GENIPA AMERICANA L. AS A SOURCE OF SECONDARY METABOLITES WITH ANTIOXIDANT PROPERTY

Theme: Biodiversity Information Systems

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Introduction *Genipa americana* L. is a South America spontaneous shrub whose fruits are consumed both *in natura* and mixed with other foodstuffs. Some medicinal properties were described for this fruit species, as diuretic and antianemic. Epidemiological studies show that dietary intake of antioxidant substances from plants is associated with health maintenance. This work describes the radical scavenging capacity (RSC) of different extracts of *G. americana* L. fruits and the isolation of a apecific secondary metabolite from these fruits.
Methodology *Dot-blot assay for antioxidant capacity:* Freeze dried fruits of *G. americana* L. were extracted with methanol. The supernatant was filtrated from the solid residue and solvent was removed under reduced pressure. Methanolic extract was partitioned in hexane, chloroform, ethyl acetate, buthanol and each extract was evaluated for RSC by thin layer chromatography (TLC) using DPPH (1,1-diphenylpicrylhydrazyl free radical).
Isolation and identification of G. americana compounds: ethyl acetate extract was fractionated under column chromatography with ethyl acetate and methanol in a increGasing polarity gradient. Fractions of 10 mL were collected and analyzed by TLC. Pure compounds were identified by NMR techniques and structures were proposed from literature data.
Results and Discussion Different polarities extracts from *G. Americana* fruits have antioxidant properties, as depicted by DPPH reaction in the dot-blot assay. Qualitative analysis revealed that chloroform and ethyl acetate extracts contained the majority of compounds responsible to antioxidant activity. A glycosylated iridoid geniposide, isolated from ethyl acetate extract, was identified by 1H and 13C NMR) significantly contributed to the antioxidant capacity of total extract.
Conclusions From TLC screening was assay possible to access *G. americana* fruits antioxidant capacity and also lead to the isolation of an antioxidant a glycosylated iridoid.

Key words: Genipapa americana, bioactive compounds, antioxidant activity, iridoid geniposide