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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
01 November 2018 (01.11.2018)

WIPO | PCT

(10) International Publication Number
WO 2018/197949 A1

(51) International Patent Classification:
C12M 1/00 (2006.01) *C12N 5/0783* (2010.01)

(21) International Application Number:
PCT/IB2018/000507

(22) International Filing Date:
27 April 2018 (27.04.2018)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
62/491,245 27 April 2017 (27.04.2017) US

(71) Applicant: **JUNO THERAPEUTICS GMBH** [DE/DE]; Rudolf-Wissell-Straße 28, 37079 Göttingen (DE).

(72) Inventors: **SCHMIDT, Thomas**; Rudolf-Wissell-Straße 28, 37079 Göttingen (DE). **STEMBERGER, Christian**; Rudolf-Wissell-Straße 28, 37079 Göttingen (DE). **KOWSKI, Tom**; 400 Dexter Avenue North, Suite 1200, Seattle, Washington 98109 (US). **PRENTICE, Ken**; 400 Dexter Avenue North, Suite 1200, Seattle, Washington 98109 (US).

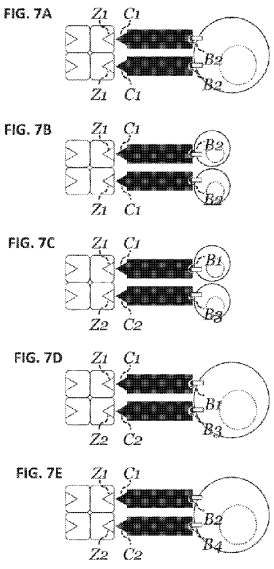
(81) Designated States *(unless otherwise indicated, for every kind of national protection available)*: AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IR, IS, 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).

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))*

(54) Title: OLIGOMERIC PARTICLE REAGENTS AND METHODS OF USE THEREOF

FIG. 7



(57) Abstract: Provided herein are oligomeric reagents, including oligomeric reagents of streptavidin or a streptavidin mutein, compositions thereof, and methods for manufacturing oligomeric reagents, including methods for reliably manufacturing oligomeric particle reagents of a desired size. In some cases, the reagents are oligomeric particle reagents containing a plurality of binding sites for agents, and thus the one or more agents are multimerized by reversibly binding to the oligomeric particle reagent, e.g., thereby creating a multimerized oligomeric particle reagent, having stimulatory agents multimerized thereon. Also provided are methods for using the oligomeric reagents for incubation or culturing, such as to induce stimulation of expansion, activation, and/or survival, of a composition of cells such as a population of lymphocytes. In some aspects, the disclosure provides methods and reagents for the stimulation, survival, persistence, activation, or other effect of cell populations that involve binding of agents to a molecule on the cell surface.

WO 2018/197949 A1