



Stem Cells International

Special Issue on
**Molecular Imaging of Stems Cells: In Vivo Tracking
and Clinical Translation**

CALL FOR PAPERS

Molecular imaging is a rapidly emerging biomedical research discipline, providing integrated information on specific molecules within the cells, and holds great promise as a way to track certain cellular and subcellular events of transplanted cells.

The use of noninvasive, longitudinal, and quantitative imaging of stem cells, and their tracking after administration, might facilitate preclinical experimental studies in animal models, and stem cell therapy in human trials as well.

Molecular imaging modalities, as optical bioluminescence, optical fluorescence, targeted ultrasound, molecular magnetic resonance imaging (MRI), magnetic resonance spectroscopy (MRS), single-photon-emission computed tomography (SPECT), and positron emission tomography (PET), might help to investigate stem cells behaviors and feasibility of administration and therapy.

As experimental techniques progress, the potential benefits of regenerative medicine will be a strong motivation to improve imaging technology that will enable stem-cell-driven therapies to be more understood.

We invite investigators to contribute original research articles as well as review articles that will stimulate the continuing efforts to focus on advances in molecular imaging technologies and to provide insights into cell imaging and tracking following administration, in order to promote the clinical translation of stem-cell based therapies.

Potential topics include but are not limited to the following:

- ▶ Advanced research in molecular imaging and biomarkers of stem cells
- ▶ Development of novel labeling agents and theranostic imaging probes to image and track stem cells
- ▶ Multimodality and novel imaging approaches for *in vivo* tracing stem cell: optogenetics imaging and stimulation, Raman imaging, Cerenkov imaging, magnetic particle imaging (MPI), MRI/PET, and others
- ▶ Preclinical and clinical studies of *in vivo* imaging for stem cells transplantation

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

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