



## Neural Plasticity

### Special Issue on **Brain Plasticity in Schizophrenia and Other Psychoses**

# CALL FOR PAPERS

Impaired neural plasticity is one of the main pathophysiological features of schizophrenia and other psychoses reducing in general the affected brain's capacity to respond adequately to an environmental challenge. Several symptom domains like positive symptoms, reduced self-monitoring, or a cognitive decline during the disease course have been linked to impairments in neural plasticity. Clinical and preclinical studies indicate that impairments in neural plasticity emerge on the molecular and systematic level and in various areas of the affected brain. Specifically, impaired neural plasticity in psychotic disorders has been linked to an impaired excitation-inhibition balance and to alterations in GABAergic and glutamatergic neurotransmission. However, it is evident that many other neurotransmitter and neuromodulator systems, like the cholinergic system, are critically involved. On a global level, impaired neural plasticity has been linked to reduced brain volumes, to reduced physiological responses following brain stimulation, and to neuronal desynchronization. A better understanding in the underlying mechanism has the potential to foster the development of novel treatment options at various stages of the disorder. In the last years, several plasticity modulating interventions in the range from glutamatergic or nicotinic modulation to exercise treatment or to noninvasive brain stimulation were discussed to be potential treatment options. However, most studies found a rather heterogeneous response pattern and work of the future has to address the question how to predict an adequate plasticity response in schizophrenia and other psychoses.

We invite investigators to contribute original research articles as well as review articles that focus on impaired neural plasticity in schizophrenia and other psychoses. We are particularly interested in preclinical and clinical studies. The targeted readouts could be molecular, behavioral, or on a systematic level. The special issue is intended to link preclinical to clinical work and to provide an outlook to possible plasticity-modulating treatments in the future.

Potential topics include, but are not limited to:

- ▶ Preclinical and animal investigations of impaired neural plasticity in genetic and other disease models
- ▶ Adaptive mechanism on the cellular or systematic level
- ▶ Proof-of-concept work of novel plasticity modulating intervention
- ▶ Investigations to understand the high variability of plasticity responses in affected brains
- ▶ The impact of pharmacological modulation (short-term and long-term) on brain plasticity
- ▶ Impact of various modulators (stress, environment, and substance abuse) on brain plasticity
- ▶ Cellular, molecular, and physiological mechanisms of plasticity modulation in affected patients and animal models

Authors can submit their manuscripts via the Manuscript Tracking System at <http://mts.hindawi.com/submit/journals/np/bps/>.

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#### **First Round of Reviews**

Friday, 10 June 2016

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