

International Conference on

Histochemistry & Cell Biology

September 14-15, 2016 Phoenix, USA

S C Okoseimiema

University of Port Harcourt, Nigeria

Effect of aqueous extract of *Bryophyllum pinnatum* on the cerebral cortex and hippocampus of healthy male Albino Wistar rat

This study was carried out to evaluate the effect of aqueous extract of *Bryophyllum pinnatum* on the histoarchitecture of the cerebral cortex and hippocampus of male albino Wistar rats, as well as its effects on learning and memory. 40 healthy male albino Wistar rats of weight ranging from 200 grams to 360 grams, were used for this study and were bred and housed at the preclinical animal house, Faculty of Basic Medical Sciences, University of Port Harcourt. The animals were kept and nurtured under laboratory conditions, temperature, humidity, and light and were allowed free access to food and water *ad libitum*. The animals were divided into 5 groups and 10 animals per group. Group₁ was the control group and they were given distilled water. Group 2 and 3 were given 200 mg/kg and 400 mg/kg, administration of the *Bryophyllum pinnatum*. Group 4 was given 0.16 ml, administrative equivalence of vitamin C. The administration was done intraperitoneally for 2 weeks during which the animals were made to undergo Morris water maze test. The mean and standard deviation of the time spent in identifying the hidden platform in the maze was analyzed using one way ANOVA followed by a Post hoc (Duncan test). It was observed that *Bryophyllum pinnatum* had a dose-dependent positive effect on learning and memory. It was also observed that *Bryophyllum pinnatum* at 400 mg/kg had a significantly faster time to identify the hidden platform than the normal subjects ($p < 0.05$). The photomicrographs showed that *Bryophyllum pinnatum* in both high and low dose had no significant effect on the histoarchitecture of the cerebral cortex and hippocampus. Sections of the brain, showed a normal cytoarchitecture of the cerebral cortex and the hippocampus. There was no marked congestion of blood vessels, there were no degeneration of neuronal cells and vacuolation and necrosis of neural cells were not observed. Knowledge gained from this work, will be useful in the management of memory and learning.

Biography

S C Okoseimiema is a professor at Department of Human Anatomy, Faculty of Basic Medical Sciences, University of Port Harcourt, Nigeria

okosonnycity@yahoo.com