

(51) International Patent Classification:
C12Q 1/70 (2006.01)(21) International Application Number:
PCT/EP2021/055748(22) International Filing Date:
08 March 2021 (08.03.2021)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
62/987,066 09 March 2020 (09.03.2020) US
63/075,579 08 September 2020 (08.09.2020) US
63/122,869 08 December 2020 (08.12.2020) US(71) Applicant (for all designated States except DE, US): **F. HOFFMANN-LA ROCHE AG** [CH/CH]; Grenzacherstrasse 124, 4070 Basel (CH).(71) Applicant (for DE only): **ROCHE DIAGNOSTICS GMBH** [DE/DE]; Sandhofer Strasse 116, 68305 Mannheim (DE).(71) Applicant (for US only): **ROCHE MOLECULAR SYSTEMS, INC.** [US/US]; 4300 Hacienda Drive, Pleasanton, California 94588 (US).(72) Inventors: **FORTECHA, Marcel, R.**; c/o Roche Molecular Systems, Inc. 4300 Hacienda Drive, Pleasanton, California 94588 (US). **HEIL, Marantha**; c/o Roche Molecular Systems, Inc. 4300 Hacienda Drive, Pleasanton, California 94588 (US). **MANGIPUDI, Kalyani**; c/o Roche Molecular Systems, Inc. 4300 Hacienda Drive, Pleasanton, California 94588 (US). **MANOHAR, Chitra**; c/o Roche Molecular Systems, Inc. 4300 Hacienda Drive, Pleasanton, California 94588 (US). **RAVIRALA, Ramani, Sadanandam**; c/o Roche Molecular Systems, Inc. 4300 Hacienda Drive, Pleasanton, California 94588 (US). **SANTINI, Christopher, David**; c/o Roche Molecular Systems, Inc. 4300 Hacienda Drive, Pleasanton, California 94588 (US). **SPIER, Eugene**; c/o Roche Molecular Systems, Inc. 4300 Hacienda Drive, Pleasanton, California 94588 (US). **SUN, Jingtao**; c/o Roche Molecular Systems, Inc. 4300 Hacienda Drive, Pleasanton, California 94588 (US). **TAM, Thanh**; c/o Roche Molecular Systems, Inc. 4300 Hacienda Drive, Pleasanton, California 94588 (US). **TRUONG, Huan**; c/o Roche Molecular Systems, Inc. 4300 Hacienda Drive, Pleasanton, California 94588 (US).

(54) Title: COMPOSITIONS AND METHODS FOR DETECTING SEVERE ACUTE RESPIRATORY SYNDROME CORONAVIRUS 2 (SARS-COV-2), INFLUENZA A AND INFLUENZA B

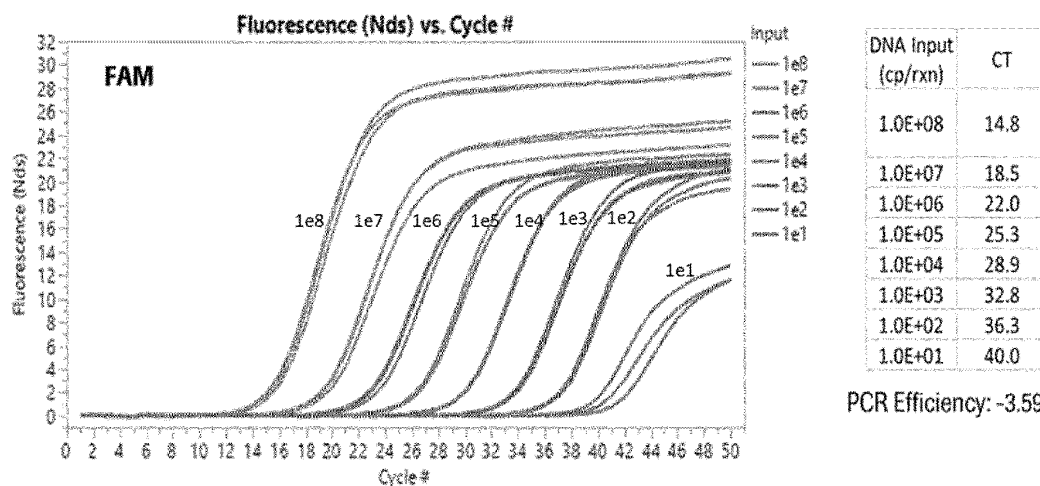


FIG. 2

(57) Abstract: Methods for the rapid detection of the presence or absence of SARS-CoV-2, influenza A and influenza B in a biological or non-biological sample are described. The methods can include performing an amplifying step, a hybridizing step, and a detecting step. Furthermore, primers and probes targeting SARS-CoV-2, influenza A, and influenza B and kits are provided that are designed for the detection of SARS-CoV-2, influenza A and influenza B.

[Continued on next page]

o Roche Molecular Systems, Inc. 4300 Hacienda Drive, Pleasanton, California 94588 (US). **YEE, Michelle, Elizabeth**; c/o Roche Molecular Systems, Inc. 4300 Hacienda Drive, Pleasanton, California 94588 (US).

(74) **Agent: HÖVELMANN, Sascha**; Patent Department Sandhofer Straße 116, 68305 Mannheim (DE).

(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).

Declarations under Rule 4.17:

- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))
- of inventorship (Rule 4.17(iv))

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))