A037 Water extract of the mixture of Anemarrhena rhizoma and Phellodendron cortex has a relaxation effect on the prostate and urethral smooth muscle of the rat

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A new pharmaceutical composition (ADP), which contains a mixed water extract obtained from the mixture of Phellodendron cortex (*Phellodendron amurense*) and Anemarrhena rhizoma (*Anemarrhena asphodeloides*) as the active ingredients, can be used effectively for the treatment of benign prostate hyperplasia (BPH). The contractile properties of the prostate and urethral tissues mediated by alpha-adrenoceptor are known to be an important aspect of the medical treatment for BPH (1). ADP at the dose of 0.5 mg/ml showed a relaxation effect of 71.6±0.8% or 68.8±1.3% on the prostate smooth muscle of the rat contracted by phenylephrine, an agonist of alpha-adrenoceptor, or by electric field stimulation, respectively, while the relaxation effect of 62.4±1.4% on the urethral tissue contracted by electric field stimulation was observed. The dose-dependent response of ADP in the relaxation effectiveness was shown. ADP has a synergistic anti-inflammatory effect compared to each plant extract in carrageenin paw-edema method. Anemarrhena extract inhibited edema by 44±11.3% and Phellodendron extract 43.5±8.5% ($p<0.001$), but ADP showed inhibition effect by 65.0±9.2% (significantly different from the single plant extract, $p<0.05$). ADP showed also mild analgesic effect by 40.7±0.89% ($p<0.05$) in acetic acid writhing method or by 75.0±22.5% ($p<0.05$) in tail flick method. In addition, the administration of ADP in the rats with the dose for the clinical trials didn't cause the lowering effect of the blood pressure. The 50% lethal dose (LD_{50}) of ADP was determined as more than 5000 mg/kg in rats. From the above results, the relaxation effect of ADP on the prostate and urethral smooth muscle may be mediated by alpha-adrenoceptor. ADP's anti-inflammatory activity and analgesic effect of ADP is expected to be very helpful for the quality of life of the patients with BPH. Thus, ADP may be a potentially useful therapeutic agent for the treatment of bladder outlet obstruction induced by BPH, chronic prostatitis, and non-specific urological disorder.

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A038 Anti-inflammatory activity of *Jungia paniculata* (*Asteraceae*)

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Jungia paniculata (DC.) A. Gray (Asteraceae), vulgarly called *matico* and widespread found in the West Andes between 2500 and 3500 m of altitude, is an herbaceous plant employed in folk medicine as anti-inflammatory. However, biological activity of these plants has not been systematically evaluated.

The aim of the present work is to investigate its potential anti-inflammatory activity. Effects have been investigated in two experimental *in vivo* models. The carrageenan-induced rat paw edema was chosen as a model for general inflammation and the mice ear edema test using tetradecanoylphorbol acetate as inflammatory agent as topical inflammation model. Indomethacin was used as reference drug in both models: 10 mg/Kg (p.o) in general inflammation and 0.5 mg/ear in topical inflammation. Dry 50% ethanol extracts of *J. paniculata* were administered in doses of 250 and 500 mg/Kg (p.o.) in the general model, and in doses of 2.5 mg/mouse ear (six times) in the topical model. A pre-treatment by extract of *J. paniculata* in a dose of 500 mg/Kg (p.o) significantly reduced the edema (36.36%). The plant extract produced higher inhibition (93.99%) of the edema than indomethacin (74.83%). These results confirm the use of *J. paniculat*a in folk medicine as a topical anti-inflammatory herbal drug.

A qualitative reversed-phase HPLC method has been developed for the analysis of 50% ethanol extract. The method enables separation of the main constituents: flavonoids and caffeic acid derivatives.