard, Suite A100, Richmond, CA 94804 (US). OJALA, David, S.; c/o Sangamo Therapeutics, Inc., 501 Canal Boulevard, Suite A100, Richmond, CA 94804 (US).
- (74) **Agent:** MANGASARIAN, Karen et al.; Haley Guiliano LLP, 75 Broad Street, Suite 1000, New York, NY 10004 (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, 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).

(54) **Title:** ENGINEERING AAV

FIG. 1



(57) **Abstract:** The present disclosure provides methods and compositions to develop AAV capsids with a desired characteristic compared to a natural AAV serotype. These capsids are useful, for example, for the delivery of genome engineering molecules and gene therapy molecules for the treatment of a subject in need thereof.

[Continued on next page]

**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:**

- *without international search report and to be republished upon receipt of that report (Rule 48.2(g))*
- *with sequence listing part of description (Rule 5.2(a))*