

**P-187****Antidiabetic Effect of Aqueous Seed and Endocarp Extracts of *Swietenia Macrophylla* King Combined with Glibenclamide in Rats**

Hanan Kumar Gopalan, Nur Hayati Jaafar Marican<sup>\*</sup>, Rahim Md Noah, Muhammad Rohani Jais and Nor Shahirah Ahmad

*Department of Biomedical Sciences, Institute of Medical Science Technology, University Kuala Lumpur, 43000 Kajang, Selangor Darul Ehsan, Malaysia; E-mail: hayyati.marican@gmail.com*

Plants and plant products with antihyperglycemic capacity are often combined with the oral hypoglycemic drug for diabetes therapy. The plant–drug interaction may affect the pharmacology and toxicology of either component leading to a number of categorizing effects. This study investigated the antidiabetic effects of *Swietenia*'s seed and endocarp aqueous extract in streptozotocin (STZ)-induced diabetic rats and to assess the possible plant–drug interactions with glibenclamide. The experimental groups were rendered diabetic by chemical combination of STZ (65 mg/kg bwt, i.v.) and NAD (230 mg/kg bwt, i.p.) in adult rats. Diabetic rats were orally force-fed with glibenclamide (5 mg/kg bwt), extract (250 mg/kg bwt) and a combination of full strength extract with half the glibenclamide dosage, daily for three weeks. Body weight (g) and FBG levels (mg/dl) were determined at treatment intervals of 0, 7, 14 and 21. Antidiabetic capacity of the aqueous plant extract ( $P<0.001$ ) were confirmed in the extract treatment group. Significant antidiabetic results were found in combined treatment of plant extract–drug group demonstrated by FBG reduction ( $P<0.001$ ) and body weight increment ( $P<0.05$ ) thus signifies the existence of potentiation effect. Findings implies that *Swietenia macrophylla* King seed and endocarp aqueous extract exhibits synergistic effect against diabetes and should serve as supplementation with a reduction in the dose of glibenclamide to warrant efficacy and safety.

**Keywords:** *Swietenia macrophylla* King, Interaction, Aqueous Extract, Antidiabetic, Synergistic.

---