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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
05 August 2021 (05.08.2021)

WIPO | PCT

(10) International Publication Number
WO 2021/154763 A1

(51) International Patent Classification:
A61K 39/12 (2006.01) *A61P 11/00* (2006.01)
A61K 39/215 (2006.01) *A61P 31/14* (2006.01)

(21) International Application Number:
PCT/US2021/015145

(22) International Filing Date:
26 January 2021 (26.01.2021)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:

62/967,006	28 January 2020 (28.01.2020)	US
62/971,825	07 February 2020 (07.02.2020)	US
63/002,094	30 March 2020 (30.03.2020)	US
63/009,005	13 April 2020 (13.04.2020)	US
63/016,175	27 April 2020 (27.04.2020)	US

(71) Applicant: **MODERNATX, INC.** [US/US]; 200 Technology Square, Cambridge, MA 02139 (US).

(72) Inventors: **STEWART-JONES, Guillaume**; 200 Technology Square, Cambridge, MA 02139 (US). **NARAYANAN, Elisabeth**; 38 Fulkerson Street, Cambridge, MA 02141 (US). **BENNETT, Hamilton**; 200 Technology Square, Cambridge, MA 02139 (US). **CARFI, Andrea**; 200 Technology Square, Cambridge, MA 02139 (US). **METKAR, Mihir**; 200 Technology Square, Cambridge, MA 02139 (US). **PRESNYAK, Vladimir**; 776 Chestnut Street, Manchester, NH 03104 (US).

(74) Agent: **LOCKHART, Helen, C.**; Wolf, Greenfield & Sacks, P.C., 600 Atlantic Avenue, Boston, MA 02210-2206 (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, IT, 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,

(54) Title: CORONAVIRUS RNA VACCINES

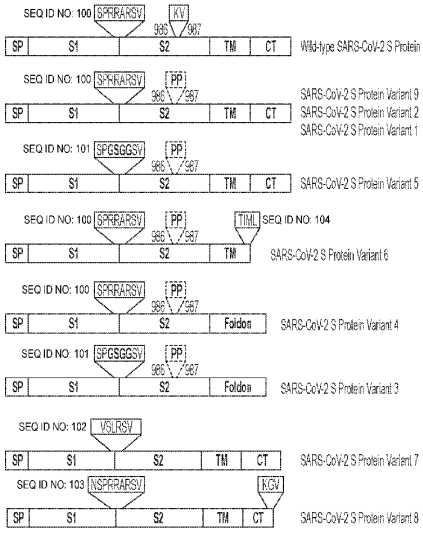


FIG. 1

(57) Abstract: The disclosure relates to coronavirus ribonucleic acid (RNA) vaccines as well as methods of using the vaccines and compositions comprising the vaccines.

[Continued on next page]

WO 2021/154763 A1

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))*

— *with sequence listing part of description (Rule 5.2(a))*