



LITERATURE REVIEW OF THE PHYTOCHEMISTRY OF THE GENUS *OXANDRA* (ANNONACEAE) AND ANNOTATION OF ALKALOIDS PRESENT IN THE LEAVES OF *OXANDRA MARTIANA*

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Natural products play a central role in modern science, serving as key sources of bioactive molecules. The Annonaceae family, with approximately 2,500 mostly tropical species, stands out for its phytochemical diversity. Within it, the genus *Oxandra*, comprising 29 recognized species, is promising for the search for bioactive compounds, although still poorly studied chemically and pharmacologically. *Oxandra martiana*, endemic to Brazil and found mainly in the Atlantic Forest, has no previous records regarding its chemical profile or biological activity. This study aimed to characterize the phytochemical profile of its leaf extract. A phytochemical database for the genus was first compiled through a literature review, which showed that only 6 of the 29 species had been chemically and/or pharmacologically studied, totaling 64 compounds from various classes. The crude ethanolic extract of *O. martiana* leaves was partitioned with hexane, dichloromethane, and butanol. Using the compiled database as reference, fractions were analyzed by HPLC-ESI-MS and dereplicated, allowing the annotation of several alkaloids. Precursor ions and fragmentation patterns matched known alkaloids: 5-hydroxy-6-methoxyonychine (m/z 242), anonaine (m/z 266), 7-hydroxy-5,6-dimethoxyonychine (m/z 272), liriodenine (m/z 276), aristolactam BII (m/z 280), norushinsunine (m/z 282), *N,N*-dimethylxylopine (m/z 324), parvinine (m/z 328), reticuline (m/z 330), corytenchine (m/z 342), and tetrahydropapaverine (m/z 344). Identification was based on MS/MS fragmentation patterns and confirmed by literature data. The alkaloid profile included various isoquinoline types, consistent with those reported in other species of the genus. This preliminary investigation provides essential insight into the chemistry of *O. martiana* and supports future studies on the isolation and characterization of bioactive compounds with pharmacological potential.

Keywords: *Oxandra martiana*, chromatography, phytochemistry, mass spectrometry (MS), literature review.

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