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Assessment of Antidiabetic Potential of *Orostachys japonicus* Extract in Streptozotocin Induced Diabetic Rats

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This study was conducted to investigate the antidiabetic potential of Wa-song (*Orostachys japonicus*) in streptozotocin induced diabetic rats. Male Sprague-Dawley rats (190 ± 10 g) were divided into 6 groups; normal, diabetic control, water extract of hot air-dried (HW) and lyophilized (LW) Wa-song (100 mg/kg BW, 500 mg/kg BW). For 4 weeks administration of HW and LW, final body weight, body weight change and FER of rats in experimental groups were increased significantly. And blood glucose level from tail vein of rats fed HW and LW was significantly decreased during experimental periods. The serum glucose level of rats was significantly decreased in groups fed with HW and LW, it showed also a significant difference between different samples. Serum GOT and GPT activities were showed a decrease compared with diabetic control after 4 weeks administration of HW and LW. Total cholesterol, triglyceride, LDL-cholesterol and atherogenic index in serum of the groups fed HW and LW were significantly different to diabetic control but closed to normal. In hepatic, glycogen content of rats fed with HW and LW was significantly increased than diabetic control. TBARS level was decreased significantly in the group fed HW and LW compared with diabetic control. Total antioxidant activity expressed as DPPH radical scavenging was significantly increased in HW at dose 500 mg/kg and LW at dose 100 and 500 mg/kg.

Key words: *Orostachys japonicus*, Antidiabetic

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Antioxidative Activities of Hagocho(*Prunella vulgaris*) Methanol Extracts

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The aim of the present study was to investigate the antioxidant activities and their compounds of Hagocho (*Prunella vulgaris*) which was divided from whole plant, flower stalk and stem. Contents of total phenolic compounds were the highest in flower stalk (77.11 mg/100 g) and the other samples were detected below 54.0 mg/100 g. Flavonoid contents were dominant in stem (36.13 mg/100 g) than other samples. Electron donating ability of *Prunella vulgaris* was activated over 70% in all sample at 500 μg/mL concentration, especially, the activity was the highest (92.1%) in flower stalk extracts. Reducing power was similar tendency to electron donating ability, which was significantly higher flower stalk (0.25～1.92), whole plant (0.22～1.55) and stem (0.21～1.47). Hydroxyl radical was scavenged over 80% in 100 μg/mL concentration, and then significantly higher in flower stalk and stem. Antioxidant activity in β-carotene-linoleic acid system, was 20.4～22.2% when 100 μg/mL methanol extracts added to reaction mixtures, but it was not significant between different parts. Ability of ABTs cation decolorization from *Prunella vulgaris* was activated over 50% in all samples when 250 μg/mL of methanol extracts added to reaction mixtures and 500 μg/mL were the most suitable concentration for its activation. Nitric oxide scavenging activity was lower under 20%, but it's activity was significantly higher in flower stalk than other parts. The result indicate that flower stalk from *Prunella vulgaris* has potent antioxidant activity.

Key words: Hagocho(*Prunella vulgaris*), Antioxidant activity