

The 27th Hot Spring Harbor International Symposium  
**Frontiers in Stem Cell Research and Reprogramming**  
Medical Institute of Bioregulation, Kyushu University

**October 31 - November 1, 2017**

Collaborative Research Station-I, Hospital Campus, Kyushu University, Fukuoka, JAPAN

---

---

**Tuesday, October 31, 2017**

---

10:00 - 10:05    Opening Remarks:  
                  **Yusaku Nakabeppu** (Director of Medical Institute of Bioregulation)

**Session 1:            Pluripotent stem cell and differentiation**

---

Chair: **Hiroyuki Sasaki**

10:05-10:40    S-01 : **Ludovic Vallier** (University of Cambridge, UK)  
                  Modeling Metabolic disorders using human Pluripotent Stem Cells

10:40-11:05    S-02 : **Takanori Takebe** (Yokohama City University, Japan)  
                  Organoid Models of Human Liver Development towards Therapy

11:05-11:30    S-03 : **Katsuhiko Hayashi** (Kyushu University, Japan)  
                  Stem cell-based in vitro gametogenesis for a better understanding of oocyte  
                  differentiation

11:30-11:40    Group Photos

11:40-13:00    Lunch (meeting invited speakers only)

**Session 2:            Stem cell and development**

---

Chair: **Yoshihiro Baba**

13:00-13:35    S-04 : **Frédéric Lemaigre** (Université catholique de Louvain, Belgium)  
                  Dynamics of gene regulatory networks in hepatocyte differentiation

13:35-14:00    S-05 : **Tomoya Kitajima** (RIKEN CDB, Japan)  
                  Roles of large cytoplasmic size of eggs

14:00-14:25    S-06 : **Satoshi Yamazaki** (University of Tokyo, Japan)  
                  Understanding of bone marrow environment and control of hematopoietic  
                  stem cells

14:25-14:45    Coffee break

---

**Session 3: Short Talks by Young Scientists**

---

Chair: **Hiroki Shibata**

- 14:45-16:35 Short talks of 11 minutes each (see p.3 for details)  
16:35-16:55 Coffee break

---

**Session 4: Direct reprogramming**

---

Chair: **Takeshi Bamba**

- 16:55-17:30 S-07 : **Marius Wernig** (Stanford University School of Medicine, USA)  
How to make a neuron
- 17:30-17:55 S-08 : **Masaki Ieda** (Keio University, Japan)  
Direct Cardiac Reprogramming, Cell Fate Decision, and Heart Regeneration
- 17:55-18:20 S-09 : **Atsushi Suzuki** (Kyushu University, Japan)  
Direct reprogramming to hepatic and intestinal lineages
- 19:30- **Dinner party** (by invitation only)

---

**Wednesday, November 1, 2017**

---

---

**Session 5: Stem cell and disease**

---

Chair: **Keiichi Nakayama**

- 10:00-10:35 S-10 : **Nick Barker** (A\*STAR Institute of Medical Biology, Singapore)  
Lgr5+ Stem Cells in Epithelial Homeostasis, Regeneration and Cancer
- 10:35-11:00 S-11 : **Tomoyuki Yamaguchi** (University of Tokyo, Japan)  
Interspecies organogenesis generates autologous functional islets
- 11:00-11:25 S-12 : **Seiji Okada** (Kyushu University, Japan)  
Spinal cord regeneration and astrogliosis
- 11:25-13:30 Lunch (meeting invited speakers only)

---

**Session 6: Stem cell aging and technology**

---

Chair: **Yasuyuki Ohkawa**

- 13:30-14:05 S-13 : **Han Li** (Institut Pasteur, France)  
Cellular senescence promotes cellular plasticity in muscle reprogramming and regeneration
- 14:05-14:30 S-14 : **Keiyo Takubo** (National Center for Global Health and Medicine, Japan)  
Metabolic regulation and hematopoietic stem cell aging
- 14:30-14:55 S-15 : **Yusuke Torisawa** (Kyoto University, Japan)  
Cell-generated niches for organ-on-a-chip microdevices
- 14:55-15:00 Closing Remarks: **Atsushi Suzuki** (Kyushu University, Japan)

**Session 3: Short Talks by Young Scientists**

---

Chair: **Hiroki Shibata**

Tuesday, October 31, 2017

14:45-16:45 Short talks of 11 minutes each

Y-01: **Kosuke Aoki** (Kyushu University, Japan)

Genetic analysis of rippling muscle disease (RMD) using Linkage-Assisted Exome Sequencing

Y-02: **Naoki Haruyama** (Kyushu University, Japan)

Accumulation of 8-oxoguanine in the nuclei of newly-generated GABAergic neurons in the nucleus accumbens and islands of Calleja contributes to locomotor hyperactivity in aged mice

Y-03: **Kentaro Hosokawa** (Kyushu University, Japan)

Foxp2 is essential for the quiescent state and self-renewal capacity of hematopoietic stem cells

Y-04: **Takashi Ishiuchi** (Kyushu University, Japan)

Epigenetic barrier screen identifies a regulator for extraembryonic development

Y-05: **Tetsuro Komatsu** (Kyushu University, Japan)

Novel histone H3.3 sub-variants are required for skeletal muscle regeneration

Y-06: **Naoto Kubota** (Kyushu University, Japan)

Identification of *DMRT3* gene enhancer involved in the pathogenesis of spastic cerebral palsy

Y-07: **Taito Matsuda** (Kyushu University, Japan)

Pioneer factor NeuroD1 rearranges transcriptional and epigenetic architecture in microglia to execute neuronal reprogramming

Y-08: **Akinobu Matsumoto** (Kyushu University, Japan)

Functional polypeptides encoded by putative long non-coding RNAs

Y-09: **Yuki Soma** (Kyushu University, Japan)

Reprogramming of Collective Microbial Cell Behavior

Y-10: **Jumpei Yamamoto** (Kyushu University, Japan)

Hepatic maturation of iHep cells in cell aggregation culture