B155 Evaluation of the gastroprotective activity of *Curatella americana* (Dilleniaceae), a Brazilian "Cerrado" medicinal plant

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In folk medicine bark of *C. americana* is used to bathe cuts and to treat arthritis, gastric ulcer and diabetes. When previously administered (p.o.) at doses of 250, 500 and 1000 mg kg $^{-1}$, the crude extract (CEB) of *C. americana* bark or cimetidine (100 mg kg^{-1}) significantly reduced ($p<0.05$) the gastric lesion index induced by HCl/ethanol solution (29, 70, 87 and 42 %, respectively). In the indomethacin/bethanechol-induced gastric-ulcer model in mice, at oral doses of 500 and 1000 mg kg^{-1}, the CEB or cimetidine significantly reduced ($p< 0.001$) the formation of gastric lesions in 42, 52 and 65 % respectively, when compared to the control group. CEB also inhibited the occurrence of gastric lesion induced by stress. In this model CEB (500 mg kg^{-1}) inhibited occurrence in 66 %, while cimetidine, the positive control, presented an 86 % increase of inhibition. We used the oral and intraduodenal route to administer CEB (500 mg kg $^{-1}$) to Shay's mice. In the pylorus-ligature, the CEB (p.o.) only decreased the gastric lesion index (35%) when compared with the control group ($p< 0.01$). But when the CEB was administered intraduodenally to mice, significant modifications were found such as a decrease in gastric acidity (4.12 ± 1.40 mEq ml^{-1} 4h) and increase in pH (5.14 ± 0.53) of gastric juice compared with the control group ($p<0.01$). Although the mechanism underlying this antiulcerogenic effect remains unknown, it seems to be related to presence of tanin in the bark. The good results obtained of CEB suggest the need for pharmacological research of this plant as a potential new antiulcerogenic drug.

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B156 *Qualea grandiflora* Mart. (Vochysiaceae): Evaluation of the gastroprotective activity of a Brazilian "Cerrado" medicinal plant

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Gastrointestinal disorders are among the most important causes of morbidity in populations of underdeveloped countries. An ethnopharmacological inventory of Cerrado in the central region of Brazil showed a high number of medicinal plants with uses against gastric pain and gastric disorder in general. Based on the inventory, the specie *Qualea grandiflora* was selected to study its antiulcer property. The bark of *Q. grandiflora* is used in folk medicine to treat gastric pain, inflammation and ulcers. Hydroalcoholic extracts (QHE) of *Q. grandiflora* barks were investigated for their ability to prevent ulceration of the gastric mucosa. In the HCl/ethanol gastric model, the oral administration of QHE (1000 and 500 mg/Kg) or cimetidine (100 mg/Kg) produced a significant reduction of gastric lesion index by 86, 54 and 63% respectively ($p < 0.001$). QHE (at the same doses) or cimetidine also significantly reduced the gastric lesions induced by the combination of indomethacin/ bethanechol by 70, 48 and 62 %, respectively ($p < 0.05$). The gastroprotective effect was also observed when QHE (500 mg/Kg) was administered to mice submitted to gastric lesion induced by stress (cold/restraint). QHE (500 mg/Kg) significantly protected the gastric mucosa (66%) against stress when compared with the control group. The pylorus-ligature experiment demonstrated that QHE (p.o. or intraduonally) did not change gastric juice parameters ($p > 0.05$). Although protective, the gastric lesion induced by gastric juice in pylorus-ligated mice (26.4 ± 6.54 mm)) occurred in animals treated with HE when compared with control group (42.1 ± 7.81 mm). The results suggest that the QHE of *Q. grandiflora* present a significant anti-ulcer effect when assessed in these ulcer-induced models. Although the mechanism underlying this antiulcerogenic effect remains unknown, our phytochemistry analyses showed the presence of flavonoids in these plants, which probably explained the antiulcerogenic effects.

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