IMCB Invited Speaker

Speaker : **Prof. Didier Stainier**
Director, Department of Developmental Genetics,
Max Planck Institute for Heart and Lung Research, Germany

Date : 31 July 2013 (Wednesday)

Time : 11:00AM - 12:00PM

Venue : IMCB Seminar Room 3-46, Level 3, Proteos, Biopolis

Host : A/Prof. Sudipto Roy

Seminar :

Imaging heart development and function in zebrafish

My lab investigates questions related to organogenesis including cell differentiation, tissue morphogenesis, organ homeostasis and function, as well as organ regeneration. We study these questions in zebrafish as well as in mouse and are currently looking at several mesodermal (heart, vasculature) and endodermal (pancreas, lung, liver) organs. We utilize both forward and reverse genetic approaches, and aim to dissect cellular processes using high-resolution live imaging. One goal of our studies is to gain understanding of vertebrate organ development at the single-cell level, and beyond. This talk will focus on cardiac development and function.

About the Speaker :

Didier Stainier is a leader in the field of organogenesis. His groundbreaking work in zebrafish has led to the identification of several molecular pathways critical for the development of the heart, blood vessels, liver, pancreas, and gut. As a graduate student with Wally Gilbert at Harvard University, Stainier first became familiar with the zebrafish system in 1987 and immediately realized the potential of thisorganism for large-scale approaches including forward genetics. As a postdoctoral fellow with Mark Fishman at Massachusetts General Hospital, he joined forces with Wolfgang Driever and his laboratory to carry out saturation mutagenesis screens in zebrafish. Moving to UCSF in 1995 to set up his own laboratory, Stainier first elected to focus his efforts on the initial assembly of the heart tube, specifically on a set of genes that regulate the migration of the precardiac mesoderm to the midline. Several of these genes affect endoderm formation thereby revealing the importance of the endoderm in heart formation. Since that time, Stainier's laboratory has expanded its research interests to include endodermal organ development, regeneration and physiology. In 2012, Stainier moved his laboratory to the Max Planck Institute for Heart and Lung Research in Bad Nauheim, Germany.

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