

Special Issue

The Mechanistic Link between Cell Therapy and Neurorehabilitation

Message from the Guest Editor

Cell therapy for neurological disorders has various meanings and offers a variety of potentials. Stem cells exist even in adulthood and possess the capacity to self-renew and differentiate into multiple lineages, contribute to normal homeostasis, and exert therapeutic benefits either endogenously or following transplantation in injured organs, i.e., the brain.

Transplanted cells might function as part of a newly developed network in the host tissue or secrete several trophic factors with subsequent neuroprotective/neurorestorative potentials.

Furthermore, exercise ameliorates the physical and cognitive impairment of patients with neurological disorders by enhancing brain plasticity, as a major mechanism of action. Key to neuroplasticity is brain remodeling towards recapitulation of a neurodevelopmental microenvironment conducive to stem cell proliferation and differentiation. However, a fundamental gap in our knowledge about the mechanistic link between stem cell and rehabilitation therapies remains unresolved. The novel concepts in this Special Issue embody the mechanistic link between cell therapy and neurorehabilitation.

Guest Editor

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Deadline for manuscript submissions

closed (30 September 2020)



International Journal of Molecular Sciences

an Open Access Journal
by MDPI

Impact Factor 5.6
CiteScore 10.0
Indexed in PubMed



mdpi.com/si/30094

*International Journal of
Molecular Sciences*
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