TITLE: ***Evaluation of chemical and biological activities of Coccoloba mollis.***

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ABSTRACT

Coccoloba mollis (Polygonaceae) is a plant that is being used as medicine in Londrina (memory herb), this specie has been praised as efficient in the treatment of stress, and as memory modulator. This work presents the chemical evaluation of the root and leaf ethanolic extracts of C. mollis and biological tests. The extracts were submitted to usual chromatographic methods of separation and purification in Natural Products Chemistry. Leading to the isolation of the following constituents: In the leaves and roots were identified aliphatic hydrocarbons (C-16 to C-31 except -17 and C-28 to C-34 except C-30 and 31 respectively) and fatty acids ethyl esters (C – 18, 22, 24, 25 and 27 and C – 12, 15, 18, 22, 25, 26, and 27 respectively) . In the roots they were identified two anthraquinones emodin (1,6,8-trihydroxy-3- methyl-anthraquinone) and fission (1,8-dihydroxy-3-methyl-6-metoxianthraquinone). In the leaves one triterpen taraxerone (13 - methyl - 27-norolean-14-en-3- one (d-friedoolean-14-en-3-one)) and diethyl malate. Phytochemical screening have been characterized using pharmacognostic methods to determine the major chemical groups present in roots and leafs of this species. Flavonois and tannins in both and anthraquinones in roots. The extracts of roots and leaves were sunjected to biological tests: Evaluation of antioxidant activity (DPPH), antimicrobial activity, allelopathy, lethality of Artemia salina and maternal toxicity in mice. The antioxidant activity (CMI50 µg/mL) das folhas (10.11 ± 0.12) e raizes (15.96 ± 0.55) are similar of BHT (butylateg hydroxytoluene). Antimicrobial tests roots showed the best results as antibacterial and the leaves as antifungal. Roots presented toxicity larger against Artemia salina than leaves. and both extracts don’t’ show maternal toxicity at the concentrations assayed. The isolated anthraquinones showed antifungal activity.

Key words: Coccoloba mollis. Chemical evaluation. Antioxidant. Antimicrobial. Maternal toxicity.