

## Special Issue on Neural Plasticity in Pain and Pain Intervention

# CALL FOR PAPERS

Pain is a multidimensional subjective experience which, depending on whether it is functional or malfunctional, falls into two categories: physiological pain and pathological pain (e.g., chronic pain). Neural mechanisms of pain are subject to, or an expression of, neural plasticity—the capacity of neurons to change their function, chemical profile, or structure. The study of neural plasticity in pain thus may help disclose the neural mechanisms of physiological pain and can shed light on the neurological modifications during the development and maintenance of pathological pain. In addition, current treatments for pain, especially chronic pain, are often unsatisfactory. Few new nonopioid and nonaddictive pain medications have been developed for over five decades. The investigation of neuroplastic changes in pain intervention may help explore better treatment targets, facilitate the design of treatment plans, and ultimately develop more effective pain interventions.

The aim of this Special Issue is to have access to the state of the art in the field of neural plasticity caused by experimental pain, chronic pain, and pain interventions. We invite researchers to submit original research and in-depth review articles within this scope. We welcome both human studies and animal studies, particularly those with longitudinal designs. The studies may be based on either healthy (e.g., experimental pain) or disease models (e.g., chronic pain), or both. We encourage studies making use of cutting-edge technologies, such as neuroimaging techniques (e.g., electroencephalography (EEG), magnetoencephalography (MEG), magnetic resonance imaging (MRI), etc.), electrophysiology (e.g., intracranial recordings, patch clamp, etc.), and molecular biology (e.g., gene editing, etc.). In addition, we welcome studies not only using both optogenetics and chemogenetics to understand the cellular mechanisms of pain but also using therapeutic approaches to treat it, as well as studies discussing contributions dealing with new roles of glial cells. All kinds of effective pain interventions will also be considered, including medications, neuromodulations (e.g., transcranial magnetic stimulation (TMS), transcranial direct current stimulation (tDCS), acupuncture, etc.), and psychological treatments.

Potential topics include but are not limited to the following:

- ▶ Neural plasticity caused by experimental pain (e.g., laser, heat, cold, and pressure pain)
- ▶ Neural plasticity caused by chronic pain (both neuropathic and nonneuropathic pain)
- ▶ Abnormal neurodevelopment in chronic pain patients
- ▶ Studies relating pain and neural plasticity with other pathological conditions (e.g., depression, drug abuse, epilepsy, etc.)
- ▶ Neural plasticity tested in animal models with acute and chronic pain
- ▶ Innovative technologies to study neural plasticity, for example, experimental approaches and novel cellular and molecular targets
- ▶ Changes of neural plasticity associated with pain interventions and behavioral therapeutic approaches, including exercise or environmental enrichment

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

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

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### Submission Deadline

Friday, 10 July 2020

### Publication Date

November 2020