

Mechanisms of facilitation and depression in CNS synapses: Presynaptic and postsynaptic components

Bolshakov A., Rozov A.

Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia

Abstract

© 2014, Pleiades Publishing, Ltd. Here we review the mechanisms of evoked synchronous, asynchronous, and spontaneous release of mediators. Special attention is paid to the relationship between the presynaptic level of calcium and the release probability of neuromediators as a key link whose modulation results in short-term synaptic alterations that lead to the development of facilitation and depression in different CNS synapses. We also review postsynaptic mechanisms that may be responsible for short-term facilitation or depression in synapses.

<http://dx.doi.org/10.1134/S1819712414040023>

Keywords

depression, facilitation, short-term synaptic plasticity