



CDB SEMINAR

Yuka Morikawa

Cardiomyocyte Renewal Lab, Texas Heart Institute,
Dept. Molecular Physiology, Baylor College of Medicine

Tuesday, April 16, 2013

16:00~17:00 C1F CDB Auditorium

Hippo signaling in cardiomyocyte renewal and regeneration

Summary

Heart disease caused by loss of heart muscle cells, cardiomyocytes, is a leading cause of death in the world. However, therapies to replace the loss of cardiomyocytes are limited since the regenerative capacity of mammalian cardiomyocytes in adult is limited. In rodents, the heart has endogenous regenerative capacity during development but it is rapidly repressed after birth. The mechanism of repressing cardiac regeneration is still unknown.

We have previously shown that Hippo signaling, an ancient organ size control pathway, regulates cardiomyocyte proliferation during development. Here, we investigated the roles of the pathway in adult cardiomyocyte renewal and postnatal cardiac regeneration. We found that cardiomyocytes re-enter the cell cycle and undergo cytokinesis in the adult mouse when the components of Hippo pathway were conditionally deleted. Furthermore, deletion of Hippo signaling in postnatal mouse results in heart repair through cardiomyocyte regeneration.

Host:

Guojun Sheng

Early Embryogenesis,
CDB

sheng@cdb.riken.jp

Tel:078-306-3132

(ext:4201)

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