

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

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
14 November 2024 (14.11.2024)



(10) International Publication Number
WO 2024/231810 A1

(51) International Patent Classification:

C07K 14/52 (2006.01) C12N 15/74 (2006.01)
A61K 31/7105 (2006.01) A61K 38/19 (2006.01)

(21) International Application Number:

PCT/IB2024/054366

(22) International Filing Date:

06 May 2024 (06.05.2024)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

63/500,377 05 May 2023 (05.05.2023) US
63/500,378 05 May 2023 (05.05.2023) US

(71) Applicant: **SEQIRUS INC.** [US/US]; 475 Green Oaks
Parkway, Holly Springs, North Carolina 27540 (US).

(72) Inventors: **WIDMAN, Douglas**; c/o Seqirus Inc., 475
Green Oaks Parkway, Holly Springs, North Carolina 27540
(US). **RAMANATHAN, Palaniappan**; c/o Seqirus Inc.,
475 Green Oaks Parkway, Holly Springs, North Carolina
27540 (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: VACCINE COMPOSITIONS

(57) Abstract: The present disclosure relates to RNAs and other polynucleotides encoding an antigen, which can be used in vaccine compositions. In some examples, the RNA also encodes a chemoattractant, such as chemerin, C-X-C motif chemokine ligand 9 (CXCL9), C-X-C motif chemokine ligand 10 (CXCL10) or C-X-C motif chemokine ligand 11 (CXCL11). The present disclosure also relates to use of the RNAs and compositions in methods of inducing an immune response in a subject.



WO 2024/231810 A1