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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
22 May 2020 (22.05.2020)

WIPO | PCT

(10) International Publication Number
WO 2020/102578 A1

(51) International Patent Classification:
C12N 15/87 (2006.01) *C12N 15/88* (2006.01)

(21) International Application Number:
PCT/US2019/061535

(22) International Filing Date:
14 November 2019 (14.11.2019)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
62/767,394 14 November 2018 (14.11.2018) US

(71) Applicant: **FLAGSHIP PIONEERING INNOVATIONS V, INC** [US/US]; 55 Cambridge Parkway, 8th Floor, Cambridge, MA 02142 (US).

(72) Inventors: **VON MALTZAHN, Geoffrey, A.**; 55 Cambridge Parkway, 8th Floor, Cambridge, MA 02142 (US). **MILWID, John, Miles**; 55 Cambridge Parkway, 8th Floor, Cambridge, MA 02142 (US). **RUBENS, Jacob, Rosenblum**; 55 Cambridge Parkway, 8th Floor, Cambridge, MA 02142 (US). **MEE, Michael, Travis**; 55 Cambridge Parkway, 8th Floor, Cambridge, MA 02142 (US). **GORDON, Neal, Francis**; 55 Cambridge Parkway, 8th Floor, Cambridge, MA 02142 (US). **SHAH, Jagesh, Vijaykumar**; 55 Cambridge Parkway, 8th Floor, Cambridge, MA 02142 (US). **TRUDEAU, Kyle, Marvin**; 55 Cambridge Parkway, 8th Floor, Cambridge, MA 02142 (US). **HARTLEY, Brigham, Jay**; 55 Cambridge Parkway, 8th Floor, Cambridge, MA 02142 (US).

(74) Agent: **KOYFMAN, Hannah, R.** et al.; Lando & Anastasi LLP, 60 State Street, 23rd Floor, Boston, MA 02109 (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, 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))*
— *with sequence listing part of description (Rule 5.2(a))*

WO 2020/102578 A1

(54) Title: COMPOSITIONS AND METHODS FOR COMPARTMENT-SPECIFIC CARGO DELIVERY

(57) Abstract: Fusosome compositions and methods are described herein.