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SAFETY AND EFFECTS OF AQUEOUS ROOT BARK EXTRACT OF *Citropsis articulata* (OMUBORO) ON SEXUAL FUNCTION IN MALE RATS

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Key words: Phytochemical, Acute toxicity, erectile dysfunction, *Citropsis articulata*, mounting, testosterone, Uganda.

ABSTRACT

About 80% of the world's population uses herbal medicine for the treatment of various health conditions. Erectile dysfunction is one of the conditions commonly treated using traditional herbs on large scale because the conventional medicines are very expensive for most people to afford. In this study we set out to determine the safety and effects of the aqueous root bark extract of *Citropsis articulata* on sexual function in male rats.

Objectives:(1) To carry out phytochemical analysis to identify the secondary metabolites (phytochemicals) present in the aqueous root bark extract of *Citropsis articulata*, (2) Conduct acute toxicity test to determine the safety of the aqueous root bark extract from *Citropsis articulata*, (3) Determine the effect of the aqueous root bark extract of *Citropsis articulata* on improving the erectile function of male rats, and (4) Evaluate the effect of the aqueous root bark extract of *Citropsis articulata* on testosterone levels in male rats.

Methods: Extraction was done by warm maceration. Phytochemical analysis was conducted using chemical of analytical grades; acute toxicity conducted following Lorke, 1983 method. Efficacy was evaluated using non-contact and contact models and testosterone analysis was performed using the AXSYM Testosterone reagent by Abbott AXSYM system.

Results: Phytochemical screening revealed the presence of saponins, proteins, free amino acids, arginine, terpenoids, phenolic compounds, tannins and fats and oils. The LD50 was estimated at 9486.833mg/kg body weight. The extracts did not induce erection, had a significant effect on mounting (p-value = 0.013) and had a significant effect on testosterone level (p-value = 0.02).

Conclusion: Aqueous root bark extract of *Citropsis articulata* was found to significantly increase mounting frequency and testosterone levels in male rats was slightly toxic, contained arginine, a phytochemical, which is a precursor of nitric oxide, a substance known to have effects on the vascular system and others with antioxidant activity which may explain its effects on sexual function in rats.