Pharmacognostic Characterization of *Campomanesia xanthocarpa* O. Berg Myrtaceae

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Campomanesia xanthocarpa Berg, a species that belongs to the Myrtaceae family, is popularly known as gabiroba. Several therapeutic properties are attributed to the various *Campomanesia* species, such as treating diarrhea, fever, cystitis and urethritis. This project aims at contributing through a chemical and pharmacological study of lyophilized hydrated alcohol extract and the vegetable drug made from leaves. The pharmacological and botanical features of the vegetable drug are indicated in order to help with the diagnosis. Main macroscopic features of the dehydrated leaves include: wavy edges, translucent blade spots, venation type, blade and leafstalk forms and scent. The main anatomical features are: dorsiventral mesophyll; large idoblasts containing prismatic crystal in the palisade parenchyma; predominance of anomocytic stomata in the hypostomatic leaves, globose segregating cavity associated to both surfaces, covered by cells organized in pairs where the commissure wall appears straight, sinuous, or in zigzag; bicollateral vascular bundle and system organized in an open arch, prismatic crystals in the phloem region. Photomicographs illustrate the study. The phytochemical screening of the vegetable drug and the lyophilized extract (EHA) indicated the presence of essential oil, flavonoids, tannins and saponins. The essential oil content in the fresh leaves was 0.11%. Linalol (29%) and globulol (20%) were identified as the main oil components. Tannin content was 2.86% in the drug and 8.49% in the EHA extract. The saponin content was 6.27% in the drug and 16% in the EHA extract. The extract displayed a high antioxidant activity in the model of malonyl dialdehyde production measure with $Q_{1/2}$ = 0,2891 ìg/mL. In the copper sulfate-induced lipoperoxydation inhibition assay the EHA extract significantly reduced Lag-time and Peak-time for low-density lipoprotein (LDL) oxidability. The EHA extract displayed antiulceration activity in the acute induction model by hydrochloric acid in ethanol, with a 62% protection percentage. The EHA extract displayed antibacterial activity with: CMI >1,000 and <500 mg/mL relative to *Staphylococcus aureus*; CMI <500 and >100 mg/mL for *Salmonella cholerasuis* and CMI <1.000 and >500 mg/mL regarding *Candida* albicans. The EHA extract displayed cytotoxic activity in the *artemias* lethality trial, with DL_{50} of 0,503 mg/mL. The EHA extract displayed no toxicity in the acute toxicity trial in the 5g/kilo oral dosage per animal body weight.

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