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PHYTOCHEMICAL EVALUATION OF PSITTACANTHUS ACINARIUS (Mart.) Mart. IN DIFFERENT HOSTS

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Parasitic plants obtain nutrients from their hosts through haustoria, specialized structures that connect to the vascular system and enable the exchange of water, nutrients, and metabolites. Although they can negatively affect crop productivity and health, they may also possess relevant medicinal properties. Descriptive phytochemical studies are crucial to elucidate their chemical diversity and ecological interactions; however, research in this field remains scarce, as only a small fraction of parasitic species has been thoroughly investigated, limiting our understanding of their biological and therapeutic potential. The present project aims to explore the chemical constituents of *Psittacanthus acinarius* (Mart.) Mart. in different hosts, focusing mainly on the species *Astronium fraxinifolium* Schott and *Andira inermis* (W.Wright) DC. The species were collected in the Pantanal, comprising parasitized and non-parasitized hosts, as well as the parasite. From the powdered plant material, a small-scale extraction was performed using methanol/water, followed by analysis with HPLC-ESI-qTOF-MS. The data were processed using DataAnalysis and MZMine, and clusters were generated via the online platform GNPS. From these clusters, a detailed data analysis was carried out, revealing that one of the parasite species, when compared with its parasitized and non-parasitized hosts, presented an unidentified compound (*m/z* 399.1259) absent in the others. Sequential maceration was then conducted with hexane, ethyl acetate, and ethanol, and the fractions related to the unidentified compound were evaluated by HPLC to initiate the isolation process. A chromatographic column was prepared in an attempt to reduce chemical variability; however, the isolation process will continue with preparative HPLC. In conclusion, our study revealed the presence of a chemical compound not identified in existing databases, which may have been generated through the parasite–host interaction. This finding promoted the ongoing process of isolation and structural elucidation. The authors acknowledge FCF-USP for providing the infrastructure and FAPESP (processes 2024/15443-0; 2022/08191-9) for financial support.

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