

Special Issue

Synaptic Vulnerability: From Biological to Therapeutic Point of View

Message from the Guest Editors

The synapse plays a critical role in all phases of neuronal life. Neurotransmission, synaptic plasticity, and neuron development are crucial for synaptic maintenance and vesicle turnover, contributing to synapse organization, the mobilization of synaptic vesicles, and neurotransmitter release. Events underlying synapse formation, plasticity, and neurotransmission are thus essential and synaptic plasticity changes, neurotransmission disruption, synaptic protein alterations, receptor dysregulation as well as mitochondrial alterations may increase synaptic vulnerability, inhibiting the proper turnover and clustering of synaptic vesicles and ultimately leading to neuronal death. Neurons are particularly vulnerable to internal and external factors, which may cause injury followed by neurodegeneration. This Special Issue aims to cover the biological aspects of the synapse, from neuronal development to mature synapse. Descriptions of molecular mechanisms are welcome to underline synaptic physiological homeostasis as well as the disruption of synaptic machinery and the onset of neurodegenerative disorders.

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The International Journal of Molecular Sciences (*IJMS*, ISSN 1422-0067) is an open access journal, which was established in 2000. The journal aims to provide a forum for scholarly research on a range of topics, including biochemistry, molecular and cell biology, molecular biophysics, molecular medicine, and all aspects of molecular research in chemistry. *IJMS* publishes both original research and review articles, and regularly publishes special issues to highlight advances at the cutting edge of research. We invite you to read recent articles published in *IJMS* and consider publishing your next paper with us.

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