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EVALUATION OF THE NITRIC OXIDE PRODUCTION IN MACROPHAGES TREATED WITH *Anthaenantia lanata* EXTRACTS

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Anthaenantia lanata, capim-açu, is a grass from the Poaceae family with a wide distribution in Latin America, especially in Brazil. Traditional populations in the Mucuri Valley and the North of Minas Gerais report its use in treating respiratory illness. Excess nitric oxide (NO) can amplify inflammatory processes, aggravating immune disorders, and studies have shown that NO can influence the prevalence, pathogenesis, and progression of asthma. Objective: To evaluate the action of the aqueous and the ethanolic extracts of *A. lanata* on the NO production. Materials and Methods: The aerial parts of A. lanata were obtained at two different times, late summer and winter, recorded in SisGen (A6A292B), and aqueous and ethanolic extraction of their compounds was performed. J774A.1 macrophages ($2x10^5$ cells.mL^{-1}) were cultured in supplemented RPMI-1640 medium, stimulated or not with LPS (1 µg.mL^{-1}) and IFN-γ (0.9 ng.mL^{-1}) and treated with aqueous or ethanolic extracts at concentrations of 333, 100, 33 and 10 µg.mL^{-1}. The MTT test was carried out to assess viability in unstimulated cells. NO production was assessed by the Griess method in the supernatant of stimulated cells. Results: The aqueous extract had a lower effect on NO reduction and showed greater cytotoxicity when collected in late summer. The ethanolic extracts reduced the NO production (late winter 2.27±0.91, 3.68±0.75, 3.70±0.72, late summer 2.11±0.35, 2.27±0.35, 2.30±0.37 *vs.* 5.66±0.67 (stimulated not-treated cells)) at higher concentrations (333, 100, and 33 µg.mL^{-1}), with lower cytotoxicity, especially when collected in late summer. Conclusion: The ethanolic extract of *A. lanata* from late summer effectively reduced NO production without altering viability. Further studies should be carried out to evaluate its potential use for treating inflammatory disorders such as asthma.

Keywords: *Anthaenantia lanata, ethanolic extract, inflammation.*

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