



NMDA Receptors in Health and Diseases: New Roles and Signaling Pathways

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Deadline for manuscript
submissions:

closed (30 September 2022)

Message from the Guest Editor

Among glutamatergic receptors, the NMDA receptor is crucial for neurons—from cell migration and synaptogenesis, to learning, memory and cell death. NMDA receptor is a channel receptor allowing Ca²⁺ influx and the activation of downstream signaling pathways. In addition, its role depends on its localizations (synaptic/extrasynaptic and pre/post synaptic), adding another step of complexity.

The NMDA receptor is at the crossroads of neurodegenerative-diseases-mediated cell death—including stroke, Alzheimer’s disease, Parkinson’s disease, multiple sclerosis, and others—and psychiatric and behavioral disorders. Many pathways are impacted by NMDA receptor dysfunctions—obviously calcium-related pathways such as CAMK II and CREB pathways, but also “unexpected” pathways such as ER stress, autophagy, and inflammation-related pathways. Among others.

The aim of the current Special Issue on “NMDA Receptors in Health and Diseases: New Roles and Signaling Pathways” is to highlight recent advances in NMDA receptor functions and signaling and their implications in the normal and pathologic brain.





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Message from the Editor-in-Chief

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