



(51) International Patent Classification:

A61K 31/047 (2006.01) *A61K 31/14* (2006.01)
A61K 31/055 (2006.01) *A61K 33/24* (2006.01)
A61K 31/085 (2006.01) *A61K 33/30* (2006.01)
A61K 31/122 (2006.01) *A61P 27/02* (2006.01)

(21) International Application Number:

PCT/US2010/059160

(22) International Filing Date:

7 December 2010 (07.12.2010)

(25) Filing Language:

English

(26) Publication Language:

English

(71) Applicant (for all designated States except US): **COL-GATE-PALMOLIVE COMPANY** [US/US]; 300 Park Avenue, New York, NY 10022 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **DU-THUMM, Laurence** [US/US]; 16 Woodfield Court, Princeton, NJ 08540 (US). **SCHAEFFER-KORBYLO, Lyndsay** [US/US]; 24 Clearbrook Lane, Flemington, NJ 08822 (US). **SANTOS, David** [US/US]; 9 Comstock Road, Edison, NJ 08817 (US). **JARACZ, Stanislaw** [CZ/US]; 22 Heather Drive, Somerset, NJ 08873 (US).

(74) Agent: **HEBLE, Nikhil, A.**; Colgate-Palmolive Company, Patent Department, 909 River Road, Piscataway, NJ 08855 (US).

(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, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PE, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, 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, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, 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, ML, MR, NE, SN, TD, TG).

Published:

— with international search report (Art. 21(3))

(54) Title: ORAL CARE COMPOSITIONS COMPRISING A QUINONE AND A FURTHER ANTIMICROBIAL AGENT

(57) Abstract: Described herein are compositions comprising a quinone and one or more antibacterial agents, and methods of preparing and using the same.



WO 2012/078135 A1