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### **Evaluation study of the diuretic and blood pressure lowering effect of the methanolic extract of *Pachyrhizus erosus* tubers in male Sprague-Dawley rats**

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Hypertension is a condition in which the arteries have persistently elevated blood pressure. Diuretic based therapy has been proven effective in reducing morbidity and mortality in hypertensive patients. The goal of this study is to determine whether the methanolic extract of *Pachyrhizus erosus* tubers has diuretic and blood-pressure lowering effect. *Pachyrhizus erosus* exhibits a variety of pharmacological use including the utilization of its tubers through decoction which is said to be diuretic based on folkloric use. The study utilized 25 male Sprague-Dawley rats divided into five groups with five rats each. Hypertension was induced to all of the test subjects through the subcutaneous injection of Cyclosporin A with a dose of 25 mg/kgBW. Systolic blood pressure (SBP) was measured using a Non-invasive Blood Pressure apparatus utilizing tail cuffs. Then, two groups were set as positive (Hydrochlorothiazide) and negative (water) controls. The other three were given varying doses of the methanolic extract of the tubers of *Pachyrhizus erosus*: 50 mg/kg, 100 mg/kg, and 200 mg/kg orally. During the whole course of treatment, the SBP of the subjects were consistently monitored. The urine output was also recorded based on schedule, 8 hours a day, using a metabolic cage. Statistical tests were used to determine significant changes. The methanolic extract of the tubers of *Pachyrhizus erosus* showed potential blood pressure lowering activity at a dose of 200 mg/kg and possibly on higher doses. The diuretic effect was only exhibited at the 50 mg/kg dose and cannot be suggestive of potential therapeutic activity.

#### **Biography**

Imei Tiongco is currently 5<sup>th</sup> year student of BS Pharmacy Major in Clinical Pharmacy in University of Santo Tomas, Manila, Philippines.

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