

Special Issue

Functional Modification of Neuronal Networks

Message from the Guest Editor

Cognitive processes, as well as neuropsychiatric diseases, involve functional modification of neuronal networks through the reorganization of existing synapses. The underlying mechanism of neuronal plasticity is complex and many aspects remain elusive. Recent studies have highlighted the importance of protein posttranslational modifications. S-palmitoylation reversibly modifies numerous classes of neuronal proteins, and, thus, it is necessary to understand the complexity and dynamics of synaptic proteins modifications under physiological and pathological context. The function of synaptic proteins, receptors, and ion channels can be also modulated by another posttranslational modification known as proteolysis. In the Special Issue, we will focus on the role of posttranslational modifications of synaptic proteins under physiological stimuli and following pathological conditions. We will also assess the role of serotonin receptor-mediated signaling in the development and maintenance of pathophysiological conditions, suggesting serotonin receptors as targets for the treatment of neurodegenerative diseases.

Guest Editor

Assoc. Prof. Jakub Włodarczyk

Nencki Institute of Experimental Biology of the Polish Academy of Sciences, Warsaw, Poland

Deadline for manuscript submissions

closed (28 February 2021)



International Journal of Molecular Sciences

an Open Access Journal
by MDPI

Impact Factor 4.9
CiteScore 9.0
Indexed in PubMed



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*International Journal of
Molecular Sciences*
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MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
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Prof. Dr. José L. Quiles
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