

BIOGUIDED PHYTOCHEMICAL STUDY OF *Annona mucosa*: ISOLATION AND IDENTIFICATION OF ACETOGENINS AND LIGNANS

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Annona mucosa, a tropical fruit tree, popularly known as “biribá”, is employed in folk medicine as therapeutic agent and for the treatment of tumors. Its phytochemical study revealed it as a great source of secondary metabolites such as acetogenins, alkaloids and lignans [1]. Data from literature reports acetogenins and lignans as classes of compounds with potential insecticide and fungicide activities, respectively [2,3]. In this perspective, this work aimed the phytochemical study of *A. mucosa* bioguided by insecticide bioassays against workers of leaf-cutting ants and fungicide bioassays against its symbiotic fungus, *Leucoagaricus gongylophorus*. Preliminary results from these bioassays showed great biological potential of the ethanolic extracts from leaves (MUL) and seeds (MUS) of *A. mucosa*. Therefore, these extracts were submitted to a liquid-liquid partition resulting in hexanic (MULHe), dichlorometanic (MULD), ethyl acetate (MULEa) and hydroalcoholic (MULHi) fractions for the leaves extract and hexanic (MUSHe) and hydroalcoholic (MUSHi) fractions for seeds extract. After new bioassays with all these fractions, the MULHe, MULD and MUSHi fractions were chosen for phytochemical studies. For the isolation of the metabolites, adsorption and exclusion chromatographic techniques such as column chromatography with silica-gel and sephadex LH-20 as stationary phase and HPLC with C-18 as stationary phase were employed. All compounds were identified using NMR and MS techniques and comparison with literature data. The phytochemical study of *A. mucosa* resulted in isolation of 4 acetogenins, rolliniastatin-1 and 2, jimenezin and a novel one, and 3 lignans, magnolin, membrin and magnolin (Figure 1). The acetogenins are been submitted to the insecticide bioassay while the lignans are been submitted to the fungicide bioassay to confirm the biological potential of these compounds.

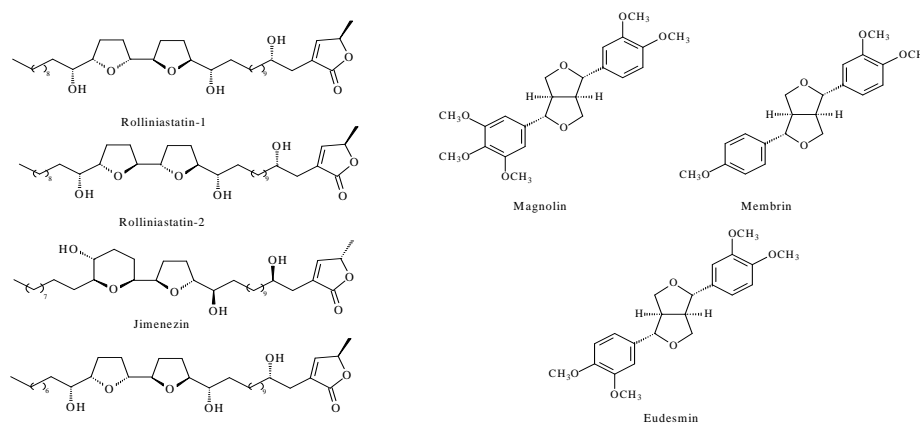


Figure 1: Acetogenins and lignans isolated from *A. mucosa*

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