Neural Plasticity

Hindawi

Special Issue on

Post-Stroke Neural Plasticity: Functional and Structural Reorganization during Stroke Recovery

CALL FOR PAPERS

Stroke is a major cause of disability worldwide. It severely impacts daily activities and affects the quality of life of humans. Despite improved treatment strategies, a substantial number of stroke survivors are associated with persistent neurological deficits. Therefore, there is an urgent need to gain more understanding about the neural plasticity that determines functional recovery from stroke.

Advanced neuroimaging techniques are promising, as they enable us to detect neural plasticity changes. Moreover, they provide important information on the brain's capacity for self-repair in stroke. In addition, novel neurorehabilitation for stroke patients is becoming more popular and has demonstrated to be effective in clinical practice and in research. However, how these promising interventions affect post-stroke neural plasticity is not fully understood. Therefore, post-stroke neural plasticity changes after neurorehabilitation need to be further explored, which may help to elucidate the neural mechanisms of these interventions and provide guidance for future clinical applications.

The aim of this Special Issue is to increase our knowledge of how neurorehabilitation affects neural plasticity. This Special issue welcomes human studies and animal studies discussing the use of advanced methods and techniques to explain the mechanisms of neurorehabilitation. Original research and review articles discussing the state of the art are welcome.

Potential topics include but are not limited to the following:

- Post-stroke neural plasticity after physical therapy
- Post-stroke neural plasticity after electrical or magnetic stimulation
- Post-stroke neural plasticity after robot-assisted training
- Post-stroke neural plasticity after traditional Chinese medicine therapy
- Brain structural and functional changes following stroke using neuroimaging techniques (e.g., magnetic resonance imaging, positron emission tomography, electroencephalogram and other related methods)
- Advanced mechanisms in humans/animals in post-stroke neural plasticity
- The role of the brain-gut axis, brain-heart axis, extracellular matrix (e.g., inhibitory proteoglycans and their interactions with chondroitinase) in post-stroke neural plasticity
- Machine learning techniques helping to build predictive models based on post-stroke neural plasticity

Authors can submit their manuscripts through the Manuscript Tracking System at https://review.hindawi.com/submit?specialIssue=083969.

Papers are published upon acceptance, regardless of the Special Issue publication date.

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Submission Deadline
Friday, 25 February 2022

Publication Date
July 2022