A035 Immunostimulatory and anti-inflammatory *in vitro* activities of aqueous *Prunella* extracts

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The genus *Prunella* (Lamiaceae) which is represented by three species in Turkey, was primarily used as a remedy alleviating pains in the throat, expectorant, fevers and accelerating wound healing (1, 2, 3). Previously reported immunomodulatory, anti-viral and anti-inflammatory activities of *Prunella* species have made the plant interesting from the viewpoint of therapeutical applications (4, 5). In the present study, the water extracts of *P. vulgaris* and *P. laciniata* have been investigated for immunomodulatory and anti-inflammatory activities concerning their effect on the mitogenic response of murine splenocytes and nitric oxide production (NO) by murine peritoneal macrophages *in vitro*. Both extracts showed stimulation of the proliferation of lymphocytes dose dependently. This mitogenic activity is also comparable to those of known mitogens, such as concanavalin A, phytohaemagglutinin and lipopolysaccharide (LPS) at all tested concentrations. Additionally, both extracts showed suppressive effect on NO production in LPS stimulated macrophages without any cytotoxicity. These preliminary results confirmed T-cell-mitogenic effect of water extracts of *P. vulgaris* and *P. laciniata*. Our future studies will be based on an *in vivo* immunosuppression model in mice.

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A036 Antiinflammatory and antinociceptive activities in Argentine medicinal species of *Eupatorium*

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Eupatorium hecatanthum (DC.) Bak., *Eupatorium macrocephalum* Less., *Eupatorium candolleanum* H&A, are plants used in argentine folk medicine for the treatment of inflammation and pain related problems, and gastrointestinal diseases (1). Other local species of the genus studied by this group were found to posses antinociceptive activity (2)

The results of the antiinflammatory and antinociceptive studies of the infusions and dichloromethane extracts of these plants are presented. The assayed models were ear edema in mice (3), carrageenan-induced edema in rats and writhing test (4). Results are expressed as mean + SEM (n=10). A one-way anayisis of variance (ANOVA), followed by Dunnett's t-test were done.

Dichloromethane extracts of *E. hecatanthum*, *E. candolleanum* and *E. macrocephalum* (1 mg/ear, topically) produced a 63, 55 and 54% of inhibition in the ear edema test ($p < 0.01$). The most active extracts in the writhing test were *E. hecatanthum* dichloromethane extract (60 % inhibition at 300 mg/kg, p.o.), *E. hecatanthum* infusion (64%, 600 mg/kg, p.o.) and *E. candolleanum* infusion (66%, 600 mg/kg and 52%, 300 mg/kg, p.o.) ($p < 0.05$). None of the extracts showed significant activity in the carrageenan-induced edema model up to the dose of 200 mg/kg, p.o.

In conclusion, the three species showed antiinflammatory response in the ear edema model, but not in the carrageenan-induced edema test. *E. hecatanthum* and *E. candolleanum* demonstrated to posses antinociceptive activity in the writhing test. Studies on the mechanism of action, as well as bioassay-guided fractionation are in progress.

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