

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

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
16 September 2021 (16.09.2021)



(10) International Publication Number
WO 2021/181355 A1

(51) International Patent Classification:

C07K 14/415 (2006.01) *A61P 31/04* (2006.01)
C12N 9/10 (2006.01) *A61P 31/10* (2006.01)
C12N 15/62 (2006.01) *A61P 31/12* (2006.01)
A01N 63/50 (2020.01) *A61P 31/02* (2006.01)
A61K 38/16 (2006.01)

(21) International Application Number:

PCT/IB2021/052079

(22) International Filing Date:

12 March 2021 (12.03.2021)

(25) Filing Language:

Italian

(26) Publication Language:

English

(30) Priority Data:

62/989,067	13 March 2020 (13.03.2020)	US
63/005,474	06 April 2020 (06.04.2020)	US
102021000002597	05 February 2021 (05.02.2021)	IT

(71) Applicant: **DELPHINUS BIOTECH S.R.L.** [IT/IT]; Via Roberto Da Sanseverino, 95, Impact Hub Trentino, 38122 Trento (IT).

(72) Inventors: **PAPARELLA, Alessandro**; Via S. Giuseppe, 35, 30020 Marcon (VE) (IT). **CAPPELLARO, Marco**; Via Olmo, 1171, 45030 Pontecchio Polesine (RO) (IT). **FIGLIORE, Enrico**; Via Padova, 67, 35010 Vigonza (PD) (IT).

(74) Agent: **BRAIDOTTI, Andrea**; c/o PRAXI Intellectual Property S.p.A. - Venezia, Via F. Baracca, 5/a, 30173 Venezia Mestre (IT).

(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))
- with sequence listing part of description (Rule 5.2(a))
- in black and white; the international application as filed contained color or greyscale and is available for download from PATENTSCOPE

(54) Title: ANTIMICROBIAL PROTEIN AND RELATIVE USES

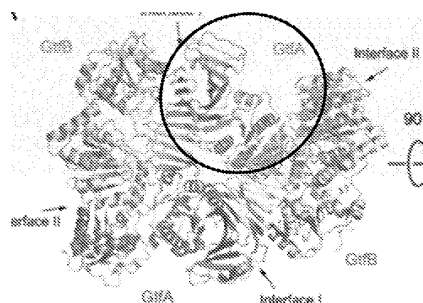


Fig. 2

(57) Abstract: The invention relates to a synthetic fusion protein having high antimicrobial activity. In particular, the invention relates to the use of said protein to eliminate pathogenic microorganisms from environments and surfaces. In particular, the synthetic fusion protein object of the present invention can be used in the preparation of disinfectant solutions that can be used in the outpatient, hospital and domestic field, in high traffic environments, in filters of air inlet and extraction systems or air conditioners or air treatment unit ATU, in environments used for food preparation. In general, in all those areas where it is necessary to adopt antimicrobial prophylaxis directed against gram + bacteria, viruses, mycoplasma and fungi.

WO 2021/181355 A1