10th Brazilian Conference on Natural Products
XXXVI RESEM
4-7 November 2025, Belo Horizonte, MG, Brazil
Section: 05

THERAPEUTIC AND PROTECTIVE POTENTIAL OF Monteverdia ilicifolia IN TYLOXAPOL-INDUCED HYPERLIPIDEMIC MICE

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Maytenus ilicifolia, native to South America, is a medicinal plant traditionally used for its gastroprotective properties, notoriously rich in phenolic compounds. Previous studies from our laboratory (DOI: 10.1016/j.biopha.2021.112049; 10.3390/foods12112097) have demonstrated that fractions rich in polyphenols have beneficial effects in models of acute dyslipidemia. In the present study, the effects of different concentrations of the crude extract of the plant on cholesterol and triglyceride levels in C57BL/6 mice with Tyloxapol-induced hyperlipidemia were evaluated. C57BL/6 mice were divided into seven experimental groups with n = 6 animals each: Group 1 (N) normolipidemic (negative control: without Tyloxapol, without extract); Group 2 (NT) normolipidemic treated with 400 mg/kg EE-MI (toxicity group: extract 400 mg/kg); Group 3 (H) hyperlipidemic treated with salines solution; Group 4 (HS) hyperlipidemic treated with simvastatin; Group 5 (H100) hyperlipidemic treated with EE-MI 100 mg/kg; Group 6 (H200) hyperlipidemic treated with EE-MI 200 mg/kg; Group 7 (H400) hyperlipidemic treated with EE-MI 400 mg/kg. Hyperlipidemia was induced by intraperitoneal administration of Tyloxapol every 48 hours for 21 days. The treated groups received doses of 100, 200 or 400 mg/kg of extract by oral gavage. Serum levels of total cholesterol and triglycerides were monitored, measured with Labtest® kits. The groups treated with plant extract showed a significant reduction in triglyceride and total cholesterol levels compared to the hyperlipidemic group, with more expressive responses at doses of 100 mg/kg and 200 mg/kg. The crude extract of *Maytenus ilicifolia* demonstrated promising therapeutic potential in modulating lipid parameters associated with hyperlipidemia. The results suggest significant lipid-lowering activity, especially at doses of 100 and 200 mg/kg, reinforcing the therapeutic potential of the plant as a source of new natural agents against metabolic disorders. Acknowledgements: CAPES, CNPq, FAPEMIG

Keywords: *Maytenus ilicifolia; Phenolic compounds; Tyloxapol; Hypolipidemic activity; Espinheira-Santa*