



# CDB SEMINAR

Speaker: **Yasuhide Furuta**

< Department of Biochemistry & Molecular Biology  
University of Texas, M.D. Anderson Cancer Center >

Title: **"Growth Factor Signaling during Organogenesis:  
Looking through the eye into the heart"**

Date: Wednesday, March 10

Time: 16:00 P.M. ~ 17:00 P.M.

Place: 6th floor Conference Room of Building C, CDB

## Summary:

Research in our laboratory is aimed at elucidating the molecular mechanisms underlying inductive tissue interactions during embryonic organ formation. Using transgenic and gene targeting approaches, we are investigating the *in vivo* function of secreted signaling molecules that play central roles during organogenesis, which will lead to our better understanding of the mechanisms underlying various birth defects. One of the model systems we currently focus on is eye development. We have shown that bone morphogenetic proteins (Bmps), members of the TGF $\beta$  superfamily of secreted signaling molecules, play essential roles in multiple distinct aspects of eye development in the mouse; during lens induction and differentiation, and patterning and growth of the developing retina. Our recent studies also suggest potential cooperation of Bmp signaling with other signaling pathways, including those of fibroblast growth factors (Fgfs) during eye development. Finally, we will discuss our recent study on the role of Fgf signaling pathways during the formation of the embryonic heart. The study will potentially define a novel regulatory pathway to control mammalian heart development, and thus to uncover novel mechanisms underlying congenital heart disorders.

Host **Kazuki Nakao** Animal Resources and Genetic Engineering, CDB

E-mail [kazuki@cdb.riken.jp](mailto:kazuki@cdb.riken.jp) Tel:078-306-0106(ext.4331)

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