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How Perinatal Stress Affects Brain Plasticity in Ontogenesis

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Message from the Collection Editors

Recent advances strongly support the essential role of perinatal stress in delayed psychological, psychiatric, and neurological sequelae during ontogenesis, specifically in adolescence and adulthood. A number of animal models of perinatal stress have been developed and used to study the mechanisms of its detrimental effects on the brain, with these studies having major translational significance. The perinatal period of brain development is extremely important, since it involves the formation of the main brain structures associated with neurogenesis and gliogenesis, the maturation of synapses, as well as other essential events regulated by endocrine and immune systems and potentially vulnerable to early-life stress. Stress-induced changes involve all levels of neuroplasticity, including synaptic plasticity. This Topical Collection is aimed at the accumulation of new data regarding the effects of perinatal stress on the development of brain plasticity mechanisms at all levels of brain organization. The goal of this collection is to highlight the translational potential of these data to elucidate connections between perinatal stress and negative health outcomes.



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Topical Collection



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Message from the Editorial Board

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