



EVALUATION OF ANTI-ULCER AND ANTI-SECRETORY ACTIVITY OF THE ESSENTIAL OIL OF *MENTHA AQUATIC*.

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The traditional use of medicinal plants contributes to the discovery of new compounds for treatment of numerous diseases [1]. *Mentha aquatica* a plant belonging to the family of Lamiaceae, founded mainly in Europe, North Africa, West Asia in moist areas and along waterways and the genus *Mentha* are popularly used as teas due their action as carminative and antispasmodic effect [2]. This study evaluated the anti-ulcer activity of the essential oil of *Mentha aquatica*. Methods and Results: The aerial parts of *Mentha aquatica* were collected in March in the morning period in the CPQBA / UNICAMP experimental field. The essential oil (EOMa) was obtained by hydrodistillation (2h) and chemical composition was evaluated by GC/EM. The *in vivo* protocols for evaluation of anti-ulcer activity using male Wistar rats were approved by the Ethics Committee (CEUA/UNICAMP). The GC/MS analysis showed that carvone was the major component of EOMa. The anti-ulcer activity of the EOMa was evaluated in ethanol-induced gastric ulcer; the animals (n = 7) were treated (v.o.) with PBS (10 ml/kg, negative control), Carbenoxolone (200 mg/kg, positive control) and EOMa (75, 150, 300 mg/kg, respectively) one hour before administration of absolute ethanol (4 mL/Kg). After one hour, the stomachs were removed and opened along the greater curvature. The ulcerative lesions were assessed macroscopically, counted and the inhibition of ulcerative lesions index (ILU) was calculated in comparison to the negative control group [3]. The anti-secretory activity was evaluated in pylorus ligation model; the animals (n = 7) were treated (intraduodenal) with PBS (2.5 ml/kg, negative control), Cymetidine (100 mg/kg, positive control) and EOMa (75, 150, 300 mg/kg, respectively) immediately after pylorus ligation. After four hours, the stomachs were removed and the gastric content was collect to evaluation of volume, pH and hydrogenionic concentration [4]. All results were submitted to statistic evaluation (ANOVA followed by Tuckey). EOMa was able to prevent ethanol-induced ulcers in all doses in 98% quite similar to carbenoxolone (96%). Moreover, EOMa was also able to reduce the three parameters evaluated at doses of 150 and 300 mg/kg such as cymetidine. Conclusions: Based on the obtained results, the essential oil of *Mentha aquatica* showed a promissory anti-ulcer activity and further studies are ongoing to elucidate the mechanisms of action.

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References:

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