

Special Issue

Molecular Synapse: Diversity, Function and Signaling

Message from the Guest Editor

Synaptic signaling is the process by which neurons communicate at synapses, transmitting signals via chemical messengers called neurotransmitters. It underpins information processing in the brain and is governed by complex molecular dynamics that control the speed, precision and, critically, plasticity of neuronal communication. This involves the ultrafast choreography of presynaptic proteins to release neurotransmitters, as well as the rapid, regulated movement of receptors and scaffolds in the postsynaptic membrane. More recently, it has become clear that synapses are highly diverse in their protein composition, both across and within cell types. New approaches are needed to visualize, dissect and understand the complex machinery of synaptic signaling. This Special Issue will be of interest to basic and clinical researchers studying the molecular and dynamic aspects of synaptic signaling and its disruptions under disease conditions, including theoretical (computational modeling) applications.

Guest Editor

Dr. Leonora Balaj

Department of Neurosurgery, Massachusetts General Hospital and Harvard Medical School, Boston, MA 02115, USA

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MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
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