

Hypoglycemic Activity of *Syzygium polycephaloides* in Alloxan-induced Mice



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Abstract

Diabetes mellitus is the most common endocrine disease associated with various metabolic disorders. Currently, oral hypoglycemic agents and insulin have serious side effects, so there is a need to find an alternative yet safe anti-diabetic medicine. The present study aimed to determine the hypoglycemic property of the *Syzygium polycephaloides*. Test tube method, thin layer chromatography, qualitative and quantitative analyses revealed the secondary metabolites of the *S. polycephaloides* leaf extract such as alkaloids, flavonoids, triterpenes, terpenoids, tannins, phenols, and anthraquinones. Hypoglycemic activity was investigated through in vivo assay using mice. The in vivo assay indicates that metformin and the two different concentrations of extracts (500mg/kg and 250 mg/kg) were able to considerably reduce blood glucose level compared to negative control. The blood glucose level before and after the oral administration have significant effect on the blood glucose level of mice ($p < 0.05$). The histopathological observations confirmed the improvement in treated groups compared to the negative control. Histopathological studies further revealed the effectiveness of *S. polycephaloides* when the reduced islet cells were restored to near-normal conditions to alloxan-induced mice. Therefore, *S. polycephaloides* has a capability in lowering the blood glucose level.

Speaker Publications:

1. "Pollen sources of *Tetragonula biroi* (Friese, 1898) (Hymenoptera: Apidae, Meliponini) in two agroecosystems in Nagcarlan, Laguna, Philippines"; *Palynology*
2. "Prevalence of *Angiostrongylus cantonensis* among different species of snails in the village of Bagong Sikat Muñoz, Nueva Ecija, Philippines and its associated risk factors for zoonotic transmission"; *Journal of parasitic diseases* /Volume 44, Issue 6
3. "The utilization of social networking sites, their perceived benefits and their potential for improving the study habits of nursing students in five countries"
4. "Soil-transmitted helminth (STH) eggs contaminating soils in selected organic and conventional farms in the Philippines"; *Parasite Epidemiology and Control*, Volume 7

[8th International Conference and Expo on Pharmacognosy, Medicinal Plants and Natural Products](#); Webinar- October 21-22, 2020.

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Biography:

Keya Zia B. Pitero is currently a BS Biology Student from Southern Luzon State University. She death research regarding anti-diabetic property of certain plant in the Philippines. In connection, she wanted to share the findings and results of her study for the sake of considering natural products which can have an important role in controlling the prevalence of diabetes mellitus since it is considered as one of the most common lethal diseases in the world.