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Isolation and Characterization of Bio-active Materials from Prickly Lettuce (*Lactuca serriola*)

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The bio-active materials were isolated from prickly lettuce (*Lactuca serriola*) by using several extraction solvents. The contents of general compounds and vitamins of prickly lettuce were analysed. In addition, contents of polyphenols and flavonoids, nitrite scavenging activity, anti-oxidative activity and anti-microbial activity of methanol extracts were measured. The ethylacetate (EtOAc) fraction from methanol extracts of prickly lettuce showed the best on nitrite scavenging activity, anti-oxidant activity and anti-microbial activity. And also, the contents of polyphenols and flavonoids were the highest among all fractions. The subfraction 2 of EtOAc fraction showed the strongest anti-oxidative activity among 5 subfractions. The bio-active materials of subfraction 2 were identified as *p*-coumaric acid and caffeic acid by GC-MS. The caffeic acid showed the stronger anti-oxidative activity than *p*-coumaric acid. In addition, the anti-microbial activity was measured by using disk diffusion method and broth dilution method. The EtOAc fraction showed the strongest anti-microbial activity. Overall, these results may help to understand the biological activities of bio-active materials derived from prickly lettuce.

Key words: Prickly lettuce; Bio-active materials; Biological activity

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Antidiabetic Effect of Methanol Extract of *Tetragonia tetragonoides* on Streptozotocin-Induced Diabetic Mice

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Tetragonia tetragonoides has long been used as a traditional remedy for stomach cancer and furuncle. This study was undertaken to investigate the Antidiabetic effect of single and repeated oral administration of the methanol extract of *Tetragonia tetragonoides* in normal and streptozotocin (STZ) induced diabetic mice, respectively. In the present study, oral adiministration of *Tetragonia tetragonoides* extract (500 mg/kg body weight.) for 26 days on the level of serum glucose, total cholesterol, triglycerides, creatinine, lactate dehydrogenase, total protein, gamma-glytamyltransferase, alkaline phosphatase and body weight in normal and streptozotocin-induced diabetic mice were evaluted. Oral adiministration of the *Tetragonia tetragonoides* extract significantly decreased serum glucose, creatinine, lactate dehydrogenase, total protein, gamma-glytamyltransferase, alkaline phosphatase in diabetic mice. The data indicated that *Tetragonia tetragonoides* has anti-diabetic effect.

Key words: *Tetragonia tetragonoides*, Antidiabetic, Streptozotocin