



(51) International Patent Classification:

A61K 39/00 (2006.01) *A61K 39/108* (2006.01)

(21) International Application Number:

PCT/IB2025/052443

(22) International Filing Date:

06 March 2025 (06.03.2025)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

63/563,748	11 March 2024 (11.03.2024)	US
63/569,359	25 March 2024 (25.03.2024)	US
63/755,767	07 February 2025 (07.02.2025)	US
63/758,638	14 February 2025 (14.02.2025)	US

(71) Applicant: **PFIZER INC.**, [US/US]; 66 Hudson Boulevard East, New York, New York 10001-2192 (US).

(72) Inventors: **ALEX, Catherine**; c/o Pfizer Inc., 401 N. Middletown Road, Pearl River, New York 10965 (US). **DONALD, Robert George Konrad**; c/o Pfizer Inc., 401 N. Middletown Road, Pearl River, New York 10965 (US). **FEENEY, Michaela Kathryn**; c/o Pfizer Inc., 401 N. Middletown Road, Pearl River, New York 10965 (US). **KAUR, Navdeep**; c/o Pfizer Inc., 401 N. Middletown Road, Pearl

River, New York 10965 (US). **KIM, Jin-hwan**; c/o Pfizer Inc., 401 N. Middletown Road, Pearl River, New York 10965 (US). **KODALI, Srinivas**; c/o Pfizer Inc., 401 N. Middletown Road, Pearl River, New York 10965 (US). **PAN, Rosalind**; 15 Spencer Court, Morris Plains, New Jersey 07950 (US). **PATEL, Axay Manojbhai**; c/o Pfizer Inc., 401 N. Middletown Road, Pearl River, New York 10965 (US). **SINGH, Suddham**; c/o Pfizer Inc., 401 N. Middletown Road, Pearl River, New York 10965 (US). **VARTAK, Abhishek Ravindra**; c/o Pfizer Inc., 401 N. Middletown Road, Pearl River, New York 10965 (US). **YANG, YuYing**; c/o Pfizer Inc., 401 N. Middletown Road, Pearl River, New York 10965 (US).

(74) Agent: **ZIELINSKI, Bryan C.**; PFIZER INC., Legal Division, 66 Hudson Boulevard East, 11th Floor, New York, New York 10001-2192 (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, MU, MW, MX, MY, MZ, NA,

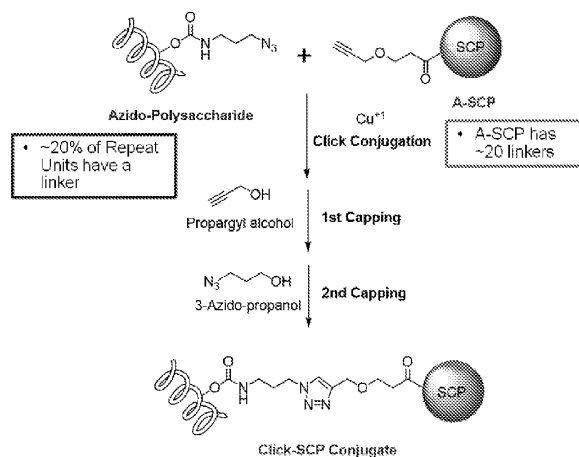
(54) Title: IMMUNOGENIC COMPOSITIONS COMPRISING CONJUGATED *ESCHERICHIA COLI* SACCHARIDES AND USES THEREOF

FIG. 1

(57) Abstract: In one aspect, the present disclosure relates to an immunogenic composition comprising conjugated O-polysaccharide molecules derived from *E. coli* lipopolysaccharides. In one embodiment, the O-polysaccharide molecules are conjugated to streptococcal C5a peptidase (SCP). In some embodiments, the O-polysaccharide molecules are conjugated to SCR using click chemistry.

[Continued on next page]

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, UY, 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, 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:

- *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:

- *with international search report (Art. 21(3))*
- *with sequence listing part of description (Rule 5.2(a))*
- *in black and white; the international application as filed contained color or greyscale and is available for download from PATENTSCOPE*