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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
27 January 2022 (27.01.2022)

WIPO | PCT

(10) International Publication Number
WO 2022/019758 A1

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

(21) International Application Number:
PCT/NL2021/050461

(22) International Filing Date:
20 July 2021 (20.07.2021)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
2026094 20 July 2020 (20.07.2020) NL

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(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, 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))*

WO 2022/019758 A1

(54) Title: METHODS AND COMPOSITIONS FOR INCREASING IMMUNITY AGAINST CORONAVIRUSES

(57) Abstract: The disclosure provides methods and compositions for increasing immunity against coronaviruses, in particular highly pathogenic coronaviruses. Compositions are provided comprising peptides comprising at least a part of the S2 ectodomain of the S (spike) protein from at least one human coronaviruses (HCoV) selected from HCoV- NL63, HCoV-OC43, HCoV-229E and HCoV-HKU1, as well as compositions comprising nucleic acid molecules encoding at least a part of the S2 ectodomain of the S (spike) protein from at least one human coronaviruses (HCoV) selected from HCoV- NL63, HCoV-OC43, HCoV-229E and HCoV-HKU1. Compositions described herein are particularly useful as vaccines, in particular against highly pathogenic coronaviruses such as SARS-CoV-1, MERS-CoV and/or SARS-CoV-2 as well as cross-species transmission of typically non-human coronaviruses.