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in collaboration with the

Society for Medicinal Plant and Natural Product Research

and

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Influence of fenugreek seed and cinnamon bark extracts on body weight, blood glucose and lipid profile in diabetic rats

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This study was conducted to investigate the effects of Cinnamonum zeylanicum bark and Trigonella foenum-groecum seeds aqueous extracts on body weight, blood glucose and lipid profile. Forty tow male rats, distributed into 6 groups of 7 rats each. One group(1) was kept as normal control, while rats of the other five groups were rendered diabetic by intraperitoneal injection of alloxan monohydrate in a dose of 150 mg/kg b.w., as a single dose. Group (2) was left as diabetic control, while rats of groups (3) and (4) were given orally fenugreek extract at 0.8 and 1.8 mg/100 mg b.w., respectively, daily for 42 days. Rats of groups (5) and (6) were given orally fenugreek extract at 0.8 and 1.8 mg/100 mg b.w., respectively, daily for 42 days. Rats of groups (5) and (6) were given orally cinnamon extract at doses of 100 and 300 mg/100 g b.w. for the same period. Serum was collected for metabolic analysis. Data were analyzed using SPSS. The results indicated that, in the diabetic state animals have significantly (P<0.05) lower body weight and significantly (P<0.05) high plasma concentrations of serum glucose, TC, TG, LDL-C and low HDL-C compared to controls. Oral administration of Trigonella foenum-graecum extract and Cinnamomum zelyanicum extract to diabetic rats for 6 weeks improved body weight and decreased blood HDL-C and glucose, while increased triglycerides and total cholesterol compared with controls. Higher doses in both extracts have effective results than lower ones and cinnamon has more potent results compared to fenugreek seed and **cinnamon bark** powders may have hypoglycemic and antihyperlipidemic effects.

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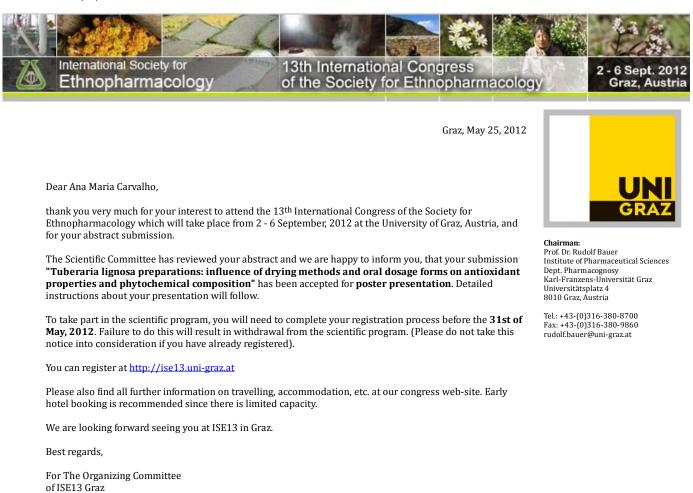
Tuberaria lignosa preparations: influence of drying methods and oral dosage forms on antioxidant properties and phytochemical composition

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Many herbal beverages used in folk medicine have pharmacological properties connected with the presence of antioxidants such as phenolic compounds. *Tuberaria lignosa* (Sweet) Samp. (Cistaceae) is one of the most popular medicinal plants in several regions of the Iberian Peninsula used to prepare herbal infusions or decoctions. In the present work, the effects of drying (freeze or shade-drying) and preparation methods (water infusion or decoction) on the antioxidant activity and phytochemical composition of wild and commercial samples of *Tuberaria lignosa* were evaluated. Infusion of the freeze-dried wild sample led to the highest levels of sugars, while infusion of shade-dried wild sample and decoction of the freeze-dried sample retained the highest ascorbic acid and phenolic compounds levels. These two samples revealed the highest antioxidant activity, even higher, in some cases, than trolox. Decoctions had lower amounts of disaccharides than infusions, which seemed to be hydrolyzed increasing the content in monosaccharides. Commercial samples showed much lower contents in phenolic compounds, mainly in ellagitanins and flavoncids, as also the lowest antioxidant activity. Data give scientific evidence to folk medicinal uses of *Tuberaria lignosa*, highlighting the interest of its decoctions and infusions as sources of bioactive compounds (e.g. phenolic compounds and ascorbic acid).

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