



NAIST Global COE International Symposium 2010 - Plasticity in Development and Evolution -

Date: November 11-12, 2010
Venue: NAIST Millennium Hall
Sponsor: NAIST Global COE program
Organizer: Mitsuhiro Aida • Tetsu Kinoshita • Hajime Ogino

November 11 (Thu) 2010

10:00-10:10 Opening remarks: **Ko Shimamoto (NAIST, Global COE Program Leader)**

Session 1 (Plant Sciences)

Plants integrate external and internal signals during their development, and respond to these signals by changing their morphology and physiology. This strategy allows their sessile lifestyle to adapt to diverse environmental conditions, and thus plays an important role in plant evolution. This session will focus on the molecular mechanisms underlying developmental plasticity in plants.

Chair person: **Yoshikatsu Sato & Mitsuhiro Aida**

10:10-10:40 **Mitsuhiro Aida (NAIST, Nara, Japan)**
Axils and margins: Shaping plant organs by the meristem

10:40-11:10 **Michael Lenhard (University of Potsdam, Germany)**
Organ size control and its evolution

11:10-11:40 **Yoshikatsu Sato (National Institute for Basic Biology, Aichi, Japan)**
Reprogramming differentiated cells into pluripotent stem cells in the moss

11:40-12:10 **Philip A. Wigge (John Innes Centre, Norwich, UK)**
Getting warmer? Trying to understand temperature perception in Arabidopsis

12:10-13:30 Lunch

13:30-15:00 **Poster Session 1 (P-01~P-28)**

Session 2 (Animal Sciences)

Recent progress in genome projects suggests that vertebrate species diversity results largely not from differences in the coding sequences of genes, but from differences in regulatory sequences that determine the timing and pattern of gene expression. In this session, we will approach the conservation and plasticity of gene regulatory mechanisms through analyses of evolutionary changes and epigenetic modifications of cis-regulatory elements.

Chair person: **Hajime Ogino & Kenta Sumiyama**

15:00-15:30 **Kenta Sumiyama (National Institute of Genetics, Shizuoka, Japan)**
Functional evaluation of cis-regulatory elements and their evolution in the vertebrate *Dlx3-7* bigene cluster

15:30-16:00 **Hajime Ogino (NAIST, Nara, JAPAN)**
Evolution of a fail-safe regulatory system after genome duplications in chordates

16:00-16:30 **Gert Jan C. Veenstra (Radboud University Nijmegen, Netherlands)**
Ontogeny of histone modifications during early vertebrate development

16:30-17:00 **Norihiro Okada (Tokyo Institute of Technology, Kanagawa, Japan)**
Emergence of mammals by emergency: Exaptation

17:30-19:30 **Mixer at the Research Center Training Hall**

November 12 (Fri) 2010

10:00-11:30 **Poster Session 2 (P-29~P-54)**

11:30-12:30 Lunch

Session 3 (Imprinting)

Genomic imprinting refers to the unequal expression of maternal and paternal alleles of a gene depending on the parent-of-origin, and is a phenomenon that has evolved in both placental mammals and flowering plants. In this session, we will introduce and discuss about the role of genomic imprinting in species hybridization barrier through control of developmental plasticity in hybrid placenta and endosperm.

Chair person: **Paul Vrana & Tetsu Kinoshita**

12:30-13:00 **Tetsu Kinoshita (NAIST, Nara, Japan)**

Interspecies hybridization barrier in rice endosperm: Its relationship to genomic imprinting

13:00-13:30 **Claudia Köhler (Swedish Agricultural University, Uppsala, Sweden)**

Mechanisms of polyploidy-mediated postzygotic reproductive isolation

13:30-14:00 **Paul Vrana (University of South Carolina, Columbia, USA)**

Disruption of developmental & epigenetic programmes in peromyscus hybrids

14:00-14:30 **Fumitoshi Ishino (Tokyo Medical and Dental University, Tokyo, Japan)**

Evolution of mammalian viviparity and genomic imprinting by retrotransposons.

14:30-14:40 Concluding remarks:

Carol A. Erickson (University of California - Davis, USA)
