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CYTOTOXICITY OF *LOBELIA BRASILIENSIS* (CAMPANULACEAE) LEAF AND FLOWER EXTRACTS IN MURINE L929 FIBROBLASTS

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Lobelia brasiliensis A.O.S.Vieira & G.J.Sheph. (Campanulaceae), an endemic and rare species of the Federal District, is considered a bioindicator of flooded areas (*veredas*), remains pharmacologically unexplored despite the documented bioactivity of congeners within its genus. Therefore, in this study, the toxicity of ethanolic extracts, obtained from leaf and flower of *L. brasiliensis*, on murine L929 cells was investigated. The cytotoxicity was assessed via MTT assay [1], with extracts tested at concentration ranging from 0.0625 mg/mLto 1 mg/mL. Cell density was adjusted to 20,000 cells/well, and the tests were conducted in triplicate. The experiment included controls for cells (negative control), MTT reagent, solvent, and the color of the extracts. Absorbance was measured at 570 nm. The leaf extract showed mild cytotoxic activity against L929 cells, with an estimated IC_{50} value of 1.169 mg/mL. In contrast, the flower extract exhibited markedly potent cytotoxicity, reducing cell viability to 5.484% at 1 mg/mL, with an IC_{50} value of 0.317 mg/mL. approximately 3.7-fold more potent than the leaf extract. The disparity suggests a distinct phytochemical profile between plant organs. These findings provide the first evidence of the cytotoxicity potential of *L. brasiliensis* and highlight its flowers as a particularly promising source of bioactive compounds. Further phytochemical investigation to isolate and identify the compounds responsible for the activity, alongside assays on a broader panel of cell lines, is warranted to assess its therapeutic potential.

Keywords: *Lobelia brasiliensis*, MTT, Cerrado, cytotoxicity

References: 1. VAN MEERLOO, J.; KASPERS, G. J. L.; CLOOS, J. Cell sensitivity assays: the MTT assay. In: S. D. SHI (Ed.). Methods in Molecular Biology, v. 731, p. 237-245, 2011. DOI: 10.1007/978-1-61779-080-5_20