

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

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
04 November 2021 (04.11.2021)



(10) International Publication Number
WO 2021/220284 A1

(51) International Patent Classification:

A61K 31/13 (2006.01) A61K 31/506 (2006.01)
A61K 31/155 (2006.01) A61K 31/517 (2006.01)
A61K 31/357 (2006.01) A61K 31/64 (2006.01)
A61K 31/375 (2006.01) A61K 31/704 (2006.01)
A61K 31/40 (2006.01) A61K 31/7072 (2006.01)
A61K 31/433 (2006.01) A61K 31/7076 (2006.01)
A61K 31/4427 (2006.01) A61K 31/708 (2006.01)
A61K 31/495 (2006.01)

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))
- with sequence listing part of description (Rule 5.2(a))

(21) International Application Number:

PCT/IL2021/050501

(22) International Filing Date:

02 May 2021 (02.05.2021)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

63/018,598 01 May 2020 (01.05.2020) US
63/117,619 24 November 2020 (24.11.2020) US

(71) Applicant: YISSUM RESEARCH DEVELOPMENT COMPANY OF THE HEBREW UNIVERSITY OF JERUSALEM LTD. [IL/IL]; Hi-Tech Park, Edmond J. Safra Campus, Givat Ram, P.O.B. 39135, 91390 Jerusalem (IL).

(72) Inventors: ARKIN, Isaiah; 38 Ha-ela st, 9083600 Har Adar (IL). SINGH TOMAR, Prabhat Pratap; 9/14, Bronfinan, (Idelson) Dorms, Mount Scopus, 9767101 Jerusalem (IL). KRUGLIAK, Miriam; Hatser Adar 3, 9063100 Beit El (IL).

(74) Agent: GEYRA KESTEN et al.; 100 HaHashmonaim Street, P.O.Box 52630, 6713317 Tel Aviv (IL).

(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,

(54) Title: E PROTEIN CHANNEL BLOCKERS AND ORF3 INHIBITORS AS ANTI-COVID-19 AGENTS

(57) Abstract: Pharmaceutical compositions comprising a SARS-CoV-2 E protein channel blocker and ORF3 inhibitors for treating or preventing SARS-CoV-2 virulence in a subject, are provided. Further provides is a pharmaceutical composition comprising a SARS-CoV-2 E protein channel blocker or an ORF3 inhibitor for preventing SARS-CoV-2 cell entry, uncoating and/or release from a cell.



WO 2021/220284 A1