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The proliferative effect on the astrocytes of the brainstem of albino mice following long term ingestion of fresh and thermoxidized palm oil diets

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The astrocytic proliferation following chronic consumption of thermoxidized and fresh palm oil diets was studied on the brainstem of growing mice. 30 mice were divided into three groups A, B and C. 15 g of thermoxidized palm oil was mixed with 85 g of mice chow (15% w/w) and given to the group C animals. 15 g of fresh palm oil was mixed with 85 g of mice chow (15% w/w) and administered to the group B animals while group A animals were fed with normal mice chow. The astrocytes in the brainstem of mice in the thermoxidized palm oil group significantly increased in number (hyperplasia) and size (hypertrophy) when compared with animals in the control and fresh palm oil groups due to the presence of concomitant evolution of toxic byproducts (free radicals, peroxides, etc.). If the results obtained in mice are applicable to man, there is reason for concern regarding adverse consequences of chronic consumption of thermoxidized palm oil diet. This may be dangerous to health since it may result in astrocytic proliferation in brainstem, thereby making the animals susceptible to loss of motor function like control of cardiovascular system, respiration, gastrointestinal tract, eye movement, etc.

Biography

Tarfa M Peter is presently working as a Professor at Gombe State University, Nigeria

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