Stem Cells International

Special Issue on
Adult Stem Cells in Tissue Maintenance and Regeneration

CALL FOR PAPERS

Research on adult stem cells has recently generated a great deal of excitement. Somatic stem cells have been found in many human tissues; notwithstanding a low abundance in adult, their role is to sustain the function of an organ despite its physiological wear and tear or aging and to allow the regeneration in disease or injury. Our increasing ability to identify and isolate tissue-specific stem cells and the comprehension of mechanisms controlling their self-renewal and differentiation *in vitro* and *in vivo* offer possibility of replenishing cells damaged by disease, exploited by regenerative medicine. Intriguingly, blood and bone marrow-derived multipotent stem cells or induced pluripotent stem cells, even though they are relatively numerous and easy to isolate and propagate, have not yet proved clinically successful in reconstituting cells in adult human organs. Possibly, tissue-specific biological cues that determine the fate of adult stem cells and committed progenitors in normal and pathological conditions pose limits to cell plasticity and differentiation *in vivo*.

Hence, our understanding of adult tissue-specific stem cell biology can provide the basis for experimental and therapeutical tissue regeneration. While this knowledge is expanding, the abundance and ever growing number of original research articles, which always pose new questions rather than yield conclusive answers, are a call for the need to summarize information and gather the perspective necessary to focus the interests and direct future scientific efforts towards the clinical application. The ultimate goal of such action would be to provide both basic science and clinical researchers in different stages of their career with the multidisciplinary platform for expanding their understanding of tissue and organ biology and how best to implement organ regenerative potential in clinical practice.

For this purpose, we invite authors to submit comprehensive and concise review articles summarizing the current notion of tissue regeneration and reporting up-to-date knowledge on topics related to tissue-specific stem cells in adult organs, such as the heart, lung, liver, intestine, kidney, brain, or skin.

Potential topics include, but are not limited to:

- Histological identification and localization of stem cells within organ
- Cellular and molecular characteristics of adult stem cells and their microenvironment
- Factors regulating somatic stem cell fate and differentiation
- Isolation, propagation, characterization, and maturation of adult stem cells *in vitro*
- Application of knowledge related to tissue-specific adult stem cells to human disease and therapy

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

Lead Guest Editor
Stefania Montagnani, University of Naples "Federico II", Naples, Italy
montagna@unina.it

Guest Editors
Maria A. Rueger, University Hospital of Cologne, Cologne, Germany
adele.rueger@uk-koeln.de

Toru Hosoda, Tokai University Institute of Innovative Science and Technology, Kanagawa, Japan
hosoda@tokai-u.jp

Daria Nurzynska, University of Naples "Federico II", Naples, Italy
dariaanna.nurzynska@unina.it

Manuscript Due
Friday, 14 August 2015

First Round of Reviews
Friday, 6 November 2015

Publication Date
Friday, 1 January 2016