

Nerolidol, an Antiulcer Constituent from the Essential Oil of *Baccharis dracunculifolia* DC (Asteraceae)

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In this study, the antiulcerogenic effect of essential oil from *Baccharis dracunculifolia* was evaluated using the model of acute gastric lesions induced by ethanol. The ulcerative lesion index (ULI) was significantly reduced by oral administration of the essential oil of *B. dracunculifolia* at doses of 50, 250 and 500 mg/kg which reduced the lesions by 42.79, 45.70 and 61.61%, respectively. The analysis of the chemical composition of the essential oil from *B. dracunculifolia* by GC showed that this was composed mainly of mono- and sesquiterpenes and the majority compound was nerolidol. Therefore, antiulcerogenic activity of nerolidol (50, 250 and 500 mg/kg) was investigated using ethanol-, indomethacin- and stress-induced ulcer models in rat. In the stress-induced ulcer model, a significant reduction of the ULI in animals treated with nerolidol (50, 250 and 500 mg/kg) and cimetidine (100 mg/kg) was observed, compared to the control group ($p < 0.05$). The percentage of inhibition of ulcer was 41.22, 51.31, 56.57 and 53.50% in groups treated with 50, 250, 500 mg/kg of nerolidol and 100 mg/kg of cimetidine (positive control), respectively. Regarding ethanol- and indomethacin-induced ulcer models, it was observed that the treatment with nerolidol (250 and 500 mg/kg) significantly reduced the ULI in comparison with the control group ($p < 0.05$). The dose of 50 mg/kg reduced the parameters analyzed but this was not statistically significant. In the ethanol-induced model percentage of inhibition of ulcer was 34.20, 52.63, 87.63 and 50.87% in groups treated with 50, 250, 500 mg/kg of nerolidol and 30 mg/kg of omeprazol (positive control), respectively. In indomethacin-ulcer the percentage of inhibition of ulcer was 34.69, 40.80, 51.02 and 46.93% in groups treated with 50, 250, 500 mg/kg of nerolidol and 100 mg/kg of cimetidine (positive control), respectively. The results of this study show that nerolidol displays antiulcer activity, as it significantly inhibited the formation of ulcers induced in different animal models. However, further pharmacological and toxicological investigations, to delineate the mechanism(s) of action and the toxic effects, are required to allow the use of nerolidol for the treatment of gastric ulcer.

Key words: *Baccharis dracunculifolia*, Antiulcerogenic, Essential Oil, Nerolidol