Chemical constituents and antimicrobial activity of the leaves of Caryota mitis Lour. (Arecaceae)

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Abstract:

Phytochemical analysis and chromatographic fractionation of the total ethanolic extract of Caryota mitis Lour. resulted in isolation and identification of ten compounds, two of them are firstly reported in the family Arecaceae; kaempferol-3-O-rutinoside (8) and chlorogenic acid methyl ester (10), six compounds are firstly reported in the plant; β-amyrin (1), β-sitosterol (2), β-sitosterol-3-O-β-D glucoside (3), kaempferol (4), quercetin (5), kaempferol-3-O-β-D-glucopyranoside (6) and two compounds previously isolated from the plant; quercetin-3-O-β-D-glucopyranoside (7), quercetin-3-O-rutinoside (9). The structures were identified and confirmed through different spectroscopic methods including 1H-NMR, 13C-NMR, EI-MS and UV spectroscopy, in addition to comparison with authentic samples. Antimicrobial assay of the different extracts and fractions revealed strong antibacterial activities on Staph. aureus more than E. coli; in addition to moderate antifungal activity of n-butanol and aqueous fractions against Candida albicans.

Keywords:

Caryota mitis, Antimicrobial, Arecaceae, flavonoids

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