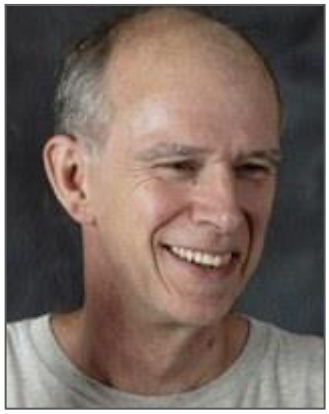
Institute of Medical Biology
A*STAR

Seminar Announcement

- All Welcome -



Speaker : **Prof David Glover**
University of Cambridge, United Kingdom

Title: ***"Centriole Duplication: its mechanisms and consequences of mis-regulation for the skin and pancreas"***

Date : **30 July 2015 (Thursday)**

Time : **11:00am – 12:00pm**

Venue : **Breakthrough Theatrette, Matrix Level 4**

Host : **Prof Birgit Lane**
(Tel: 64070151; e-mail: birgit.lane@imb.a-star.edu.sg)

Abstract:
The structure of centrioles and the mechanism of their duplication are highly conserved. Before a mother-daughter pair of centrioles can duplicate, the daughter must acquire the full properties of a centrosome and disengage from its mother. I will describe the key molecular events behind these processes that take pace during passage through mitosis. The initiation of centriole duplication then requires recruitment of key components of the centriole core to a single site on the mother and newly converted daughter. This is only possible following phosphorylation of one of these core components by Plk4, the master regulator of centriole duplication.

Overexpression of Plk4 results in supernumerary centrosomes. As cancer has are long known to have multiple centrosomes, we have developed a transgenic mouse in which we can induce Plk4 over-expression. I will describe how this perturbs the balance between differentiation and cell proliferation in the skin and the pancreas in a p53 dependent manner.

About the Speaker:
David Glover participated in the recombinant DNA revolution in the Hogness lab at Stanford in the 1970s. He has held positions at Imperial College, London and at the University of Dundee and since 1999 has been Arthur Balfour Professor of Genetics at the University of Cambridge. In the 1980s he began to use Drosophila as a model system in which to unravel the molecular cell biology of mitosis. This led to the discoveries of the Aurora and Polo kinases. In the past ten years his work has focused upon the roles of Polo-like kinase 4 in centriole duplication.