NANYANG TECHNOLOGICAL UNIVERSITY

School of Biological Sciences

Reg. No. 200604393R

Research Theme: Neuroscience

Research Project Title: The role of astrocytes during learning and memory

Principal Investigator/Supervisor: Ch'ng Toh Hean

Co-supervisor/ Collaborator(s) (if any):

Project Description

a) Background:

Our lab is interested in understanding how astrocytes contribute to neuronal plasticity during learning and memory. Much is known about transcription-dependent plasticity in neurons during encoding of memories but activity-dependent transcriptional regulation in astrocytes remains poorly characterized. In recent years, astrocytes are thought to contribute metabolitically during peak neuronal activity by providing additional sources of energy. In that context, our lab is studying nuclear signaling pathways in astrocytes and how that is regulated during a memory formation.

b) Proposed work:

Interested candidates will be working to study and understand different signaling pathways that are triggered in astrocytes during learning and memory. In particular, we want to better understand the neuron-astrocyte relationship from the context of transcription-dependent long-term plasticity. Candidates will be using the mouse model to look at the function of astrocytes and should be prepared to work with different in-vivo mouse models as well as in-vitro neuronal preparations.

Supervisor contact:

If you have questions regarding this project, please email the Principal Investigator: thchng@ntu.edu.sg

SBS contact and how to apply:

Associate Chair-Biological Sciences (Graduate Studies) : AC-SBS-GS@ntu.edu.sg

Please apply at the following:

http://admissions.ntu.edu.sg/graduate/R-Programs/R-WhenYouApply/Pages/R-ApplyOnline.aspx

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