

DIBENZYL BUTIROLACTONES LIGNANES FROM LEAVES OF *Zanthoxylum monogynum* A. ST-HILL.

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Abstract: Rutaceae family has about 150 genera with about 900 species spread in tropical, subtropical and temperate regions. *Zanthoxylum* is a genus of Rutaceae with a great diversity comprising over 200 species and it occurs in Brazil especially in mountainous and scrub forests. Classes of special metabolites already identified out of the species of the genus are: alkaloids, coumarins, lignans, amides, terpenoids and flavonoids [1]. *Z. monogynum* is popularly known as tinguaciba, tinguaciba-da-restinga, limãozinho and limão-bravo and occurs in Brazil in the states of Alagoas, Espírito Santo, Goiás, Minas Gerais, Pernambuco, Rio de Janeiro and São Paulo. Leaves were collected in Itatiaia National Park in Rio de Janeiro, separated, dried and pulverized. 100g of the powder was extracted with ethanol which was evaporated under vacuum. Ethanol extract was submitted to a selective partition with hexanes, dichloromethane and ethyl acetate. Dichloromethane fraction was fractionated by adsorption chromatography in silicagel, affording 72 fractions which were grouped into 12 fractions, according to visualization in TLC after spreading with a solution of H₂SO₄ 2% and further warming. Fractions ZMPD 31, 36 and 39 showed spots that might indicate pure compounds and were submitted to analysis by GC-MS and ¹H and ¹³CNMR (1D and 2D). Comparison of the data with the literature led to the identification of three dibenzylbutirolactone lignans: cubebin, hinokinin and matairesinol. These lignans have been already found in other species of *Zanthoxylum*, but this is the first report of their identification in *Z. monogynum*. Literature reports studies that show all the lignans have leishmanicidal, trypanocidal and antitumor activities among several others [2,3,4]. These previous results shows that this plant might be a good aim for further bioguided studies.

References:

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