Neural Plasticity

Hindawi

Special Issue on

# Stress Induced Neuroplasticity and Mental Disorders 2018

CALL FOR PAPERS

Stress induced neuroplasticity plays a critical role in almost all of the mental disorders. Some stress induced changes are long-term; for example, the childhood stress induced changes can persist into adulthood to induce mental disorders, such as depression, or posttraumatic stress disorders. Stress can be defined as the presence of acute or persistent physiological or psychological threats to the organism that results in significant strain on the body's compensatory systems. Stress is further characterized by the existence of compensatory responses that generally deviate from and extend normal physiological regulation in order to protect the living organism against severe threats and sustain life. Based on the clinical and preclinical evidence, the elucidation of the precise mechanisms underlying how psychological and physical stressors can influence the CNS and peripheral organ systems as well as the development of systemic diseases remains unsolved. To date, activation of the hypothalamic-pituitary-adrenal (HPA) axis has been widely accepted as one of the central mechanisms involved in stress regulating neural plasticity, which is critical to the understanding of the mental disorders as well as cognitive functions.

In all, mental disorders are among the leading causes of disabilities worldwide. Stress is the major reason for almost all these mental disorders and has become a synonym for diverse terms of negative emotions, such as anxiety or threat. The mechanism might be stress induced neural plasticity, including the hormones and neuromodulators, which in turn can alter the function of the neural networks, by altering the networks' building blocks and by altering the dynamics and integrative properties and thus the behavior or emotional changes.

In this special issue, we invite investigators to contribute original research articles as well as review articles that focus on stress induced neural plasticity in mental disorders. The targeted readouts could be molecular, behavioral, or systematic level. This special issue is intended to link preclinical to clinical work and to provide an outlook to potential plasticity-modulating treatments in the future.

Potential topics include but are not limited to the following:

- Preclinical and animal investigations of stress induced neural plasticity in genetic or other mental disorder models
- Clinical studies about the psychological and emotional changes that trigger mental disorders, such as depression, ADHD, chronic pain, psychosis, and even ageing
- Investigations to understand the variability of neural plasticity responses in affected brains
- The pharmacological modulation of stress induced neuroplasticity and thus the mental disorders
- Impact of various modulators such as drugs on the molecular, cellular, or physiological mechanisms of stress induced neural plasticity

Authors can submit their manuscripts through the Manuscript Tracking System at https://mts.hindawi.com/submit/journals/np/sinmd18/.

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

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