



CDB SEMINAR

Shigeru Makino

The Hospital for Sick Children and Department of Molecular and Medical Genetics,
University of Toronto

Wednesday, June 7

16:00~17:00 C1F CDB Auditorium

Function of Suppressor of Fused (Su(fu)) and Kif27 in mammalian Hedgehog signal transduction

Summary

Hedgehog (Hh) signaling plays critical roles in diverse developmental processes across the metazoa. Despite the importance of this pathway in development and disease, the mechanism of Hh signal transduction in mammalian cells is poorly understood. We show here, in contrast to the *Drosophila* gene which is dispensable for Hh signal transduction, mice lacking Su(fu) die during early embryogenesis and exhibit a mutant phenotype indicative of increased Hh signaling. This demonstrates that Su(fu) is a critical rate-limiting component in mammalian Hh signal transduction. On the contrary, analysis of mutant mice shows that Kif27, which is one of the two mammalian orthologs to Costal2, an indispensable molecule for Hh signal transduction in *Drosophila*, is not necessary for normal Hh signal transduction in mouse. Together, our data indicates that the mammalian Hh signal transduction is mechanistically different from that of fly.

Host:

Hiroshi Sasaki

Embryonic Induction,
CDB

sasaki@cdb.riken.jp

Tel: 078-306-0102

(ext: 4431)

Shigeo Hayashi

Morphogenetic
Signaling, CDB

shayashi@cdb.riken.jp

Tel: 078-306-3185

(ext: 1523)

RIKEN CENTER for DEVELOPMENTAL BIOLOGY (CDB)