

Special Issue on Environmental Control of Adult Neurogenesis: From Hippocampal Homeostasis to Behavior

Call for Papers

Neuroplasticity is the brain's ability to change and adapt as a result of experience. Adult neurogenesis, neural stem and progenitor cells' ability to generate new neurons in adulthood, is a form of structural plasticity with important implications for understanding brain development and potential use by the aged or injured brain to compensate for damaged or dysfunctional pathways.

The hippocampus, one of the few structures where adult neurogenesis occurs, is vital to cognitive and emotional processing. Plasticity here is highly responsive to environmental factors, and an individual's behavioral and physiological traits can be lastingly affected by elements such as exercise, drugs, learning, or stress. Chronic stress is often associated with the development or exacerbation of psychiatric conditions. Environmental or stress-induced neural activity changes act in concert with genomic and nongenomic mechanisms to modulate changes in gene expression and structural and functional plasticity. As stress affects individuals differently, it is unclear why some thrive and others falter under similar conditions. The perception of stress and persistence of its consequences varies according to an individual's stress resilience or vulnerability, but the underlying neural processes are largely unknown.

We invite investigators to submit original research and review articles that address this field. We encourage manuscripts that will stimulate efforts to understand the molecular and (epi)genetic mechanisms that define interactions between environmental stressors, hippocampal neuroplasticity, and disease. Papers addressing how these pathways underlie (mal)adaptive responses to stress or the development of novel strategies for therapeutic intervention or treatment of neuropathological conditions will be of great interest. Potential topics include, but are not limited to:

- Environmental effects on hippocampal neuroplasticity/neurogenesis and their role in the development of anxiety and depressive-like behavior
- Impact of stress or exercise occurring, for example, at different developmental periods, on adult hippocampal neuroplasticity/neurogenesis
- Neural mechanisms of resilience or vulnerability to stress

- Sex-dependent modulation of environmental and stress effects on hippocampal plasticity
- Stress-induced epigenetic and transgenerational changes in the hippocampus

Before submission authors should carefully read over the journal's Authors Guidelines, which are located at <http://www.hindawi.com/journals/np/guidelines/>. Prospective authors should submit an electronic copy of their manuscript through the Journal Manuscript Tracking System at <http://mts.hindawi.com/submit/journals/np/csan/> according to the following timetable:

Manuscript Due	Friday, 11 April 2014
First Round of Reviews	Friday, 4 July 2014
Publication Date	Friday, 29 August 2014

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