



CDB SEMINAR

Speaker: Noguchi Tatsuhiko

<Miller lab, Department of Biology, Washington University in St. Louis, MO,>

Title:

“The role of Myosin VI in spermatogenesis of *Drosophila*”

Date: Wednesday, June 18

Time: 16:00 p.m.-18:00 p.m.

Place: 7th floor Conference Room, CDB

Summary

We are using membrane remodeling during spermatid individualization in *Drosophila melanogaster* to investigate myosin VI's cellular function. During individualization, the final stage of spermatogenesis, a cyst of 64 syncytia I spermatids is remodeled into individual sperm. Membrane remodeling is accomplished by the assembly of actin cones around each spermatid nuclei and the synchronous movement of 64 actin cones from head to tail of cyst attaching cellular membrane to the axoneme. Myosin VI mutants (jaguar and mmw 14) are both male sterile, and in the mutant testis, actin cone complex collapses and the individualization stops in the middle of the cyst. In order to study the role of myosin VI during individualization, we developed a culture system of isolated cysts and demonstrated that the whole process of individualization takes place in the cultures.

In the seminar, I would like to talk about basic characterization of the process of individualization, and our recent progress in analyzing myosin VI mutant phenotypes using in vitro culture system. I would like to focus on the role of myosin VI in constructing actin cone and regulating actin dynamics of actin cone through interaction with other actin regulating proteins.

Reference

Tatsuhiko Noguchi and Kathryn G. Miller

A role for actin dynamics in individualization during spermatogenesis in *Drosophila melanogaster*

Development 2003 130: 1805-1816.

Host Shigeo Hayashi Morphogenetic Signaling ,CDB

E-mail: shayashi@cdb.riken.go.jp Tel: 078-306-3184(ext.:1521)

RIKEN Center for developmental Biology <http://www.cdb.riken.go.jp/>