Stochastic Events in Stem Cell Differentiation and Reprogramming
October 28-29, 2010 - Las Vegas, Nevada USA

Register online at
www.abcam.com/stemcellsvegas

Conference program - Thursday, October 28

8:00 AM  Registration: Pick up your abstract book and name badge.

Session one: Eliminating and propagating noise during reprogramming: non-coding RNAs
Chair: Konrad Hochedlinger

9:00 AM  MicroRNA regulation of the switch between ES self-renewal and differentiation
Robert Blelloch (University of California, San Francisco, USA)

9:35 AM  Large intergenic non-coding RNAs in chromatin, cancer, and stem cells
John Rinn (Harvard Medical School, USA)

10:05 AM  Noncoding RNA regulation of X-chromosome inactivation and stem cell fate
Daniel Kim (California Institute of Technology, USA)

10:25 AM  Lentiviral vector-induced genotoxic reprogramming in the absence of ectopic transcription-factor expression
Nicole Kane (University of Glasgow, UK)

10:45 AM  Networking and coffee break

Session two: Random events that shape neural differentiation and patterning
Chair: Alex Meissner

11:05 AM  Playing dice with differentiating motor neurons
Hynek Wichterle (Columbia University, USA)

11:40 AM  Analyses of fully pluripotent iPS cells and iPS mice
Kristin Baldwin (The Scripps Research Institute, USA)

12:15 PM  The identification of a novel, human neural induction gene: implications for differentiation and direct reprogramming
Christopher Fasano (The Neural Stem Cell Institute, USA)

12:35 PM  Query of Polycomb-targeting mechanism in mammals by integration of experimental and computational methods
Guo-Cheng Yuan (Dana-Farber Cancer Institute, USA)

12:55 PM  Introduction to Abcam

1:10 PM  Lunch
Session three: Controlling noise during lineage specific differentiation events
Chair: Ihor Lemischka
2:10 PM Aging and rejuvenation of tissue stem cells
Amy Wagers (Joslin Diabetes Center, USA)
2:45 PM Epigenetic regulation of cardiac differentiation
Benoit Bruneau (Gladstone Institute of Cardiovascular Disease, USA)
3:05 PM Stochastic promoter switches and small RNA control variegated gene activation in developing NK cells
Stephen Anderson (National Cancer Institute at Frederick, USA)
3:25 PM To be announced
4:00 PM Networking and coffee break

Session four: microRNA regulation of cardiovascular differentiation
Chair: Kevin Eggan
4:20 PM Keynote: microRNA regulation of cardiovascular differentiation
Deepak Srivastava (Gladstone Institute of Cardiovascular Disease, USA)
5:10 PM Posters session (even numbers)

Friday October 29

Session five: Variation in the bona fide pluripotent state
Chair: Hynek Wichterle
9:35 AM Equivalency of ESCs and iPSCs
Konrad Hochedlinger (Massachusetts General Hospital, USA)
10:05 AM Induction and maintenance of naive pluripotency in mice and humans
Jacob Hanna (Whitehead Institute for Biomedical Research, USA)
10:25 AM Single-cell analysis reveals stochastic expression of key lineage markers in undifferentiated human ES cells
Craig Nelson (University of Connecticut, USA)

10:45 AM Networking and coffee break

Session six: Understanding noise in stem cell behavior: epigenetic and genetic influences
Chair: Benoit Bruneau
11:05 AM Epigenetic reprogramming and cellular states
Alex Meissner (Harvard Medical School, USA)
11:40 AM Evaluating the potential of human induced pluripotent stem cells for disease modeling
Gabriella Boulting (Harvard University, USA)
12:15 PM Title to be announced
Kun Zhang (University of California, San Diego, USA)
12:35 PM Enhanced maintenance of genetic integrity is a fundamental characteristic of pluripotent stem cells
John McCarrey (University Of Texas at San Antonio, USA)
Session seven: Using small molecules and transcription factors to overcome energy barriers to cell state-transitions
Chair: Kristin Baldwin

2:10 PM  **A chemical approach to controlling cell fate**
Sheng Ding (The Scripps Research Institute, USA)

2:45 PM  **Conversion of fibroblasts to motor neurons using defined factors**
Justin Ichida (Harvard Stem Cell Institute, USA)

3:05 PM  **Dynamic single cell imaging of direct reprogramming**
Zachary Smith (Harvard University, USA)

3:25 PM  **To be announced**

4:00 PM  Networking and coffee break

Session eight: Pursuing pluripotency from systems biology perspectives
Chair: Amy Wagers

4:20 PM  **Keynote: Pursuing pluripotency from systems biology perspectives**
Ihor Lemischka (Mount Sinai School of Medicine, USA)

5:10 PM  Posters session (odd numbers)

7:00 PM  Conference ends