Stem Cells International

Hindawi

Special Issue on

Effect of Donor "Age" and "Disease" on Potential of Stem Cells for Autologous Use

CALL FOR PAPERS

Recent animal and human studies indicate that stem cell based therapies are very promising especially for the treatment of diseases that cannot be cured with conventional medicine. However, the success of a stem cell based therapy may be influenced by several factors such as donor age, disease conditions, cell types, and processing methods. For example, several studies indicate that stem cells isolated from young donors are better than those isolated from aged donors in terms of their regenerative potential. Similarly, disease conditions may lead to poor outcomes of stem cell based therapies in these patients. So it is very important to consider the potential factors that can influence the outcomes of stem cell based therapies. This special issue aims to discuss how stem cell characteristics (e.g., proliferation, differentiation, and homing) are affected *in vivo* and *in vitro* by various aspects. It will also examine how different strategies could be used to improve the age- or disease-impaired function of stem cells.

The accepted papers in this special issue will address the associated problems with the use of stem cells and potential solutions to correct these problems. This special issue of Stem Cells International will accept the high quality original research articles and full length reviews of outstanding importance.

Potential topics include but are not limited to the following:

- Effect of donor age on stem cell potential
- Effect of disease conditions on regenerative potential of stem cell
- Use of preconditioning strategies to enhance the age-impaired function of stem cells
- Use of preconditioning strategies to augment the disease-impaired function of stem cells
- Hypoxia and low/high temperature treatments to improve the compromised function of stem cells
- Hormesis and caloric restriction as modulator of the effect of disease and age on stem cell potential
- 3D culturing to rejuvenate the age-depleted and disease impaired function of stem cells

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

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