10th Brazilian Conference on Natural Products
XXXVI RESEM
4-7 November 2025, Belo Horizonte, MG, Brazil

Section: 05

PHYTOCHEMICAL CHARACTERIZATION, ANTINOCICEPTIVE POTENTIAL, AND SAFETY ASSESSMENT OF CHAMAECRISTA DIPHYLLA (L.) GREENE

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The Amazon is rich in plant biodiversity, with several species used in traditional medicine, such as *Chamaecrista diphylla* (L.) Greene, a small herb used for therapeutic purposes in treating ulcers, wounds, and constipation, has an abundance of phenolic compounds. Therefore, this study investigated the phytochemical profile of the aqueous extract of *C. diphylla*, its acute oral toxicity, antinociceptive potential, and the possible pathways involved in this activity. Manual inspection of each mirror plot between experimental mass spectra and reference available in the GNPS libraries allowed the annotation of 23 compounds. The analyzed *C. diphylla* aerial parts infusion mainly contains twelve flavonoids, including flavones, anthocyanins, flava-3-ols and flavonols. Furthermore, eight organic acids and three terpenes were also annotated. For toxicity studies, rats were treated with a limiting dose (2000 mg/kg) of aerial parts extract, followed by an evaluation of the occurrence of deaths or hippocratic, behavioral, biochemical, anatomical or histopathological signs of intoxication. Antinociceptive activity was evaluated in male mice using the writhing test with acetic acid and the pathways were investigated using opioid, cholinergic and adrenergic antagonists and K^+ channel blockers. The extract showed low acute oral toxicity and dose-dependent antinociceptive activity, possibly related to adrenergic and cholinergic pathway modulation.

Keywords: *Chamaecrista diphylla, acute toxicity, antinociceptive, folk medicine, phytochemistry.*