National Neuroscience Institute
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National Neuroscience Research Institute Singapore

NEUROSCIENCE & BEHAVIOURAL DISORDERS

NNRIS Bench to Bedside Seminar Series

Date: 23 October 2020 (Friday)

Time: 12:00pm – 1:00pm

Zoom Details: https://ihis.zoom.us/j/98599401228?pwd=RkROd3hwbHRmRXJ2NTNjcys4MVo0dz09
Meeting ID: 985 9940 1228
Passcode: 969805

Note: Please rename your login name to include your institute to facilitate admission

Moderator: **Assoc Prof LIAO Ping**
National Neuroscience Institute

TARGETING SUBTYPE SWITCHING IN GLIOBLASTOMA

Dr Melanie Tan, PhD
Research Fellow
Neuro-Oncology Research Laboratory
National Neuroscience Institute

Abstract:
Glioblastoma (GBM) tumours are notoriously difficult to treat due to their aggressive and recurrent nature. The Cancer Genome Atlas studies have attributed the frequently observed variation in treatment responses to the molecular and cellular heterogeneity of tumour tissue. Molecular subtype switching further compounds the difficulty in treatment. This talk discusses our recent findings on the mechanisms underlying subtype switching in GBM, and why in patient-derived models, different approaches are needful to recapitulate the pathophysiology of GBM. We will then present explorative efforts to therapeutically target GBM molecular subtypes, and offer a glimpse of how our multi-disciplinary team of collaborators will integrate into GBM AGILE (**G**lioblastoma **A**daptive **G**lobal **I**nnovative **L**earning **E**nvironment) to launch a unique design of clinical trial that overcomes a low prevalence disease (and patient cohort) represented locally.

Biography:
Melanie obtained her PhD from the Nanyang Technological University in 2019, and is now a Research Fellow at the Neuro-Oncology Research Laboratory at NNI. During her training, she focused on identifying mechanisms underlying chemoresistance and recurrence in GBM (Nat Commun. 2019). She will discuss the findings and also elaborate briefly on future explorative efforts.

NOVEL MOLECULAR MECHANISMS UNDERLYING THE REACTIVATION OF QUIESCENT NEURAL STEM CELLS

Dr Qiannan Deng, PhD
Research Fellow
Neuroscience & Behavioural
Disorders Programme
Duke-NUS Medical School

Abstract:
The ability of stem cells to switch between quiescence and proliferation is crucial for tissue homeostasis and regeneration. *Drosophila* quiescent neural stem cells (NSCs) extend a primary cellular protrusion from the cell body prior to their reactivation. However, the structure and function of this protrusion are not well established. Here, we show that in quiescent NSCs, microtubules are predominantly acentrosomal and oriented plus-end-out toward the tip of the primary protrusion. We have identified Mini Spindles (Msps)/XMAP215 as a key microtubule regulator in quiescent NSCs that governs NSC reactivation via regulating acentrosomal microtubule growth and orientation.

Biography:
Qiannan received her PhD degree in Zhejiang University in China in 2012. She worked on signaling pathways regulating the growth of epithelial cells in Drosophila. She joined Prof Wang Hongyan's laboratory as a postdoctoral research fellow since September 2017. Currently, She is working on neural stem cell development in Drosophila.

All are welcome. No registration is required.