IMCB Invited Speaker



Speaker : **Dr. Park In-Hyun**
Assistant Professor, Department of Genetics,
Yale School of Medicine, USA

Date : 22 November 2012 (Thursday)

Time : 11:30AM - 12:30PM

Venue : Level 3, IMCB Seminar Room 3-46, Proteos, Biopolis

Host : Dr. Jonathan Loh

Seminar :

Reprogramming and its application in neurodevelopmental disorders

Reprogramming to generate induced pluripotent stem cells (iPSC) has revolutionized the approaches, concepts, and future perspectives of biomedical research. Previously, we found that human somatic cell reprogramming can be distinguished by the expression of a set of defined cell surface markers. Here, we find that the expressions of unique sets of genes are gradually changed toward pluripotent state. We will discuss the genetic change in reprogramming. One of interest of our study includes the in vitro disease modeling using human iPSCs. Neurons differentiated iPSCs derived from Rett syndrome (RTT) patients show the defect in neuronal maturation consistent with the RTT phenotypes. Here, we further characterized the genes affected by different mutations in MeCP2 using RTT-iPSCs.

About the Speaker :

Dr. Park received his B.S from Seoul National University at Korea, and Ph.D from University of Illinois at Urbana-Champaign in the field of Cell and Structural Biology. During his Ph.D training, he studied mTOR pathways regulating cell growth, and myogenic differentiation. He continued his research as a Post-doc fellow in Dr. George Daley's lab in Children's Hospital Boston, where he isolated one of the first human induced pluripotent stem cells (iPSCs) and investigated the epigenetic change during reprogramming process. He is now an Assistant Professor of Genetics and Yale Stem Cell Center at Yale University. As an independent investigator, he studies the basic molecular mechanism of reprogramming and investigates neurodevelopmental disorders using human iPSCs.

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