Membrane Steroid Receptors in Neuroendocrinology

Guest Editor
Martin J. Kelly, Portland, Oreg.
Both parents and offspring are susceptible to adverse environmental conditions that alter their normal brain development and adaptations during reproduction, increasing their risk of mental problems in the short and long term. Pregnancy stress and anxiety alter the cognitive performance, memory and behavior of mothers. Resulting in suboptimal maternal hormonal signals and inadequate care, they impact directly and indirectly on the developing baby in utero and in the neonatal stage.

This special issue of Neuroendocrinology is a collection of timely review articles from experts in the field of Mental Health Programming presented at the 'Parental Brain' Conference in Edinburgh in September 2010. A variety of mental health topics ranging from the neonatal to the juvenile and parental brain are discussed in detail. The insight provided here from in-depth research into brain mechanisms underlying altered mental health marks the recent realization that mental health is susceptible to adverse programming from an early age and that real harm can be passed on inadvertently from generation to generation. Therefore ‘The Parental Brain’ offers valuable reading for scientists and clinicians interested in the impact of environmental conditions on mental health and how parental health contributes to long-term mental health in offspring.

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• Experimentally Altered Navigational Demands Induce Changes in the Cortical Forebrain of Free-Ranging Northern Pacific Rattlesnakes (Crotalus o. oreganus): Holding, M.L.; Frazier, J.A.; Taylor, E.N.; Strand, C.R. (San Luis Obispo, Calif.)
• The Arcuate Nucleus of the C57BL/6J Mouse Hindbrain Is a Displaced Part of the Inferior Olive: Fu, Y.H. (Randwick, N.S.W); Watson, C. (Randwick, N.S.W/Perth, W.A.)
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• The Allometry of Brain Miniaturization in Ants: Seid, M.A.; Castillo, A.; Wcislo, W.T. (Panama)

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Neuroendocrine Immunology of the Thymus

Editors
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Membrane Steroid Receptors in Neuroendocrinology

A major problem confronting postmenopausal women is whether or not to take hormone replacement therapy in light of the negative findings of the Women’s Health Initiative Memory Study published about a decade ago declaring there were no positive effects of hormone replacement therapy on cognitive function. In fact, there were even increased risks of breast cancer and cardiovascular disease. However, it is known that estrogens maintain autonomic functions and have been reported to exert a positive influence on mood and affect. Hence, there has been a critical need for the development of new drugs for targeting steroid receptors in the brain.

This special issue of Neuroendocrinology on ‘Membrane Steroid Receptors in Neuroendocrinology’ is a collection of timely review articles from leading experts on gonadal steroid receptors. The scholarly, in-depth analysis of the novel signaling pathways of the gonadal steroid receptors in the brain provide a much needed new perspective. ‘Membrane Steroid Receptors in Neuroendocrinology’ is a must read for scientists and clinicians interested in rational drug design for treating the symptoms of menopause in women and andropause in men.