

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

(19) World Intellectual Property
Organization

International Bureau

(43) International Publication Date
07 December 2023 (07.12.2023)



(10) International Publication Number
WO 2023/235749 A3

(51) International Patent Classification:

A61K 39/39 (2006.01) A61K 39/12 (2006.01)
A61K 35/74 (2015.01) A61K 38/16 (2006.01)
A61K 39/02 (2006.01)

Declarations under Rule 4.17:

— as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))

(21) International Application Number:

PCT/US2023/067691

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))

(22) International Filing Date:

31 May 2023 (31.05.2023)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

63/347,635 01 June 2022 (01.06.2022) US

(88) Date of publication of the international search report:

25 January 2024 (25.01.2024)

(71) Applicant: **FLAG BIO, INC.** [US/US]; 1892 Sweet Road, East Aurora, New York 14052 (US).

(72) Inventors: **ANDRIANOVA, Ekaterina L.**; c/o Flag Bio, Inc., 1892 Sweet Road, East Aurora, New York 14052 (US).
GITLIN, Ilya; c/o Flag Bio, Inc., 1892 Sweet Road, East Aurora, New York 14052 (US).

(74) Agent: **SHRADER, Jae Sung et al.**; Greenberg Traurig, LLP, One International Place, Boston, Massachusetts 02110 (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, 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, 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).

(54) Title: RNA ADJUVANTS, METHODS AND USES THEREOF

(57) Abstract: Provided herein are adjuvants, compositions, and methods for the prevention and treatment of infectious diseases and cancer. Various toll-like receptor (TLR) agonists and RNA encoding TLR agonists are provided herein. The adjuvants provided herein can be complexed with a carrier or formulated with a delivery vehicle for administration to a subject. Further provided are adjuvants that can be delivered with vaccine compositions or as part of a vaccine composition to enhance the innate immune response in a subject.

WO 2023/235749 A3