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Reproductive toxicity of aqueous wood-ash extract of *Parkia biglobosa* on male Swiss albino mice

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The use of wood-ash extracts, including that of *Parkia biglobosa* as food additives and for medicinal purposes by Gbagyi, Koro, Ebira and other ethnic groups in the Middle-Belt Region of Nigeria, without knowledge of its possible reproductive toxicity has been an age long practice. This study thus investigated the toxicity of aqueous wood-ash extracts of *P. biglobosa* on male reproductive ability, using mice as models. Aqueous extraction of the wood ash of *P. biglobosa* was performed using the traditional percolation method. Four different dose levels of 0, 5, 50 and 100 mg/kg body weight were administered to 20 male mice (five per group) for seven days, which were sacrificed 35 days thereafter. Gonadosomatic index, sperm motility, sperm count, sperm morphology, serum follicle stimulating hormone (FSH), luteinizing hormone (LH) and testosterone assay and histopathology of testes were carried out using standard methods. Data were analyzed using descriptive statistics and ANOVA, considered significant at $P < 0.05$. Though no significant toxic effect on testicular weight, FSH, LH and testosterone was recorded, sperm motility, live/dead sperm and sperm count decreased significantly with significant increase of abnormal sperm cells when compared to control. Dose dependent depletion of spermatogenic cells were recorded in the testes. Aqueous wood-ash extract of *P. biglobosa* had damaging effects on sperm cells and testicular tissues, which could compromise reproductive potentials.

Biography

Timothy Auta is currently a Doctoral degree candidate in University of Ibadan, Nigeria, where he has obtained his Master's degree in 2011. He is a young Faculty Member at Federal University Dutsinma, Katsina State, Nigeria and teaches Biology. He has published 13 papers in reputed journals and presented several papers at different academic conferences/meetings.

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