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EVALUATION OF THE CHEMICAL COMPOSITION AND ACTIVITY OF THE ETHANOLIC EXTRACT FROM THE AERIAL PARTS OF *Mandevilla velame*

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Mandevilla velame, commonly known as "Velame Branco" is a plant native to the Cerrado, traditionally used for its roots, particularly due to their anti-inflammatory activity. However, the extraction of its underground parts results in the death of the plant, raising concerns about the sustainability of its use. In this context, the present study aimed to evaluate the chemical composition and biological activities of the ethanolic extract from the aerial parts of the plant as a viable and less impactful alternative. Leaves of *M. velame* were collected in Abadia dos Dourados, Minas Gerais, Brazil (herbarium voucher: HUFU 85230). After drying and grinding, the plant material was subjected to solvent maceration. Initially, hexane was used, and the resulting extract was filtered and removed using a rotary evaporator under vacuum after 48 hours (5 repetitions), yielding the hexane extract. Subsequently, the plant material from the hexane extraction was subjected to ethanolic maceration using the same procedure, yielding the ethanolic extract. Quantitative analyses of phenolic compounds revealed the following contents: total phenolics (155.9±1.1 mg gallic acid equivalents/g extract), total flavonoids (14.37±0.0 mg quercetin equivalents/g extract), and total proanthocyanidins (32,2±0.4 mg catechin equivalents/g extract). Antioxidant assays demonstrated significant activity, with DPPH (EC_{50}: 4.25±0.23 µg/mL) and FRAP (224,69±8,4 µmol Trolox equivalents/g sample) results indicating strong antioxidant potential. Chemical characterization by liquid chromatography/electrospray ionization time-of-flight mass spectrometry (LC-ESI-MS/MS-QTOF) indicated the presence of proanthocyanidins (such as proanthocyanidin A2), phenolic acids (caffeoylquinic acid and chlorogenic acid), and flavonoids (quercetin-3*O*-glucuronide). It is concluded that the ethanolic extract from the aerial parts of *M. velame* exhibits significant antioxidant activity, attributed to the presence of phenolic compounds, reinforcing its potential as a sustainable source for natural product chemistry. Acknowledgments: FAPEMIG, CAPES and CNPq.

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