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EVALUATION OF THE SYNERGISTIC EFFECT OF *Bauhinia monandra* KURZ EXTRACT AND LASER ACUPUNCTURE IN THE MODULATION OF INFLAMMATORY MODELS

A. A. D. S. Castro*[1], R.C.C. Júnior[1], J.S. Nunes[1], E. A. Laurindo[2], L. C. Soares[2], T. M. Fernandes[2], N.M. Lima[1]; S. B. R. Castro[2], C. Souza Alves[2], A. P. Carli[1].

*allyne.dias@ufvjm.edu.br

1 - Universidade Federal dos Vales do Jequitinhonha e Mucuri, Instituto de Ciência, Engenharia e Tecnologia, Teófilo Otoni, MG, Brasil, 39803-371. 2 - Universidade Federal dos Vales do Jequitinhonha e Mucuri, Faculdade de Medicina do Mucuri, Teófilo Otoni, MG, Brasil, 39803-371.

Bauhinia monandra Kurz, popularly known as "cow's foot," belongs to the Fabaceae family and is easily recognized by its bilobed leaves that resemble the shape of a cow's foot. It is a medicinal plant widely used in traditional medicine in Brazil and other tropical regions, especially for treating diabetes, inflammatory processes, and kidney disorders. Several studies have shown that the species is a source of bioactive compounds, such as flavonoids, glycosides, tannins, and protease inhibitors, associated with antioxidant, hypoglycemic, and anti-inflammatory properties. This study aimed to evaluate the anti-inflammatory potential of the ethanolic extract of *B. monandra* Kurz (EEBm) using *in vitro* and *in vivo* models. The leaves were obtained and recorded in SisGen (AFFF12E), and the ethanolic extraction of their compounds was performed. In an *in vitro* model, cell viability and nitric oxide (NO) production were evaluated in murine macrophages (J774A.1 and RAW 264.7) treated with EEBm. The cells were cultured under controlled conditions and exposed to different concentrations of the extract (333, 100, 33.3, and 10 µg/mL) in the presence or absence of inflammatory stimulus (LPS + IFN-γ) for 48 h. Cell viability was analyzed using the MTT assay, and NO production was measured using the Griess method. In the *in vivo* experiment, the paw edema model was performed in female BALB/c mice, aged 6 to 8 weeks, approved by CEUA-Mucuri (01-2025R). Induction was performed by inoculating 20 µL of carrageenan (2.5%) diluted in phosphate-buffered saline (PBS) into one of the hind paws. Animals were treated with EEBm at concentrations of 100 and 200 mg/kg and LaserAcupuncture (LA) in unilateral acupuncture points on the lower limbs. The findings suggest that EEBm has a safe profile regarding cell viability and exerts anti-inflammatory effects at both the cellular and systemic levels. The reduction in NO production *in vitro* and the inhibition of paw edema *in vivo* indicate that the bioactive compounds present in EEBm modulate central mechanisms of inflammation. Furthermore, the combination with LA demonstrated the potential to amplify therapeutic effects, constituting an innovative and promising strategy for the management of inflammatory processes.

Keywords: Bauhinia monandra Kurz. *LaserAcupuncture; anti-inflammatory; arthritis.*

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