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Poster Presentation

The Association between TrkB Signaling Pathway and NMDARs in LTP Induction

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Abstract

Long-term potentiation (LTP) is a biological process of learning and memory after a high-frequency train of electrical stimulations. By binding of brain-derived neurotrophic factor (BDNF) to Tropomyosin receptor kinase B (TrKB) receptors in postsynaptic neurons, tyrosine kinase Fyn is bound to these receptors and hereby plays a mediating role to binding and activation of N-methyl-D-aspartic acid receptors (NMDARs). TrkB receptor can be initiated three different pathway includes: MAPK pathway, PI3K-Akt pathway and PLCγ-Ca 2+ pathway. So Fyn by playing a mediating role between TrkB signaling pathway and NMDARs has an important role in LTP induction.

Keywords: Long-Term Potentiation, Tyrosine kinase Fyn, Learning and Memory.

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