IMCB Invited Speaker

Speaker : **Dr. Y. Peng Loh**
Head, Section on Cellular Neurobiology,
Program on Developmental Neuroscience,
Eunice Kennedy Shriver National Institute of Child, Health and Human Development, National Institutes of Health, USA

Date : 28 August 2013 (Wednesday)

Time : 11:00AM - 12:00PM

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

Host : Prof. Wanjin Hong

Seminar :

Carboxypeptidase E: A New Trophin in Neuronal Survival, Depression and Cancer

Carboxypeptidase E (CPE) was first identified as a prohormone processing enzyme. Recently it has been shown to have trophic effects independent of its enzymatic activity. CPE is secreted from hippocampal neurons and shown to neuroprotect these neurons against oxidative stress via Akt, or Erk1/2 signaling to up-regulate the expression of BCL2, an anti-apoptotic protein. CPE expression is increased during chronic stress in mice to prevent depressive-like behavior. Genetic obliteration of CPE in mice leads to diminished neurogenesis and depressive –like behavior. Finally, a splice variant of CPE (CPE-DN) has been found that functions in the nucleus to up-regulate the expression of anti-apoptotic genes and a metastatic gene, Nedd 9, in liver cancer cells to induce metastasis. Clinically, CPE-DN has proven to be a powerful prognostic biomarker for predicting future metastasis in patients with hepatocellular carcinoma and pheochromocytoma.

About the Speaker :

Dr. Peng Loh is the Head of the Section on Cellular Neurobiology, Program on Developmental Neuroscience, National Institute of Child Health and Human Development, National Institutes of Health in USA. She received her B.Sc. (Hons.) in Biochemistry from University College Dublin, Ireland, and her PhD in Molecular Biology from The University of Pennsylvania, Philadelphia, USA. She did her postdoctoral work at NIH and at the Max Plank Institute in Germany. Her studies have identified players and mechanisms that control secretory granule biogenesis and transport in endocrine cells and neurons. More recently, she discovered that Carpboxypeptidase E, is a trophic factor that is involved in neuroprotection and depression, and a splice variant form induces metastasis in cancer. Dr. Loh has published more than 200 papers inprestigious journals and received numerous awards including the NIH Director's Award, the NIH Director's Award for Mentoring and The FASEB Award for Excellence in Science.

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