Tentative Outline

Special Thematic Issue for the journal *Current Neuropharmacology*

Brain Connectivity Regulation as a target of intervention in Neuropsychiatric Disorders

Guest Editors: Cheng Luo, PhD

- **Scope of the Thematic Issue:**

Neuropsychiatric disorders often influence discrete regions in human brain. Recently, accompany with the Neuroimage progression, the altered connectivity in brain is also observed frequently in many of disorders, so brain network disorders have been used to descript the phenomenon of the disrupted interaction in brain. Actually, the microscopic cellular and molecular alteration is considered as the pathophysiologyical foundation of network-level phenomenon. For example, dopaminergic neurotransmitter alteration link to the disrupted striatal functional connectivity in schizophrenia. In general, the anti-neuropsychiatric drugs, physiotherapy and neural behavior therapy are the major intervention to control these diseases. The Neuroimage might provide the noninvasive mesoscopic information to assist in selecting intervention approaches and drugs, predicting and evaluating the therapeutic effects. Compelling evidences suggests that brain connectivity based on Neuroimange tools including fMRI, DTI, EEG and MEG, contribute to the research of different state in the neuropsychiatric disorders, ranging from schizophrenia, depression, Alzheimer's Disease, Parkinson's disease, and epilepsy to cognitive dysfunction. In past decades, it has revealed that the brain connectivity has been equipped with potential physiological mechanism, and also provides excellent opportunity to develop opportunistic marker for evaluation of intervention in neuropsychiatric disorders.

Therefore, in the proposed special issue for Current Neuropharmacology, entitled "Brain Connectivity Regulation as a target of intervention in Neuropsychiatric Disorders", we will try to assimilate the available knowledge and understanding on the topic. Here we will review the recent advances regarding the significance of Neuroimage research in neuropsychiatric disorders and summarize emerging pharmacological, physiotherapeutic and behavior strategies to modulate brain connectivity to realize the efficient neurotherapeutic need.

Keywords:

Structural connectivity, Functional connectivity, Intervention, pharmacological effects, Neuropsychiatric disorders, Schizophrenia, Epilepsy, Alzheimer's disease.

Sub-topics:

The sub-topics to be covered within the issue should be provided:

- New methods regarding connectivity analysis based on Neuroimages in diagnostic and therapeutic need.
- Crucial connections and/or networks as marker and regulator for neuropsychiatric diseases.
- Crucial connections and/or networks as a putative target for the efficient intervention.
- Symptom-related connectivity features across neuropsychiatric disorders and their alteration responding to special intervention.

Tentative titles of the articles and list of contributors:

Tentative titles:

Brain Networks responded to therapeutic intervention in schizophrenia.

The functional connectivity related to the effective intervention during normal aging

Crucial cortical networks responded to antiepileptic drugs

Resting state functional connectivity interacted with training gains in AD

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Schedule:

- ✧ Thematic issue submission deadline: December 2020
- ✧ Peer-review completion and notify to authors: March 2021
- ✧ Final Publication: May 2021

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