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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
16 February 2023 (16.02.2023)

WIPO | PCT

(10) International Publication Number
WO 2023/019241 A2

(51) International Patent Classification:
A61K 39/00 (2006.01) *A61K 47/69* (2017.01)

(21) International Application Number:
PCT/US2022/074902

(22) International Filing Date:
12 August 2022 (12.08.2022)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:

63/260,227	12 August 2021 (12.08.2021)	US
63/263,541	04 November 2021 (04.11.2021)	US
63/267,975	14 February 2022 (14.02.2022)	US

(71) Applicants: **JANSSEN PHARMACEUTICALS, INC.** [US/US]; 1125 Trenton-Harbourtton Road, Titusville, NJ 08560 (US). **AC IMMUNE SA** [CH/CH]; EPFL Innovation Park, Building B, 1015 Lausanne (CH).

(72) Inventors: **PFEIFER, Andrea**; c/o AC Immune SA, EPFL Innovation Park, Building B, 1015 Lausanne (CH). **MUHS, Andreas**; c/o AC Immune SA, EPFL Innovation Park, Building B, 1015 Lausanne (CH). **GALPERN, Wendy**; c/o Janssen Pharmaceuticals, Inc., 1125 Trenton-Harbourton Road, Titusville, NJ 08560 (US).

(74) Agent: **ICE MILLER LLP** et al.; Weihong, Hsing, J., D., 1735 Market Street, Suite 3900, Philadelphia, PA 19103-7509 (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, 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).

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))*

WO 2023/019241 A2

(54) Title: LIPOSOMES CONTAINING PHOSPHORYLATED TAU PEPTIDES FOR INDUCING SUSTAINED IMMUNE RESPONSES

(57) Abstract: Methods for inducing a sustained immune response against phosphorylated Tau in humans are described. The methods include administering to the subject an effective amount of liposomes including a toll-like receptor 4 agonist, a helper T-cell epitope, a lipidated CpG oligonucleotide, and a Tau phosphopeptide presented on the surface of the liposome to thereby obtain the sustained immune response.