Special Issue

Cell Pathways Underlying Neuronal Differentiation

Message from the Guest Editor

In fact, although the persistence of neurogenic niches in adult life has been demonstrated and adult neurogenesis has been described in experimental models, the occurrence of neurogenesis in humans still remains controversial, and the generation of new neurons in an adult organism represents a challenging new frontier for regenerative medicine. In recent years, advances in methodological and technological procedures have allowed new treatments to be developed, capable of inducing stem-like neural progenitor cells and even somatic cells to reprogram their differentiation in fate and convert them into neurons.

The present Special Issue aims to collect the more recent research data obtained in experimental models both in vivo and in vitro, which provide new insights regarding the molecular mechanisms and cell pathways that are key to directing undifferentiated, stem-like neural cells toward a neuronal phenotype. These findings, apart from being essential to increasing our knowledge of neurobiology, might contribute to the development of new therapeutic strategies in order to counteract several human neuronal pathologies such as brain and spinal cord injury and brain tumors.

Guest Editor

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The International Journal of Molecular Sciences (*IJMS*, ISSN 1422-0067) is an open access journal, which was established in 2000. The journal aims to provide a forum for scholarly research on a range of topics, including biochemistry, molecular and cell biology, molecular biophysics, molecular medicine, and all aspects of molecular research in chemistry. *IJMS* publishes both original research and review articles, and regularly publishes special issues to highlight advances at the cutting edge of research. We invite you to read recent articles published in *IJMS* and consider publishing your next paper with us.

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