



(51) International Patent Classification:
Not classified

(21) International Application Number:
PCT/US2024/026065

(22) International Filing Date:
24 April 2024 (24.04.2024)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
63/497,986 24 April 2023 (24.04.2023) US
63/507,079 08 June 2023 (08.06.2023) US
63/507,412 09 June 2023 (09.06.2023) US
63/508,088 14 June 2023 (14.06.2023) US
63/579,438 29 August 2023 (29.08.2023) US
63/580,596 05 September 2023 (05.09.2023) US

(71) Applicant: **NOVAVAX, INC.** [US/US]; 21 Firstfield
Road, Gaithersburg, Maryland 20878 (US).

(72) Inventors: **SMITH, Gale**; c/o Novavax, Inc., 21 Firstfield
Road, Gaithersburg, Maryland 20878 (US). **PATEL, Nita**;
c/o Novavax, Inc., 21 Firstfield Road, Gaithersburg, Mary-
land 20878 (US).

(74) Agent: **SPEIER, Gary**; Carlson, Caspers, Vandenburg &
Lindquist, P.A., 225 South Sixth Street, Suite 4200, Min-
neapolis, Minnesota 55402 (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.

(54) Title: SARS-COV-2 VACCINE COMPOSITIONS

Fig. 1A

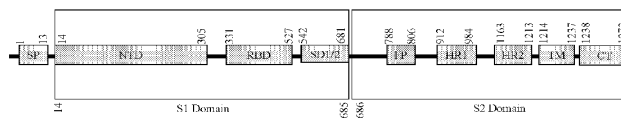
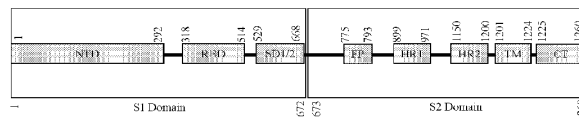


Fig. 1B



(57) Abstract: Disclosed herein are coronavirus (CoV) Spike (S) polypeptides, including naturally and non-naturally occurring polypeptides, and nanoparticles and immunogenic compositions comprising the same, which are useful for stimulating immune responses against various SARS-CoV-2 strains. The nanoparticles present antigens from pathogens surrounded to and associated with a detergent core resulting in enhanced stability and good immunogenicity. Dosages, formulations, and methods for preparing the vaccines and nanoparticles are also disclosed.

[Continued on next page]

(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).

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))*