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EXPERIMENTAL BIOLOGY**



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**PROGRAMME OF EVENT &  
BOOK OF ABSTRACTS**



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**Scientific  
CONFERENCE**  
and General Meeting

**Theme:**

**EXPERIMENTAL BIOLOGY FOR FOOD SECURITY  
AND SUSTAINABLE DEVELOPMENT**

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## ANTIULCER STUDIES OF *AGELANTHUS DODONEIFOLIUS* LEAVES AGAINST ASPIRIN AND ETHANOL INDUCED ULCERATION IN RATS.

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Gastric ulcer is one of the most prevalent gastrointestinal disorders, which affects about 10% of the people in their life time. *Agelanthus dodoneifolius* (*A. dodoneifolius*) preparation has been used in traditional medicine to treat ulcer without scientific validation. The present study was carried out to investigate antiulcer effects of *A. dodoneifolius*. Phytochemical composition and acute toxicity of the extract were carried out using standard procedure. The antiulcer activities of crude extract (800 and 1600 mg/kg bw) and the fractions (methanol, n-hexane and ethyl acetate) were carried out against ethanol and aspirin induced ulcer in rats. Result reveal the presence of Alkaloids ( $99.07 \pm 0.23$ ), Saponins ( $1.81 \pm 0.01$ ), Terpenoids ( $9.38 \pm 0.06$ ), Flavonoids ( $12.89 \pm 0.07$ ), Total Phenols ( $101.69 \pm 0.00$ ), Tannins ( $20.28 \pm 0.02$ ). The extract had LD<sub>50</sub> value of 3807 mg/kg bw and percentage ulcer protection of  $60.00 \pm 11.54$  % and  $73.33 \pm 7.40$  % in ethanol and aspirin models respectively. The fractions had better protective effect than the crude with ethylecetate fraction having the best activity ( $76.66 \pm 6.66$ ) in the ethanol model while methanol fraction had the best activity ( $50.00 \pm 7.21$ ) in aspirin model. The results showed that *A. dodoneifolius* may contain biologically active compounds that are relevant in the treatment of ulcer.

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## HEPATOPROTECTIVE EFFECT OF *TAMINALIA CATAPPA* ROOT EXTRACT ON AFLATOXIN B1-INDUCED LIVER DAMAGE IN RATS

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About 4.5 to 5.5 billion people are being exposed to non-infectious food born toxins worldwide of which mycotoxins is one of them. Aflatoxins B1 is a mycotoxin produced by fungi (*Aspergillus parasiticus* and *Aspergillus niger*) which grows on food and food products which causes gross liver damage when consumed by mammals or poultry. The determination of secondary metabolites and antioxidants activities of methanol extract of *T. catappa* root were carried out using standard methods. Hepatoprotective effect of the extract was carried out with six (6) groups of five (5) male Wistar rats per group. Toxicity was induced in groups 2-6 with 0.5mg/kg body weight of aflatoxin B-1 intraperitoneally with the exception of group 1. Group 1 and 3 were treated with 0.5% DMSO and 100mg/kg bw of standard drug (silymarin) was administered to group 2 rats orally after 72 hours of aflatoxin induced toxicity along with group 4-6 which received 100 mg/kg bw, 200 mg/kg bw and 400 mg/kg bw of *T. catappa* extract respectively. The liver damage biomarkers in the serum and liver homogenate as well as liver histology of the experimental animals were determined after 2 weeks of daily administration of the extracts. The yield of ( $17.80 \pm 0.10$ ) % of the extract was obtained with appreciable amount of secondary metabolites; total phenol, tannins, flavonoids, terpenoids, alkaloids, glycosides, steroids and saponins. Inhibition of lipid peroxidation by the extract was observed with