

ISN satellite symposium

on

“Key molecules for neuronal maturation”

-Application for validating the maturation of human iPSC-derived neurons-

23 September, 2014 in Yayoi Auditorium, The University of Tokyo.

President of the Conference: Dr. Yuko Sekino

**Opening Remarks** (13:00~13:10) Yuko Sekino (NIHS, Japan)

Requirement for surrogate markers of neuronal maturation.

**Session 1: Maturation of protein signaling in neurons and glial cells**

Chair: Yuta Ishizuka (Gunma University, Japan)

13:10~13:30 Christian Gonzalez (University of Chile, Chile)

MAP1B regulates pre- and post-synaptic events during neurotransmission.

13:30~13:50 Peter Penzes (Northwestern University, USA)

Nanoscale regulation of synapse structure and function by psychiatric risk molecules

13:50~14:10 Irina Majoul (Ruebeck University, Germany)

Molecules controlling the rearrangement of cell-cell contact interface.

14:10~14:25 Nobuyuki Takei (Niigata University, Japan)

mTOR mediates neuronal maturation and cell size control.

Coffee break (14:25~14:40)

**Session 2: Maturation of cytoskeletal molecules in neurons**

Chair: Noriko Koganezawa (Gunma University, Japan)

14:40~14:55 Hideto Takahashi (IRCM, Canada)

Drebrin governs spine morphogenesis.

14:55~15:10 Toshiyuki Mizui (AIST, Japan)

LTP-induced translocation of drebrin in mature synapse.

15:10~15:25 Nobuhiko Kojima (Toyo University, Japan)

Drebrin is a key molecule for LTP formation.

15:25~15:40 Hiroyuki Yamazaki (Gunma University, Japan)

A novel drebrin-binding protein spikar-mediates spine formation

Coffee break (15:40~15:55)

### **Session 3: Maturation of human iPSC-derived neurons**

Chair: Yuko Sekino (NIHS, Japan)

15:55~16:15 Reiko T Roppongi (Gunma University, Japan)

Early development of iPSC-derived neurons.

16:15~16:30 Kaoru Sato (NIHS, Japan)

Sequential expression of various receptors along with the differentiation of human iPSC-derived neurons

16:30~16:45 Norimasa Miyamoto (Eisai Co., Japan)

Application of iPSC-derived differentiated cells to safety assessment.

### **Plenary lecture (16:45~17:15)**

Chair: Kazuyuki Imamura (Maebashi Institute of Technology, Japan)

Tomoaki Shirao (Gunma University, Japan)

Drebrin as a surrogate marker of synaptic maturation.

**Closing Remarks (17:15~17:20)** Nobuhiko Kojima (Toyo University, Japan)

**Party**