



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

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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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