Stem Cells International

Hindawi

Special Issue on

Neural Stem Cells in Development and Diseases

CALL FOR PAPERS

During embryonic development, neural stem cells (NSCs) give rise to neural progenitors, differentiated neurons, oligodendrocytes, and astrocytes. NSCs persist throughout adult life in almost all mammals studied so far, including humans. After birth NSCs continue to produce glia and neurons in two canonical sites: the subventricular zone (SVZ) of the lateral ventricular and the subgranular zone (SGZ) in the dentate gyrus (DG) of the hippocampus. Addition of new neurons has been also described in other noncanonical regions of the brain including neocortex, striatum, and hypothalamus. Interestingly, several animal models showed that following disease adult NSC niches are activated and NSCs proliferation, migration, and neural differentiation increase.

Different molecular mechanisms drive neurogenesis during embryo and adult but little is known, however, on how exactly adult neurogenesis is distributed and modulated. Indeed, the description of the environmental clues capable of stimulating adult neurogenesis in both canonical and noncanonical sites is only partial. This knowledge can have relevant implications for therapies of neurodegenerative disorders.

We invite investigators to contribute original research articles and review articles that seek to address the mechanisms and significance of adult NSC distribution and differentiation. Particular attention will be given to papers exploring or discussing the concept of disease-induced NSC activation and to studies exploring the similarities and the differences among the molecular signals and mechanism acting during development, aging, and disease.

Potential topics include but are not limited to the following:

- Molecular mechanism of NSC quiescence and differentiation during development, including newly emerging factors such as metabolism and immunity
- Aging of NSCs
- Molecular mechanism of NSC quiescence and differentiation during diseases
- NSCs migration and distribution in development and diseases
- Strategies for regenerating the injured brain using endogenous NSCs

Authors can submit their manuscripts through the Manuscript Tracking System at http://mts.hindawi.com/submit/journals/sci/nscdd/.

Lead Guest Editor
Guido Fumagalli, University of Verona, Verona, Italy
guido.fumagalli@univr.it

Guest Editors
Kazunobu Sawamoto, Nagoya City University, Nagoya, Japan
sawamoto@med.nagoya-cu.ac.jp

Joanne Conover, University of Connecticut, Storrs, USA
joanne.conover@uconn.edu

Manuscript Due
Friday, 28 July 2017

First Round of Reviews
Friday, 20 October 2017

Publication Date
Friday, 15 December 2017