

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

(19) World Intellectual Property
Organization

International Bureau

(43) International Publication Date
03 November 2022 (03.11.2022)



(10) International Publication Number
WO 2022/229461 A1

(51) International Patent Classification:

G01N 33/569 (2006.01) C07K 14/00 (2006.01)

A61K 39/00 (2006.01)

(21) International Application Number:

PCT/EP2022/061635

(22) International Filing Date:

29 April 2022 (29.04.2022)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

21171378.9 29 April 2021 (29.04.2021) EP

21171380.5 29 April 2021 (29.04.2021) EP

21306369.6 30 September 2021 (30.09.2021) EP

(71) Applicants: **INSTITUT GUSTAVE ROUSSY** [FR/FR]; 39 rue Camille Desmoulins, 94800 VILLEJUIF (FR). **FUNDAÇÃO D. ANNA DE SOMMER CHAMPALIMAUD** [PT/PT]; e Dr. Carlos Montez Champalimaud, Avenida Brasília, 1400-038 LISBON (PT). **UNIVERSITE PARIS-SACLAY** [FR/FR]; Parc technologique, Immeuble Discovery, Route de l'orme des merisiers RD 128, 91191 Saint Aubin (FR). **TRANSGENE** [FR/FR]; Boulevard Gonthier d'Andernach, Parc d'Innovation, 67400 ILLKIRCH-GRAF-FENSTADEN (FR).

(72) Inventors: **ZITVOGEL, Laurence**; 14-16, avenue de l'Observatoire, 75006 PARIS (FR). **FAHRNER, Jean-Eudes**; 25, Boulevard Arago, 75013 PARIS (FR). **MAEURER, Markus**; Rua Gustavo de Matos Sequeira 29, 1200-215 LISBON (PT). **DE SOUSA, Eric**; Rua Cidade da Praia Lote 361 3rd floor right, 1800-119 LISBON (PT). **LERIAS, Joana**; Rua Mário Moreia, 9, 5 floor, left, 2675-660 ODIVELAS (PT).

(74) Agent: **SANTARELLI**; 49 avenue des Champs-Élysées, 75008 PARIS (FR).

(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, JM, 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:

— 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))

(54) Title: THE POLARITY AND SPECIFICITY OF SARS-COV2 -SPECIFIC T LYMPHOCYTE RESPONSES AS A BIOMARKER OF DISEASE SUSCEPTIBILITY

(57) Abstract: The application pertains to biomarkers for assessing whether an individual is likely to resist to an infection by a SARS-CoV-2 virus or is susceptible to SARS-CoV-2.

WO 2022/229461 A1