



Stem Cells World Congress

24-25 January 2011
San Diego, CA, USA



For sponsorship and exhibiting opportunities contact Aaron Woodley, Exhibition Manager
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Stem Cells World Congress

Day One - Monday 24th January 2011

08:00 **Registration Opens**

09:00 **Keynote Presentation**

Stem Cells and Neurodegenerative Disease

Larry Goldstein, Professor, UCSD

Session: Regenerative Medicine Recent Trends

09:30 **Cell Tracking and Future Implications In Regenerative Medicine**

Joseph Frank, Chief, Frank Laboratory, NIH

Various imaging approaches are being used to monitor the migration of cells in regenerative medicine.

10:00 **Regeneration of a "Non-Regenerating" Tissue Promoted By Topical Treatment With the Regenerative Immunophilin Ligands**

David Weinstein, Chief Scientific Officer, GliaMed

10:30 **Coffee & Networking in Exhibition Hall**

11:15 **Vessel-derived Stem Cells for Therapy of Skeletal and Cardiac Muscle in Duchenne Muscular Dystrophy**

Suzanne Berry, Assistant Professor, University of Illinois

Data will be presented demonstrating vessel-derived stem cell therapy for skeletal and cardiac muscle in animal models of muscular dystrophy. The stem cells regenerate skeletal muscle and engraft into cardiac muscle, restoring expression of dystrophin protein and improving heart function.

11:45 **Human Mesenchymal Stromal Cell (hMSC) Spheroids Exhibit Enhanced Anti-inflammatory Properties**

Joni Ylostalo, Senior Research Associate, Texas A&M Health Science Center

The current work demonstrates how mesenchymal stromal cell (MSCs) spheroids are more effective than monolayer MSCs in reducing inflammation. In addition, spheroid MSCs are much smaller and can traffic through the lungs more efficiently than monolayer MSCs.

12:15 **Assessment of the Mechanism of Cytotoxicity Using iPS Cardiomyocytes and Bioluminescent Assays**

Jeff Kelly, Cell Analysis & HTS/Pharma, Promega

The combined use of iPS-derived cardiomyocytes and bioluminescent assays for viability, apoptosis, oxidative stress, HDAC state and proteasome function offer an ideal mammalian cell model for the sensitive analysis of multiple mechanisms of cytotoxicity will be discussed.

12:45 **Lunch & Networking in Exhibition Hall**

1:15 **Poster Session**

2:30 **The Use of Stem Cells and Platelet Rich Plasma in an Office Setting**

Joseph Purita, Medical Doctor and Director, Institute of Regenerative and Molecular Orthopedics

The purpose of this talk is to present to the physician a simple and cost effective method of performing Stem Cell (both Bone Marrow and Adipose) and Platelet Rich Plasma injections in the office setting for musculo-skeletal problems.

3:00 **Legal and Psychological Issues in Stem Cell and Regenerative Medicine**

Kenneth Lynch, Attorney / Forensic Psychologist, Kenneth Lynch

3:30 **Coffee & Networking in Exhibition Hall**

Session: Cord Blood and Stem Cell Banking

4:15 **Stem Cell Banking: Between Traceability and Identifiability**

Rosario Isasi, Research Associate, McGill University

4:45 **Biobanking: Regulatory Requirements for Cord Blood and Tissues**

Mary-Beth Fisk, Vice President, Texas Blood and Tissue Bank

In this talk the speaker will describe the regulatory requirements for banking cells and tissues in the United States. From Good Tissue Practices to licensure requirements will be outlined.

5:15 **Sample Preservation in Biobanking**

Rolf Muller, Chief Scientific Officer & Founder, BioMatrica

5:45 **Panel Discussion**

6:45 **Drinks Reception**

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Day Two - Tuesday 25th January 2011

08:00 Keynote Presentation

Mesenchymal Stem Cells for the Treatment of Huntington's Disease

Jan Nolte, Professor, UCD

Mesenchymal stem cells/marrow stromal cells (MSC) present a promising tool for cell therapy, and are currently being tested in FDA-approved clinical trials for various disorders. The current data in support of applying MSC-based cellular therapies to the treatment of Huntington's disease and other neurodegenerative disorders will be discussed.

Session: Stem Cell Utilization in Drug Discovery & Development

08:30 Stem Cells and HCS: A Differentiator in Drug Discovery

Mark Slack, Group Leader, Evotec

This talk will summarise the advantages and issues of applying stem cell derived cells lines to drug screening and development processes.

09:00 High Content Assay Strategies to Screen iPS Cells with no Screenable Phenotype

Hakim Djaballah, Director, Memorial Sloan-Kettering Cancer Center

We have successfully implemented a novel assay strategy to screen iPS cells where there is no obvious phenotype that can be measured using conventional HTS detection methodologies. The assay was developed in 384-well plates and makes use of an unusual readout technology for HTS. The assay was validated in a pilot screen against a library of 6,000 compounds. I will present some data on this novel way to screen iPS cells and discuss its merits for drug discovery and geno-toxicity assessment.

09:30 Coffee & Networking in Exhibition Hall

10:15 Epithelial-to-mesenchymal Transition Leads to the Acquisition of Cancer Stem Cell Characteristics in Liver Cancer

Bart Rountree, Assistant Professor, Penn State College of Medicine

Metastatic disease and chemotherapy resistance are the two primary causes of treatment failures for cancer. Within liver cancer, we have linked these two important aspects through Snail, a transcription factor that drives epithelial-to-mesenchymal transition.

10:45 The Current Utilization of Stem Cells in Drug Discovery and Toxicity Screening: Market Analysis

Enal Razvi, Biotechnology Analyst, Select Biosciences

Session: ESCs, Induced Pluripotent Cells (iPSC), and their Potential Applications

11:15 Human Embryonic Stem Cells for Myocardial Regeneration: How to Get the Cells We Need

Harold Bernstein, Professor, UCSF

The goal of directing differentiation of hESCs into functional cardiomyocytes has led to our research utilizing chemical, genetic, epigenetic, and lineage selection strategies to identify populations of cardiac cells for therapeutic use.

11:45 Genetic Manipulation of Human Embryonic Stem Cells and Their Neuronal Progenies using Baculoviral Vectors

Jieming Zeng, Research Scientist, Institute of Bioengineering and Nanotechnology, Singapore

To realize the potentials of human embryonic stem (hES) cells in regenerative medicine, effective genetic manipulation in hES cells and their progenies is an obvious demand. Our study demonstrates that baculoviral vectors can provide an efficient tool for this purpose.

12:15 Technology Spotlight

12:30 Lunch & Networking in Exhibition Hall



Prearrange meetings with other delegates or follow up with them after the event.

Check the event website for further information.

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1:30 **Poster Session**

2:00 **A Method for Preparation of Induced Pluripotent Stem Cells by Small Molecule Chemicals**
Siyuan Wen, Associate Professor, Beijing Institute of Radiation Medicine

2:30 **Production of RBC from Human Embryonic Stem Cells (ES) in a Bioreactor System**
Ewa Carrier, Associate Professor of Medicine and Pediatrics, UCSD
This work will present generation of red blood cells from human embryonic stem cells and novel approaches to establish bioreactors to enhance this process.

3:00 **Use of Mesenchymal Stem Cells for Therapies in the Lung**
Mauricio Rojas, Assistant Professor, University of Pittsburgh
We have demonstrated that MSC administration prevented Acute and Chronic Lung Injury in animal models. Protection against injury is associated with regulation of immune after injury. We hypothesize that MSC may also can be use on lung transplantation by ameliorating the development of obliterative bronchiolitis (OB) during chronic rejection. The studies were performed in the mouse heterotopic allogenic airway transplant model. We transplanted mouse tracheas into genetically different mice strains. Treatment with MSC significantly reduced the epithelial loss and luminal occlusion after transplant. We will discuss the mechanisms described to explain the mechanism of action and the implications to translate MSC therapy into clinic.

3:30 **Coffee & Networking in Exhibition Hall**

4:00 **Modeling Autism Spectrum Disorders with Stem Cells**
Alysson Muotri, Assistant Professor, Moores Cancer Centre
The author will present a human model using reprogrammed pluripotent stem cells from patients suffering from autism spectrum disorders and differentiated into functional neurons.

4:30 **Chemically induced Pluripotent Stem Cells (CiPSC) for Practical, Safe, Clinical Translation of Human iPS Technology**
Babak Esmaeli-Azad, President, CEO, DNAmicroarray
DNAmicroarray, Inc. has developed a robust iPS methodology termed "Chemically induced Pluripotent Stem Cells" (CiPSC, patent pending) that uses a cocktail of small molecule inducers. CiPSC eliminates the need for any exogenous gene transduction and generates fully reprogrammed cells with high levels of efficiency. In addition, CiPSC uses non-invasive samples (e.g. skin biopsies) to derive personalized pluripotent stem cells without abnormal or permanent modifications to the cellular and molecular machinery.

5:00 **Title to be Confirmed**
Mark Sussman, Professor, San Diego State University



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Registration Form

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