



Stem Cells International

Special Issue on
Epigenetic Regulation of Stem Cell Function

CALL FOR PAPERS

Pluripotent and adult stem cells provide an unparalleled system for modeling development and disease, for drug-response screening, and hold great promise for use in regenerative therapies. Understanding and manipulating the regulatory principles that govern stem cells are therefore a priority in biomedical research.

Epigenetic regulation is a key mechanism that defines cellular identity and developmental potential. In particular, dynamic epigenetic changes appear to be important for regulating stem cell biology by integrating extrinsic signaling cues and modulating intrinsic activity. Epigenetic systems therefore play a central role in controlling stem cell state and function. Further insights into the connection between epigenetic processes and stem cell behavior are an important step towards fulfilling the potential applications of stem cells.

This special issue is intended to present novel research and concepts that link epigenetic regulation to the function and status of stem cells. We welcome submission of high-quality research studies as well as review articles

Potential topics include, but are not limited to:

- ▶ The role of DNA methylation in pluripotent and adult stem cells
- ▶ Connections between chromatin modification and stem cell function
- ▶ Regulation by noncoding RNA (including miRNA, lncRNA, and piRNA)
- ▶ Epigenetic changes associated with cell-fate decisions or reprogramming
- ▶ Enhancer usage and regulation
- ▶ Manipulation of epigenetic systems to influence differentiation, dedifferentiation (iPS), or transdifferentiation
- ▶ Signaling pathways to chromatin
- ▶ Role and prevalence of RNA modifications in stem cell biology
- ▶ Nuclear architecture and 3D topology of chromatin interactions
- ▶ Epigenetic control of X-inactivation and reactivation
- ▶ Regulation of transposable elements in stem cells
- ▶ Genomic imprint biology

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

Lead Guest Editor

Jamie A. Hackett, Cancer Research UK
Gurdon Institute, Cambridge, UK
j.hackett@gurdon.cam.ac.uk

Guest Editors

Harry G. Leitch, Imperial College
London, London, UK
h.leitch@csc.mrc.ac.uk

Bernhard Payer, Centre for Genomic
Regulation (CRG) and UPF, Boston,
USA
bernhard.payer@crg.eu

Hendrik Marks, Radboud University,
Nijmegen, Netherlands
h.marks@ncmls.ru.nl

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