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PRECLINICAL EVALUATION FOR BETTER CONTRACEPTIVES: AN HERBAL APPROACH

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ABSTRACT

Sesbania sesban(L) Merr. commonly known as 'Egyptian sesban' is a nitrogen fixing shrub found throughout African and Asian countries. The plant contains alpha-ketoglutaric, oxaloacetic & pyruvic acid, campesterol and beta-sitosterol. The leaves are found to be rich source of saponin such as chikusetsusaponin IVa, Kaikosaponin-III, also contain cholesterol, β-sitosterol, ilexoside XLVIII, and olaenolic acid as major sapogenin. Successive extraction & fractionation process was undertaken to separate saponins from leaf extract. The preliminary phytochemical investigation and thin layer chromatography was performed to confirm the presence of major saponins. Oral toxicity studies were performed and dose was calculated for test drug. Antifertility activity was evaluated by carrying antiimplantation & abortifacient activity on young virgin female wistar albino rats as per the standard protocol. Effect of extract was evaluated on the body weight & genital organ. Estrogenic and anti-estrogenic activity of saponin extract was determined by calculating weight and measuring diameter of uterus. The preliminary phytochemical test confirmed the presence of triterpenoids, steroids, saponins & few polyphenols. The chromatography showed the presence of major saponins. Antiimplantation activity for doses 100mg/kg and 200mg/kg was significant compared to control. Anti implantation activity was found to be dose dependent. The percent abortion was found to be 50% and 78% for 100mg/kg and 200mg/kg dose. Wet weight of ovary & uterus was found to be decreased with the test sample. On evaluation of estrogenic effect, there was significant increase in a weight of uterus with standard estradiol. On simultaneous administration of drug, weight of uterus was increased as compared to test alone, but was not more than standard drug.