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Poster Presentation

Signaling Pathway in Long-Term Potentiation

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Abstract

Synaptic plasticity in the central nervous system (CNS) of mammals has been discussed for many years. Several forms of synaptic plasticity of mammal's CNS have been identified, such as those that occur in long-term potentiation (LTP). Different types of LTP have been observed in distinctive areas of the CNS of mammals. The hippocampus is one of the most important areas in the CNS that plays an important role in learning and memory formation and LTP. LTP of synaptic strength occurs during learning and the examination of the molecular and cellular mechanisms underlying these types of synaptic plasticity have been studied by several scientists. In this review, emphasis is focused on the role of synaptic ion channels, ionotropic and metabotropic glutamate receptors as well as TrkB receptor in LTP, and the importance and significance of these elements in understanding of the molecular biology of learning and memory.

Keywords: Synaptic Plasticity, Long-Term Potentiation, Ionotropic, Metabotropic.

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