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Research Article

Heterophynone and methyl ester of Colic acid, two new compounds with antimicrobial activity from *Cola heterophylla* (Sterculiaceae)

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Abstract

The ethyl acetate fraction, the stem bark and the residual methanolic extracts from the leaves of *Cola heterophylla* (Sterculiaceae) led to the isolation of two new compounds: Heterophynone (**1**) and methyl ester of Colic acid (**6**), along with four known triterpenes: betulinic acid (**2**), oleanolic acid (**3**), ursolic acid (**4**) and chletric acid (**5**). Structures of compounds were established by different spectroscopic methods that included 1D and 2D NMR experiment. The antimicrobial activity of isolated compounds was evaluated against two yeasts, *Candida Albicans* NR 29456 and *Candida Krusei* 1415; and five Gram-positive bacterial, *Salmonella enteric Serovar Muenchem*, *Salmonella enteric Serovar Thyphimurium*, *Staphylococcus aureus* NR 46003, *Staphylococcus aureus* NR46374 and *Pseudomonas aeruginosa* HM 601). Among tested compounds, Heterophynone was found to be the most active with significant antimicrobial activity against *Salmonella enteric Serovar Thyphimurium* (MIC = 7.82 µg/mL and MBC = 62.5 µg/mL) and good activity against *Candida Albicans* NR 29456 (MIC = 62.5 µg/mL).



Keywords: *Cola heterophylla*, heterophynone, methyl ester of Colic acid, antimicrobial

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Disclosure statement

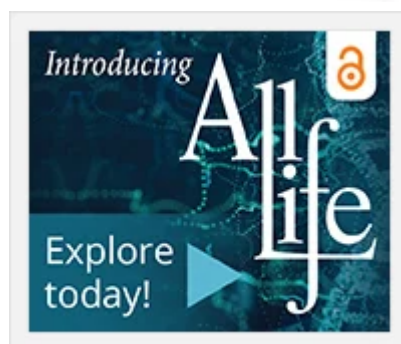
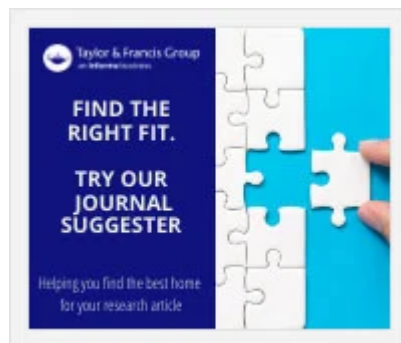
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