

# SEMINAR ANNOUNCEMENT

## Harukiho Siomi

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Keio University School of Medicine



### Mammalian PIWI-piRNA Pathways in Ovaries and Chromatin Architecture Reorganization during Early Male Germline Development

**Date:** Thursday, 14 December 2017

**Time:** 10.30am – 11.30am

**Venue:** LT36, L3 Auditorium, Centre for Translational Medicine (MD6)  
(14 Medical Drive, Singapore 117599)

**Chair:** Dr Polly Chen

#### Abstract:

The PIWI-piRNA pathway is a conserved cellular pathway that represses transposable elements (TEs) and plays an important role in germline development. My laboratory is investigating the PIWI-piRNA pathway using model animals including *Drosophila*, mouse, hamster, and primates. We aim to exploit a combination of biochemical approaches, genetic experiments and bioinformatics to understand in detail how our cells silence TEs and how TEs regulate host gene regulatory networks. Two topics will be present in my talk: 1) Generation and characterization of PIWI KO hamster (Syrian hamster; *Mesocricetus auratus*) in which three of its four distinct PIWIs are expressed in the ovary. 2) Novel chromatin domains termed DADs (Differentially Accessible Domains) which span more than mega bases, get transiently accessible in embryonic male germ cells right after the reprogramming event, and turn back to closed state during the rest of their life.

#### Biosketch:

Haruhiko Siomi is Professor in the Department of Molecular Biology at Keio University School of Medicine. He obtained his Diploma degree (1982) and M.S. degree (1984) in Chemistry from Gifu University, and his Ph. D. (1988) in Virology from Kyoto University. He was then an HHMI associate with Gideon Dreyfuss at the University of Pennsylvania School of Medicine, where he studied RNA-binding proteins, such as hnRNP proteins and FMR1. He joined the University of Tokushima faculty in 1999, where he, with Mikiko Siomi, started to work on RNA silencing. In 2008, he moved to his current position at Keio University. His research focuses on many aspects of RNA silencing including small RNA biogenesis, transposon silencing, and roles of Argonautes in silencing. Recently he is also interested in elucidating roles of transposons in host cellular gene regulatory networks.