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Neuroplasticity of Central Nervous System in Health and Disease

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submissions:

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Message from the Guest Editor

Dear Colleagues,

Neuroplasticity represents the key feature of the central nervous system (CNS) and includes both short- and long-term adaptive synaptic changes that, in turn, modulate the activity of brain networks underlying higher brain functions. Recent advances strongly support the role of activated glial cells in the perturbation of synaptic plasticity. This condition, called maladaptive synaptic plasticity, represents the final result of a cascade of events (neuroinflammation, failure of neurovascular coupling, changes of neurotransmitters homeostasis, failure of rescue mechanisms, metabolic/mitochondrial dysfunction) leading to disruption of the complex neuroglial networks underlying neural homeostasis and connectivity within brain circuits. Accordingly, the possibility to directly modulate synaptic functions and plasticity through induction of both short- and long-term neurobiological after-effects with non-invasive brain stimulation techniques is paving the way for new therapeutic strategies in treating neuropsychiatric disorders.

Dr. Giovanni Cirillo
Guest Editor



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Special Issue



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