

Chemical prospection of Dalbergia miscolobium extract with antiplasmodial potential

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Abstract

Dalbergia miscolobium Benth. (Fabaceae) is an endemic plant of Cerrado popularly known as “jacarandá-docerrado”. Species of this genus have secondary metabolites of class of flavonoids and different biological activities such as antibacterial and antimalarial. In this work, *D. miscolobium* was evaluated against *P. falciparum* using SYBR Green method. Crude extract of stem bark of *D. miscolobium* revealed antiplasmodial activity, with an IC₅₀ = 8.4 ± 0.4 µg/mL and SI of 16.9 ± 0.9. In order to investigate the chemical profile of active extract, a method involving liquid chromatography-high resolution quadrupole-time of flight mass spectrometry (LC-HRMS) was developed. By using Data Analysis 4.0 software and Bruker Smart Formula and comparing to literature data, nine compounds were identified including tannin, flavonoid, phenol, aromatic carboxylic acid and sesquiterpenoid class. Among compounds identified, similar compounds to benzoic acid and procyanidin have revealed previously antimalarial potential.

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Keywords

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