



Singapore Developmental Biology Club

SEMINAR ANNOUNCEMENT

27 March 2013, Wednesday
Exploration Theatre, Level 4, Matrix, Biopolis
5:30PM – 6.30PM



Dr. Julian Heng

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Seminar Title: Regulating the actin and tubulin cytoskeleton during brain development and in disease

The mammalian cerebral cortex is a remarkable product of brain evolution, and is the structure that most distinctively delineates the human species from others. During fetal development, new neurons of the embryonic cerebral cortex undergo active cell migration in order to arrive at their appropriate locations before finalising their connections to form functional brain circuitry. As these developmental processes occur, the cytoskeleton of immature neurons undergoes extensive and dynamic remodelling to facilitate the sequential steps of neurogenesis, cell migration and terminal differentiation. In this presentation, I will discuss the gene regulatory mechanisms that regulate the actin cytoskeleton of embryonic cortical neurons within the developing mouse brain. In addition, I will also discuss our recent work which identifies the microtubule cytoskeleton gene TUBB5 to be important for human brain development. Together, our research serves as a discovery platform for the identification of novel biomarkers for diagnostic testing. In addition, our research improves our understanding of the molecular mechanisms for nerve cell production, and we will exploit these findings in order to develop novel cell therapies and genetic interventions to clinically manage brain injury and disease.

No registration required.

*For more details on Singapore Developmental Biology Club,
please visit www.singaporedbc.blogspot.com*