



## Neural Plasticity

### Special Issue on **Neuroplastic Mechanisms Underlying Perceptual and Cognitive Enhancement**

# CALL FOR PAPERS

The remarkable plastic nature of our brain, often manifesting itself via changes in how brain circuits code information, is at the origin of the many complex skills we master during both early development and adulthood. Intensive work in the last few decades in both human and animal models has revealed the multiple facets of brain plasticity and culminated recently in the explosion of the field of cognitive neurotherapeutics, bringing hope that brain plasticity can be used for the remediation of a wide range of cognitive, perceptual, or motor deficits.

This growing interest in brain plasticity now shared by the general public has, however, shed light on the fact that our understanding of the regulating mechanisms of plasticity in the young, adult, and aging brain and how it can be best harnessed for therapeutic purposes remains poor. This limitation stands as a significant roadblock in the elaboration of effective science-based strategies for the remediation of neurological impairments at all ages and the preservation of optimal brain function in older adults.

Our objective with this special issue is to bring further attention to the field of neuroplasticity and cognitive neurotherapeutics by presenting novel original work performed in humans or animal models focusing on the impact of experience on brain circuits and behavior. Studies with a cross-species angle or which examine basic mechanisms of plasticity involved in the shaping of complex sensory or motor systems will be considered as priority.

We are seeking original research articles as well as review articles that will stimulate the continuing effort to understand the relationship between brain plasticity, its regulators, and its impact on behavioral function.

Potential topics include, but are not limited to:

- ▶ Effects or mechanisms of cognitive and/or perceptual training in humans and/or animals
- ▶ Improving brain function with training in clinical or normal populations
- ▶ Pharmacological or physical methods of enhancing brain plasticity
- ▶ Impact of sensory experience on brain circuit function or structure
- ▶ Methods to improve the delivery or efficiency of brain training
- ▶ Differential regulation of developmental and adult plasticity
- ▶ Identification of potential negative impacts of brain training
- ▶ Impact of specialized sensorimotor training on brain function and/or structure

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

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