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

Section: 05

EXPLORING THE ANTILEISHMANIAL PROPERTIES OF *LANTANA CAATINGENSIS* MOLDENKE (VERBENACEAE): A PHYTOCHEMICAL APPROACH

Iolanda Souza do Carmo[1], **José de Sousa Lima Neto[2]***, Paulo de Sousa Lima Júnior[3], Sidney Gonçalo de Lima[1], Jardes Figuerêdo do Rêgo[4], Valéria Carlos de Sousa,[5] Laiz Pinheiro Santos,[5] Rita de Cássia Viana de Carvalho,[5] Lucas Maciel Mauriz Marques,[6] Norberto Peporine Lopes,[6] Fernando Aécio de Amorim Carvalho[7], Antônia Maria das Graças Lopes Citó[1]

jose.sln@ufma.br

1 - Programa de Pós-Graduação em Química, UFPI, Av. Universitária, sn, lado ímpar, Teresina, PI. 2 - LEAF, Departamento de Biologia, UFMA, Av. Portugueses, 1966, São Luís, MA. 3 - Curso de Farmácia, UFPI, Av. Univsersitária, sn, lado ímpar, Teresina, PI. 4 - Coordenação do Curso de Engenharia Civil, AFYA, Teresina, PI. 5 - BioLeish, UFPI, Av. Universitária, sn, lado ímpar, Teresina, PI. 6 –NPPNS_LAB, Departamento de Ciências BioMoleculares, FCFRP, USP, Av. do Café, Ribeirão Preto, SP. 7 – Departamento de Biofísica e Fisiologia, UFPI, Av. Universitária, sn, lado ímpar, Teresina, PI.

Lantana caatingensis Moldenke (Verbenaceae) is an endemic plant from northeastern Brazil. However, its chemical composition is almost unknown. This study aimed to characterize the chemical compounds found in *L. caatingensis* and investigate the antileishmanial potential of its hydroalcoholic extract and polar fractions. Compounds present in the hydroalcoholic extract obtained from *L. caatingensis* leaves and its polar fractions (ethyl acetate and methanolic) were analyzed by Liquid chromatography with a photodiode-array detector coupled an electrospray ionization quadrupole Time-of-Flight mass spectrometry. An antileishmanial assay was performed in a 96-well plate against *Leishmania major* promastigotes using resazurin on a plate spectrophotometer and the results were expressed as percentage of growth inhibition. Nine compounds were determined in the investigated extract and fractions, classified as flavonoids and *C*-glycosides derivatives, as well as the phenylethanoid glycosides and the antileishmanial activity revealed that both the hydroalcoholic extract and the ethyl acetate fraction were active against of *L. major* promastigotes with inhibitory concentration of 71.78 and 26.86 µg mL^{-1}, respectively, while the methanolic fraction was inactive (478.40 µg mL^{-1}). This is the first report on the chemical composition and antileishmanial activity of *L. caatingensis* extracts. These results contribute to further knowledge on species belonging to the *Lantana* genus. The authors thank the support from their institutions, Capes, CNPq and PPBioAmar.

Keywords: *flavonoids, phenylethanoids, mass spectrometry, promastigotes, natural products*