

PRESS RELEASE FROM FUTURE SCIENCE GROUP

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***Regenerative Medicine* releases special focus issue on human iPS cells**

The journal *Regenerative Medicine* has announced that the July 2010 issue will provide an exclusive focus on **Cellular Reprogramming and Induced Pluripotent Stem (iPS) Cells**. The special focus issue will provide state-of-the-art coverage, including basic science, disease modeling, regulatory issues, intellectual property, toxicology and clinical applications.

In particular for this special focus, it was important that the Guest Editors, and the issue as a whole, represented both academic and industry perspectives and most importantly their integration. The Guest Editors themselves will point out; the translation of this technology will require the fostering of the “*cooperative interplay between basic research institutions, biotech and pharmaceutical companies*”.

Is iPS cell technology the future of clinical medicine? iPS cells were first produced in 2007, when it was discovered that skin cells could be reprogrammed by the addition of just four genes. The discovery was received with huge interest both from researchers and the media, offering a potential alternative to costly and sometimes controversial embryonic stem cell research. Despite this enthusiasm, the fact that iPS cells were created via genetic engineering of the cell using viral vectors rendered them unsafe for any potential therapeutic use.

However, research in the field has progressed at breakneck speed. Several methods were quickly developed to deliver transcription factor genes without viral vectors and in April 2009 the first iPS cells were generated without genetic manipulation.

Debate still continues as to whether iPS cells are truly equivalent to ESC cells, with recent advances suggesting that cells can be reprogrammed directly from one cell type to another without an intermediate iPS cell step.

Dr Chris Mason, Editor of *Regenerative Medicine*, said, “*It is universally agreed that iPS cells have the potential to transform healthcare. The big question is, ‘how?’*. In this special issue, world leading iPS experts discuss the key scientific facts, translational perspectives and future areas of impact for this disruptive technology”.

With the field moving so fast and a great deal of excitement being generated, authoritative reviews are needed to identify the genuine scientific advances amongst the hype, and offer expert commentary as to which approaches are likely to constitute the future of this field.

Dr M William Lensch, Guest Editor and Senior Scientist at the Howard Hughes Medical Institute commented; *“If this new technology has any hope of improving medical practice, and there are a variety of ways this might happen as high-lighted in this issue of the journal, then the cooperative interplay between basic research institutions, biotech and pharmaceutical companies must be encouraged.”*

Lensch went on to say, *“what is clear is that we are living through a revolution in our understanding of cellular lineage specification, tissue genesis and the epigenetic regulation of our genome, and all because of the availability of iPS cells and reprogramming process.”*

Bringing together international experts this special focus issue will aim to shed light on the real potential of iPS cells as an alternative to embryonic stem cells in research and clinical applications. The full content listing of the **Cellular Reprogramming and Induced Pluripotent Stem (iPS) Cells** issue can be found at www.futuremedicine.com/toc/rme/5/4.

Regenerative Medicine is published by London-based publisher **Future Medicine Ltd**, part of the **Future Science Group**.

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NOTES FOR EDITORS

ABOUT REGENERATIVE MEDICINE

Improved healthcare has resulted in dramatic demographic changes in developed countries, causing an increase in the prevalence of diseases associated with aging. Many significant human diseases arising from the loss or dysfunction of specific cell types in the body, such as Parkinson's disease, diabetes and cancer, are becoming increasingly common.

Stem cell research and regenerative medicine offers unique opportunities for developing new therapeutic approaches to prevent and treat these debilitating and life-threatening diseases, and new ways to explore fundamental questions of biology. The current optimism over potential stem cell therapies is driven by new understandings of genetics and developmental biology. Gradually, the curative and regenerative potential that lies in harnessing stem cells is being realized.

Regenerative Medicine (ISSN: 1746-0751) provides a forum to address the important challenges and advances in stem cell research and regenerative medicine, delivering this essential information in concise, clear and attractive article formats – vital to an increasingly time-constrained community.

Coverage includes:

- Bench-to-bedside translation and scale-up of stem cell and regenerative medicine therapies
- Potential applications for stem-cell-based strategies in pathological conditions
- Stem cell pluriipotency and emerging technologies

- Tissue engineering and artificial organ development
- Regulatory and reimbursement issues
- Ethical and legal perspectives

Despite substantial developments in our knowledge and understanding of stem cell biology and regenerative medicine, the field is in its infancy. The next few decades will unveil the true potential of this emerging specialty. *Regenerative Medicine* will provide a critical overview of these advances as they unfold and explore their potential relevance in the clinical setting.

ABOUT FUTURE SCIENCE GROUP

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