Antifungal and Antibacterial Metabolites from a French Poplar Type Propolis

During this study, the in vitro antifungal and antibacterial activities of different extracts (aqueous and organic) obtained from a French propolis batch were evaluated. Antifungal activity was evaluated by broth microdilution on three pathogenic strains: Candida albicans, C. glabrata, and Aspergillus fumigatus. Antibacterial activity was assayed using agar dilution method on 36 Gram-negative and Gram-positive strains including Staphylococcus aureus. Organic extracts showed a significant antifungal activity against C. albicans and C. glabrata (MIC80 between 16 and 31 µg/mL) but only a weak activity towards A. fumigatus (MIC80 = 250 µg/mL). DCM based extracts exhibited a selective Gram-positive antibacterial activity, especially against S. aureus (SA) and several of its methicillin-resistant (MRSA) and methicillin-susceptible (MSSA) strains (MIC100 30–97 µg/mL). A new and active derivative of catechin was also identified whereas a synergistic antimicrobial effect was noticed during this study.
[7] http://okina.univ-angers.fr/p.richomme/publications
[8] http://okina.univ-angers.fr/publications?f%5Bkeyword%5D=15242
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