

2014 Bridging Biomedical Worlds



Turning Obstacles into Opportunities  
for Stem Cell Therapy

Beijing, China

October 13-15, 2014

## 2014 PROGRAM



# MONDAY, OCTOBER 13<sup>TH</sup>

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**2:00–5:00pm**

Registration

**5:00pm**

Welcome and opening remarks

Gang Pei, President, Tongji University, Chinese Academy of Sciences

Yves Christen, Fondation IPSEN

Orla Smith, *Science Translational Medicine*

**5:20pm**

Chair: Qi Zhou, Institute of Zoology, Chinese Academy of Sciences

Keynote Speaker

Irving L. Weissman, Stanford University

*Normal and neoplastic stem cells*

**6:20–7:50pm**

Reception and Poster Session

# TUESDAY, OCTOBER 14<sup>TH</sup>

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**8:00–9:00am**

Breakfast/Registration

**9:00–10:40am**

**Chairs:** Beverly Purnell, *Science*

Hongkui Deng, Peking University

## Session I. Cell Fate Choices and Reprogramming

Hongkui Deng, Center for Life Sciences, Peking University

*Novel strategies for cellular reprogramming*

Fred Gage, Salk Institute

*Human cellular models of CNS disease and evolution*

Jinsong Li, Shanghai Institute for Biological Sciences

*Somatic reprogramming and embryonic development*

Hiromitsu Nakauchi, Stanford University

*In vivo generation of functional cells and organs from iPSCs*

## COFFEE BREAK

**11:10–12:50pm**

**Chairs:** Irving Weissman, Stanford University

Weizhi Ji, Yunnan Key Laboratory of Primate Biomedical Research, Kunming

## Session II. Animal models

Qi Zhou, Institute of Zoology, Beijing

*Basic research and potential application of stem cells: Cell banks and animal models*

Lei Xiao, Zhejiang University

*Pig as a model system for stem cell research*

Hideyuki Okano, Keio University, Japan

*Modeling neurological disorders with iPSC technologies and transgenic non-human primates*

Weizhi Ji, Yunnan Key Laboratory of Primate Biomedical Research, Kunming

*Gene targeting in monkeys with TALEN and CRISPR/Cas9*

## LUNCH

**2:00–3:40pm**

**Chairs:** Thomas Lecuit, Aix-Marseille Université

Lei Xiao, Zhejiang University

## Session III. Organs and Regeneration

Ira Fox, University of Pittsburgh

*Translating stem cells to the treatment of life-threatening liver disease*

Todd McDevitt, Georgia Tech

*Engineering pluripotent stem cell microenvironments for directed morphogenesis*

Maïke Sander, UCSD

*Making pancreatic beta cells from stem cells*

Nadia Rosenthal, Imperial College, London

*Immune regulation of tissue regeneration*

## COFFEE BREAK

**4:00–5:30pm**

**Chair:** Fred Gage, Salk Institute

## Session IV. Panel Discussion: International Guidelines for Stem Cell Therapies

Michele De Luca, Fred Gage, Christine Mummery, Nadia Rosenthal, Irv Weissman, Qi Zhou

# WEDNESDAY, OCTOBER 15<sup>th</sup>

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**8:00–8:45am**

Breakfast

**8:45–9:45am**

Chair: Yves Christen, Fondation IPSEN

**Keynote Speaker**

Christine Mummery, Leiden University Medical Center  
*Human pluripotent stem cells as models of cardiovascular disease*

**COFFEE BREAK**

**10:00–12:05pm**

Chairs: Orla Smith, *Science Translational Medicine*  
Qi Zhou, Institute of Zoology

**Session V. Translational and Clinical Applications**

Ann Tsukamoto, Stem Cells Inc.  
*Early clinical trial results in spinal cord injury and age-related macular degeneration*

Andrew Carr, University of Oxford  
*Barriers to Adoption in the Clinic*

Michele de Luca, University of Modena, Italy  
*Epithelial stem cells in cell and gene therapy*

Mark Zimmerman, Janssen Research & Development, LLC.  
*A big Pharma perspective on cell therapies*

Keith Thompson, Catapult, UK  
*Creating health and wealth through cell therapy translation*

**LUNCH**

**1:20–3:00pm**

Chairs: Christine Mummery, Leiden University Medical Center  
Jinsong Li, Shanghai Institute for Biological Sciences

**Session VI. New Tools and Techniques**

Feng Zhang, Broad Institute  
*Development and applications of CRISPR-Cas9 for genome biology*

Dennis Discher, University of Pennsylvania  
*Tissue mechanics from a stem cell perspective*

Thomas Lecuit, Aix-Marseille Université, France  
*The biomechanics of tissue architecture and plasticity: Concepts and tools*

Timm Schroeder, ETH-Zurich, Switzerland  
*Long-term single stem cell quantification: New tools for old questions*

**COFFEE BREAK**

**3:15–4:30pm**

Chair: Mark Zimmerman, Janssen Research & Development, LLC

Panelists: Mark Zimmerman; Keith Thompson, Catapult;  
Ira Fox, University of Pittsburgh; Ann Tsukamoto, Stem Cells Inc.

**Session VII. Panel Discussion**

**Translational Obstacles to Stem Cell Therapy Implementation**

**4:30pm**

**Closing Remarks**

Beverly Purnell, *Science*  
Qi Zhou, Institute of Zoology, Chinese Academy of Sciences