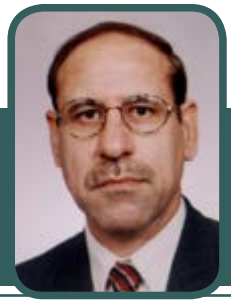
Meetings International
SciTechnol

Amer Kamal Al Ansari, Endocrinol Diabetes Res 2018, Volume: 4
DOI: 10.4172/2470-7570-C5-019

4th International Conference on
DIABETES & ITS TREATMENT
&
International Conference on
CLINICAL AND MEDICAL CASE REPORTS

December 03-04, 2018
Dubai, UAE

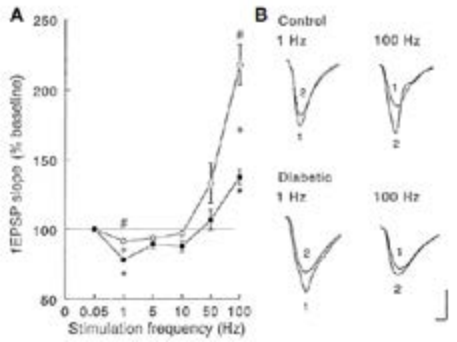


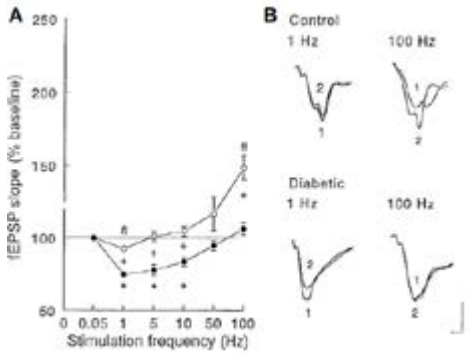
Amer Kamal Al Ansari

Arabian Gulf University, Bahrain

Cognition and memory in ageing: Is diabetes an accelerated form of ageing?

The aim of the present study was to examine learning and hippocampal synaptic plasticity in ageing and diabetes. Many of the processes that have been implicated in the pathogenesis of brain ageing are also involved in the development of diabetic complications. We investigated Morris water maze performance and examined hippocampal synaptic plasticity in young adult and aged diabetic and non-diabetic rats. In hippocampal slices from young adult diabetic animals, long-term potentiation induced by 100 Hz stimulation was impaired compared with controls (138 vs 218% of baseline). In contrast, long-term depression induced by 1 Hz stimulation was enhanced in slices from diabetic rats compared with controls (79 vs 92%). In non-diabetic aged rats, synaptic responses were 149 and 93% of baseline in response to 100 and 1 Hz stimulation, compared with 106 and 75%in aged diabetic rats. Statistically significant learning impairments were observed in young adult diabetic rats compared with controls. These impairments were even greater. It is concluded that both diabetes and ageing affect learning and hippocampal synaptic plasticity. The cumulative deficits in learning and synaptic plasticity in aged diabetic rats indicate that the effects of diabetes and ageing on the brain could interact.





Biography

Amer Kamal Al Ansari was graduated from Basrah University/ College of Medicine in 1978; he received his PhD in neurophysiology in 1986 from Lauvain University/ College of medicine. He worked in University of Utrecht in the Netherlands as senior researcher and University docent for about 20 years, and then joined the Arabian Gulf University/ College of Medicine and Medical Sciences staff in Bahrain. In addition to his teaching responsibilities, he worked as a consultant doctor in the Bahrain Defense Force hospital for the last 6 years. His research field belongs to electrophysiology of hippocampus, learning and memory, behavioral studies ageing and Diabetes mellitus.

amerha@agu.edu.bh