

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

(19) World Intellectual Property  
Organization  
International Bureau

(43) International Publication Date  
22 October 2020 (22.10.2020)



(10) International Publication Number  
**WO 2020/212901 A1**

(51) International Patent Classification:

A61P 31/04 (2006.01) A61P 31/22 (2006.01)  
A61P 31/10 (2006.01) C07C 229/16 (2006.01)  
A61P 31/12 (2006.01) A61K 31/225 (2006.01)  
A61P 31/20 (2006.01)

(21) International Application Number:

PCT/IB2020/053607

(22) International Filing Date:

16 April 2020 (16.04.2020)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

1905390.9 16 April 2019 (16.04.2019) GB

(71) Applicant: **ALECTRONA PTE. LTD.** [SG/SG]; Hudson Technocentre, 16 New Industrial Road, #05-03/04, Singapore 536204 (SG).

(72) Inventors: **BABIKIAN, Haig**; Hudson Technocentre, 16 New Industrial Road, #05-03/04, Singapore 536204 (SG).  
**JIAHAVANON, Benjamin**; Hudson Technocentre, 16 New Industrial Road, #05-03/04, Singapore 536204 (SG).

(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,

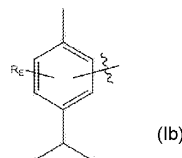
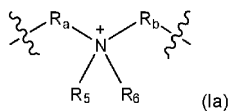
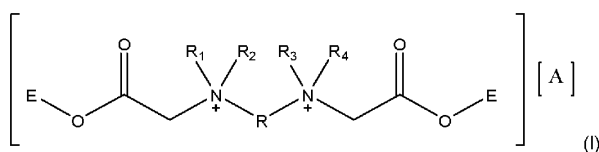
HR, HU, ID, IL, IN, IR, IS, JO, JP, KE, KG, KH, KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, SC, SD, SE, SG, SK, SL, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, WS, ZA, 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))

(54) Title: QUATERNARY AMINE COMPOUNDS WITH ISOPROPYLMETHYLPHENOL ESTER MOIETIES AS ANTIVIRALS, ANTIBACTERIALS AND ANTIMYCOTICS



(57) Abstract: Disclosed are compounds having the following formula (I): Formula (I) wherein R is an alkylene chain having between 8 and 20 carbon atoms, and A is one or more anions having a total charge of -2, or R is a quaternary amine having the following formula (Ia): Formula (Ia) wherein Ra and Rb are each an alkylene chain having between 8 and 20 carbon atoms, and A is one or more anions having a total charge of -3; R1, R2, R3, R4, R5 and R6 are each independently selected from C1-10 alkyl and H; E has the following Formula (Ib), wherein the ester oxygen is bonded to the aromatic ring of each E at the same position, the position being position 2 or 3; and wherein RE is H or a halide.