



## SEMINAR ANNOUNCEMENT

We would like to invite you to attend this seminar hosted by Prof. Hong Wanjin:

Date: 20 June 2019, Thursday

Time: 11:00AM – 12:00PM

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

---

**Speaker:** Dr Y. Peng Loh, Chief, Section on Cellular Neurobiology, National Institute of Child Health and Human Development, National Institutes of Health, USA

**Title:** Carboxypeptidase E – Neurotrophic factor- $\alpha$ 1: Role in Neuroprotection, Cognitive Function and Cancer

### **Abstract**

Stress causes various pathophysiology in the brain including neuronal degeneration, compromised neuronal network and cognitive dysfunction, and leads to diseases such as Alzheimer Disease and Major Depressive Disorder. Carboxypeptidase E (CPE), a proneuropeptide/prohormone processing enzyme, also named neurotrophic factor- $\alpha$ 1(NF $\alpha$ 1) has recently been shown to be a new trophin that is highly expressed in hippocampal CA3 neurons, and has neuroprotective activity, specifically in these neurons during stress, to maintain normal cognitive function. CPE-NF $\alpha$ 1 has also been shown to mediate anti-depression in mice. Interestingly, CPE-NF $\alpha$ 1 and its splice variant CPE- $\Delta$ N are expressed in cancer cells and elevated levels are correlated with metastatic activity. CPE-NF $\alpha$ 1 is also secreted from exosomes of cancer cells and these organelles when taken up by recipient cells can confer tumorigenesis. Conversely delivery of exosomes loaded with shCPE is able to suppress growth and invasion of metastatic cancer cells. Thus CPE-NF $\alpha$ 1 is a potential therapeutic target for treating neurodegenerative diseases and cancer.

### **Biography**

Dr. Y. Peng Loh completed her BSc (Hons) in Biochemistry at University College Dublin, Ireland and PhD in Molecular Biology from the University of Pennsylvania, Philadelphia, USA. She did postdoctoral studies from the National Institutes of Health and the Max Planck Institute in Germany. She is currently Chief of the Section on Cellular Neurobiology, Eunice Kennedy Shriver National Institute of Child Health and Human Development, National Institutes of Health, USA. She has published more than 200 papers in reputed journals and has been serving as an editorial board member of several international journals.

---

**ALL ARE WELCOME** (No registration required)

*We appreciate if you could disseminate this email to your staff.*

*For upcoming seminars in IMCB, please visit our website at <https://www.a-star.edu.sg/imcb>*

*Thank you.*