B.U. Enaibe, Gabriel O. Omotoso, O.J. Olajide, S.F. Lewu, S.O. Adeyemi.**Morphological evaluation of the superior colliculus of young Wistar rats following prenatal exposure to Carica papaya leaf extract.**Vol. 13 No. 2 (2014): 29-33.   
Abstract  
Aim: This study was carried out to determine the effects of prenatal administration of Carica papaya on the superior colliculi (SC) of Wistar rats.Materials and Methods: Twenty adult female Wistar rats were mated and randomly assigned to 4 groups, each comprising of 5 rats. The aqueous leaf extract of C. papaya was prepared at a concentration of 100 mg/kg, and administered to rats on days 9 and 10 of gestation (Group A); days 16 and 17 (Group B); and on days 9, 10, 16 and 17 (Group C); while Group D represented the control, and received distilled water throughout gestation. The grouping was designed to represent 2nd gestational week (Group A), 3rd gestational week (Group B), and a combination of 2nd and 3rd gestational week (Group C). After the pregnant rats had littered, the pups were sacrificed on postnatal days 1, 14 and 35. The SCs was identified in the brain specimen and fixed in 10% formol calcium, and the tissue was processed for histological studies using hematoxylin and eosin stains.Results: The leaf extract of C. papaya was associated with low birth weight, changes in growth rate and morphological changes in the histology of SCs, especially in animals exposed during the 3rd week of gestation.Conclusion: The use of C. papaya leaf extract during pregnancy is detrimental to fetal development and can affect the morphology and function of the SCs, with possible neurologic deficits after birth.Keywords: Carica papaya, histology, prenatal, superior colliculus

Sakpa Christopher Lucky, Okhimamhe Akhalumhe Festus.**Effects of aqueous leaf extract of Chaya (Cnidoscolus aconitifolius) on pituitary‑gonadal axis hormones of male Wistar rats.**Vol. 13 No. 2 (2014): 34-39.   
Abstract  
Introduction: Male fertility is controlled by a complex assortment of pituitary-gonadal hormones. This regulation is key to understanding problems with fertility. The level to which some plants consumed by man contribute to his fertility problems is yet to be fully explored. This study aimed at evaluating the effects of Chaya on pituitary gonadal hormone axis in male wistar rats.Methodology: The study was conducted using 24 wistar rats randomized into three control and three treatment groups of four rats each. The treatment rats received 1.5g/kg body weight of Chaya extract by gavage. Blood samples were collected at various time intervals for hormonal assay and statistical analysis performed.Findings: There was a statistically significant decrease (P = 0.010) in testosterone levels and elevated LH and FSH levels (P = 0.432 and P = 0.939 respectively) in the treatment rats. The testosterone / estrogen ratio was also elevated. These effects were duration of treatment dependent.Keywords: Cnidoscolus aconitifolius, pituitary‑gonadal axis, testosterone

Sylvester Ifeanyi Omoruyi, Madu Ifeoma Joan, Enogieru Adaze Bijou, Momodu Oghenakhogie Irobodu.**Uvaria afzelii root extract protects the liver against damage caused by carbontetrachloride ingestion.**Vol. 13 No. 2 (2014): 40-44.   
Abstract  
Introduction: Hepatoprotective activity of crude aqueous extract of Uvaria afzelii (UV) root was investigated and compared with a standard hepatoprotective drug (silymarin) in Wistar rats.Materials and Methods: Twenty‑five adult Wistar rats were randomly assigned into a control Group (A) and four treatment Groups (B‑E) each containing five rats (n = 5/group). Animals in each group were allowed access to 200 g/day growers’ mash and water ad libitum. Rats in the treatment groups were administered with intraperitoneal injection of 1 ml/ kg body weight of 30% carbon tetrachloride (CCL4)/olive oil mixture every 72 h interval during the 15 days experimental period. Rats in Group B were not pretreated while Groups C, D and E rats were pretreated daily with 50 mg/kg body weight of silymarin, 250 mg/kg and 500 mg/kg body weight of crude aqueous extract of UV root respectively. On the 15th day of the experiment, the rats were sacrificed and blood samples were collected to assay for serum liver enzymes; aspartate aminotransferase (AST), alanine aminotransferase (ALT), alkaline phosphatase (ALP) as well as total protein (TP).The liver tissues were also excised and fixed in 10% buffered formal saline for routine histological examination. Result: The result obtained showed that UV root extract significantly (P < 0.05) decreased serum AST, ALT, ALP while TP was significantly (P < 0.05)increased when compared with nonpretreated rats administered with CCL4/olive oil and not significant (P < 0.05) when compared with silymarin pretreated rats. Histological observation of the liver of rats injected with CCL4/olive oil only showed vacuolation (presence of fat droplets), portal vein congestion, and moderate tissue separation. These observations were reduced in the liver of rats pretreated with UV root extract and silymarin.Conclusion: These findings indicate that root extract of UV possess hepatoprotective activity against Ingested hepatotoxic insults.Keywords: Carbon tetrachloride, histology, liver enzymes, silymarin, Uvaria afzelii

E Finbarrs‑Bello, A.O. Egwu, E Esom, E.O. Okefie.**Neurobehavioral and histological effects of Akaki extract on the temporal lobe: Mimicking traditional treatment method.**Vol. 13 No. 2 (2014): 45-49.   
Abstract  
Introduction: Neurobehavioral and histological effect of akaki extract on the temporal lobe of wister rats was carried out. In the study we evaluate a traditional prescription method for the treatment of mental illness using the akaki extract on the temporal lobe.Material and Methods: Twenty rats of average weight 200 g were divided into four groups (n = 5). The rats in the control group (GroupA) were given feed and water, while the rats in the experimental Groups B, C, and D were treated daily with 3 mg/kg, 6 mg/kg and 9 mg/kg of the extract for 7days respectively.Results: Preliminary phytochemical analysis revealed presence of bioactive agents.The behavioral study was performed using the elevated plus‑maze (EPM) to access anxiety and routine H and E histological technique. The mean difference was significant at level (P < 0.05). The study showed that the rat exhibited antianxiety property in the EPM. This was more pronounced in the experimental rats. The histological study performed showed that there were progressive changes in the temporal lobe integrity of the sections of the rat in the experimental groups with the rat that received 9 mg/kg of the Akaki extract showing more prominent features of these changes which include cytoplasmic vacuolations and eccentric nuclei within the pyramidal cell layer than granular cell layer as compared to the control group (Group A).Conclusion: In conclusion, the akaki extract shows positive indication of its use in the treatment of mental illness.Keywords: Akaki extract, behavioral, histological, temporal lobe

O.A. Ebeye, P.O. Abade, B.O. Okwoka.**Influence of gender on quadriceps (Q) angle among adult Urhobos in Nigeria population.**Vol. 13 No. 2 (2014): 50-53.   
Abstract  
Background: The Quadriceps angle (Q-angle) is defined as the angle formed between the longitudinal axis of the femur representing the pull of the quadriceps muscle and the patellar tendon.Materials and Methods: This study comprises of 90 male and 100 female adult Nigerian population of Urhobo ethnicity between the age range of 19-32 years, measurements were taken from healthy individuals with no previous history of musculoskeletal disorder to establish a standard value. The Q-angle was taken using a goniometer with the subject standing on a weight bearing position.Results: Results show that in the male subject the Q-angles were 12.92 + 1.320 and 12.27 + 1.480 for the right and left lower limb, while the female Q-angle was 16.93 + 1.350 and 16.30 + 1.200 for the right and left limb respectively. Further analysis reveals that the right Q-angle is higher than the left (P < 0.05) for both gender with the female Q-angle being slightly higher than the male (P < 0.05).Conclusion: The result obtained showed difference in the values of the left Q-angle for both gender when compared with the other indigenous research on this subject suggesting there is difference in the Q-angle values across the various ethnic groups in Nigeria.Keywords: Q-angle, gender, Urhobo

Odokuma Emmanuel Igho, Iteire Kingsley Afoke.**A histomorphologic analysis of pyrethroid pesticide on the cerebrum and cerebellum of adult albino rats.**Vol. 13 No. 2 (2014): 54-59.   
Abstract  
Introduction: Pyrethroids Pesticide formulations are complex mixtures and some studies have associated their usage to predisposition to some degenerative diseases. This study was therefore aimed at investigating the sub-acute and acute histomorphologic effects of orally administered mixture of Allethrin, Imiprothrin and Phenothrin (P. pesticide) on the cerebrum and cerebellum of adult Wistar rats.Materials and Methods: 80 adult Wistar rats of both sexes were divided into 5 groups of 15 rats each. Group I-III which was the treatment groups were further subdivided into 3 groups of 5 rats each while groups IV and V were normal and oil control respectively. The Pesticide was diluted with olive oil into 3 grades (75, 50 and 25% concentration) and orally administered to the rats of the treatment groups for 7, 21 and 40 days. The rats in group IV and V were given water and olive oil respectively for the duration of the treatment. At the end of the treatment, the rats were sacrificed by cervical dislocation. The brains were harvested and processed for histology using standard manual tissue processing techniques.Results/Discussion: The behaviors exhibited by the animals included itching, twitch contraction, dilation of pupils, erected furs, tail suspension and increased salivation. Histological examination of the brain tissues revealed mild to marked distortion of the cyto-architectural patterns with multifoci of necrosis, severe gliosis involving predominantly astrocytes and olingodendrocytes both in the cerebral and cerebellar tissues.Conclusion: In conclusion, this study showed that oral administration of P. pesticide resulted in several histomorphologic changes in the brain tissues in both dose and time dependent manner.Keywords: Brain, cerebellum, cerebrum, histomorphologic, pyrethroids, Wistar rats

Ibegbu Augustine Oseloka, Micheal Ayuba, Abdulrazaq A. Animoku, Daniel Brosu, Sadeeq A. Adamu, Peter Akpulu, W.O. Hamman, U.E. Umana, S.A. Musa.**Ameliorative effect of ascorbic acid on mercury chloride‑induced changes on the spleen of adult wistar rats.**Vol. 13 No. 2 (2014): 60-65.   
Abstract  
Introduction: Mercury is a highly toxic metal that exerts its adverse effects on the health of humans and animals through air, soil, water and food.Aim: The present study was aimed at the evaluation of the effects of ascorbic acid on mercury chloride-induced changes on the histomorphology of the spleen of adult Wistar Rats.Method: Thirty adult Albino Wistar Rats of average weight of 200g were randomly divided into six groups of five rats per group. The animals were orally administered with different concentrations of mercury chloride daily for three weeks. Group one was administered with normal saline, Group two and three were administered with 52mg/kg body weight and 26.25mg/kg body weight of mercury chloride respectively while Groups four and five were administered with 52mg/kg of mercury chloride and 5mg/kg of ascorbic acid and 26.25mg/kg of mercury chloride and 5mg/kg of ascorbic acid respectively and Group 6 was administered 5mg/kg of ascorbic acid only. After three weeks of administration, the animals were sacrificed, blood and tissue samples were collected for tissue processing and analysis.Results: The results showed histo-morphological changes in the spleen of the rats. These changes were shown to be concentration dependent.Conclusion: Ascorbic acid administration was able to ameliorate mercury-induced changes in the spleen of adult Wistar rats.Keywords: Ascorbic acid, histomorphology, mercury chloride, spleen, Wistar rats

Oghenakogie I. Momodu, A.B. Enogieru, Sylvester I. Omoruyi, F.A.E. Om`Iniabohs.**Extracts of Hunteria umbellata reverses the effect of streptozotocin‑induced pancreatic islet‑cell destruction.**Vol. 13 No. 2 (2014): 66-73.   
Abstract  
The use of extracts of plant parts in the treatment and/or management of diabetes mellitus has formed the basis of health care in most African countries. The aim of this study was to investigate the possible effect of oral administration of extracts Hunteria umbellata (HU) leaves and seeds on streptozotocin- induced pancreatic β-cell damage. Twenty four (24) adult wistar rats were selected into two control group (negative control group A and positive control group B) and two treatment groups (C & D) each containing six animals each (n= 6 per group). Rats in the positive control group (B) were giving intraperitoneal injection of with 50 mg/kg body weight of Streptozotocin (STZ) prepared with 0.05M Citrate buffer solution while the negative control group A rats were injected with a corresponding volume of Citrate buffer without STZ. Rats in the treatment groups were treated with 250 mg/kg body weight aqueous extract of seeds of Hunteria umbellata (group C) and 250 mg/kg body weight aqueous extract of leaves of Hunteria umbellata (group D) respectively. Blood samples were taken by repeated needle puncture of their tail tip vein every 72 hours at the end of a 12 hrs fasting. Fasting blood glucose was determined using a fine test glucometer and compatible glucose test strips. Rats were sacrificed by cervical dislocation on the 15th day and the pancreas was accessed and dissected out through a midline incision of the anterior abdominal wall of the rats. The pancreas was fixed in 10% buffered formal saline for routine histological examination. 5ml blood samples were collected in heparin coated tubes for serum anti-oxidant estimation. Results obtained showed that HU seeds and leaves extracts significantly (P < 0.05) increased Superoxide dismutase (SOD) and Catalase (CAT) activities and decrease in the activity of Thiobarbituric acid reactive species (TBARS) when compared streptozotocin injected rats. Histological sections showed marked distortion, vacoulation of the central part of the Islet. Treatment with Hunteria umbellata seed and leaf extracts reversed the cytoarchitectural distortion of pancreatic Islet cells caused by Streptozotocin. This suggests that extracts of HU seeds and leaves posses antidiabetic potential.Keywords: Hunteria umbellata, streptozotocin, pancreatic Islet, cytoarchitectural distortion