

World Congress on

# Pharmacology

July 20-22, 2015 Brisbane, Australia

## The effects of concomitant *Ginkgo* intake on noise induced Hippocampus injury: Possible auditory clinical correlate

**Alaa Abousetta**

Suez Canal University, Egypt

This study was conducted to determine the injurious effects of noise on the hippocampus, and to show whether Ginkgo Biloba (Gb) has any modulatory effect on hippocampal injury. Fifteen adult male albino rats were divided into three groups; control group, noise group and protected group. The noisy group was exposed to 100 dB Sound Pressure Level (SPL) white noise, six hours/day for four consecutive weeks. The protected group was exposed to the same noise level with the administration of Gb extract to the animals (50 mg/kg daily) for 4 weeks. In the noise exposed group, both pyramidal cell layer and dentate gyrus (DG) granular cell layer showed a decrease in thickness with loss and degeneration of many cells. The protected group showed preservation of many parameters as compared to the noise group, i.e. increase in thickness of Cornu Ammonis area3 (CA3)&DG; increase in surface area of cells and increased vascularity. In conclusion, the noise had detrimental effects on cells of Cornu Ammonis area1 (CA1), CA3 & DG of the hippocampus. In view of this finding, the clinical auditory hazardous effects in people exposed to harmful noise such as tinnitus, as well as memory disturbances and learning disabilities might have a new dimension. The administration of Gb protected the hippocampus against the injurious effect of noise. The probable mechanism and usefulness of Gb in reducing the previously mentioned effects are discussed.

### Biography

Alaa Abousetta has completed his MD "Doctorate of Audiological Medicine" at the age of 35 years from Ain Shams University, Cairo, Egypt. He is currently appointed as Associate Professor and the Head of Audio vestibular unit at the Faculty of Medicine, Suez Canal University, Egypt. He has published around 20 papers in reputed journals and serving as Editorial Board Member of repute. In addition, he has helped in the inauguration of Audio vestibular units as well as academic degrees in Egypt and the Arab world.

[alaa\\_abousetta@yahoo.com](mailto:alaa_abousetta@yahoo.com)

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