

## The Review of Diabetic Studies (RDS)

### Special Issue on **Stem Cells and Pancreas Regeneration**

In the past decades, much progress has been made in the development of pancreatic endocrine and beta cell derivation from various types of stem cells. Nevertheless, despite early success of *in vitro* and *in vivo* experimental outcomes, limitations in scalability, culture variation and functional reproducibility still represent a daunting task for cell replacement therapy in diabetes mellitus. The resolution of these issues is essential to bring stem cell technology forward and to advance clinical applications within the field of diabetic research.

This special issue will focus on both stem cells and progenitor cells derived from the human pancreas as well as those that have been modified to resemble them (e.g. pluripotent stem cells). It will also bring to light the development of new cell-based therapeutic technologies, including genetic modification, high-content screening and tissue engineering. For this special issue, we invite authors to contribute with original research and review articles that will further continue efforts on pancreatic stem cells from various sources. Work with human cell types is of particular interest with topics pertaining, but not limited to:

- Advances in cell isolation for pre-clinical and clinical purposes
- Derivation and differentiation of pancreatic progenitor cells from human pancreata
- Protocols that optimize the expansion of human pancreatic cells via genetic modification or culture techniques
- Mechanisms involving pancreatic stem cell replication and/or their regeneration
- Reprogramming or transdifferentiation of somatic cells to generate pancreatic endocrine and/or beta cells
- Differentiation of pluripotent stem cells, including embryonic stem (ES) and induced pluripotent stem (IPS) cells
- Tissue engineering approaches that include 3D scaffolding and/or culture systems
- Transplantation studies

Manuscript due February 1, 2013

Publication date Summer, 2013

#### **Lead Guest Editors**

Chee G Liew, PhD  
Academic Coordinator  
Stem Cell Center  
Department of Cell Biology and  
Neuroscience  
University of California  
Riverside, CA 92521

Malgorzata Borowiak, PhD  
Assistant Professor  
Stem Cell and Regenerative Center  
Center for Cell and Gene Therapy  
Alkek Building, Room N1020  
Baylor College of Medicine  
Houston, TX 77098

**RDS Managing Editor** Michael Weinem