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# The 95<sup>th</sup> iCeMS SEMINAR

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**Fri 25 Nov 2011**  
**17:00-18:30**

Venue: 2nd floor Seminar Room (#A207) Main Building  
iCeMS Complex 1, Kyoto University

Lecturers: **Prof. Guangxiu Lu**  
**Assoc. Prof. Ge Lin**

Institute of Reproduction and Stem Cell Engineering,  
Central South University  
Reproductive & Genetic Hospital CITIC-XIANGYA  
National Engineering Research Center of Human Stem Cells

## **“Modelling Glanzmann thrombasthenia with human induced pluripotent stem cells”** by Prof. Lu

Glanzmann thrombasthenia (GT) is a rare autosomal recessive genetic hemorrhagic disorder resulting from deficiency or functional defect of platelet receptor glycoprotein (GP) IIb/IIIa (GPIIb is also known as CD41). In this study, we characterized the genotype of a GT patient and then generated induced pluripotent stem cells (iPSCs) from the patient's fibroblast. GT-iPSCs have the same characteristics as embryonic stem cells (ESCs) and can be differentiated to yolk-sac-like structures. Platelets derived from GT Yolk-sac-like structures (GT-iPS-platelet) are defective in platelet function. Furthermore, expression of normal CD41 in GT-iPS platelets restored platelet function. Our study suggested that iPSCs could be used to generate GT model and to be a target of GT gene therapy.

## **“Stem cell activities in National Engineering and Research Center of Human Stem Cells”** by Dr. Lin

This is a brief overview of the history and major stem cell projects nowadays implemented in National Engineering and Research Center of human stem cells. Both research activities on human embryonic stem cell and adult stem cell will be addressed.

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**Hosted by:** iCeMS (Institute for Integrated Cell-Material Sciences), Kyoto University  
**Co-hosted by:** Center for Frontier Medicine, Global COE Program, Kyoto University

