

عنوان مقاله:

Lipopolysaccharide Inhibited Long Term Potentiation (LTP) and Synaptic Plasticity in the CA1 Area of the Hippocampal Formation

محل انتشار:

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تعداد صفحات اصل مقاله: 1

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خلاصه مقاله:

Neuro-inflammation is a common feature in neurodegenerative disorders leading to the cognitive and learning deficiency especially in elderly people. Lipopolysaccharide (LPS), is a part of the outer membrane of Gram negative bacteria that is extensively apply for inducing inflammation in neural system. LPS mediates its effects through stimulating immune system cells and releasing inflammatory cytokines. The aim of this study was to investigate, the effects of lipopolysaccharide (LPS) on long term potentiation (LTP) in rats. Materials and Methods: two groups of rats were allocated to these experiments (n=10 in each). These experimental groups were defined as: (1) control, (2) LPS (1 mg/kg). Afterwards, Long-term potentiation (LTP) from CA1 area of hippocampus was recorded following 100 Hz high frequency stimulus application to the Schaffer collateral. Results: Our data indicated that the amplitude and slope of field Excitatory Post-Synaptic Potential (fEPSP) have reduced after the LPS administration, with regard to the control animals. Conclusion: This investigation suggested that chronic inflammation could impair LTP induction by LPS in rats.

کلمات کلیدی:

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