Institute of Molecular and Cell Biology
A*STAR

SEMINAR ANNOUNCEMENT

We would like to invite you to attend this seminar hosted by A/Prof Sudipto Roy:

Date: 9 October 2019, Wednesday
Time: 3.00PM – 4.00PM*
Venue: Level 3, IMCB Seminar Room 3-46, Proteos, Biopolis

*Please take note of amended timing

Speaker: A/Prof Peter Swoboda, Department of Biosciences and Nutrition, Karolinska Institute, Sweden
Title: Human neurons and their cilia

Abstract
We use bioinformatics, human cell culture systems and the worm Caenorhabditis elegans to explore how certain neuron types differentiate into specialized sensory and signaling machines enabling behavioral responses to environmental input. Parallels between worms and humans allow mechanistic insight into normal neuronal differentiation and possible defects underlying human neuro-developmental, including psychiatric, disorders. Primary cilia, antenna-like structures projecting off polarized cell surfaces, are organelles involved in signal transduction and cell-to-cell communication. In the nervous system cilia can serve as extra-synaptic signaling hubs. Many different human cell types, including neurons, are ciliated and defects in cilia function and/or structure lead to disorders called ciliopathies, which also include brain phenotypes. However, how cilia affect the neuro-developmental aspects of these disorders is still poorly understood. Recently we have established a novel ciliated human neuronal cell model where we can investigate molecular, sub-cellular and developmental aspects of cilia biology in proliferating, differentiating and fully differentiated, functional neurons. Moreover, we provide an efficient cell model for the studies of cilia function associated with neuro-developmental disorders.

Biography
Peter Swoboda is originally from Austria. He graduated from the University of Vienna, Austria, and then did his PhD work at the Friedrich Miescher Institute in Basel, Switzerland. After a post-doc at the University of Washington in Seattle, USA, he obtained a faculty position at the Karolinska Institute in Stockholm-Huddinge, Sweden. Peter Swoboda is Associate Professor and Principal Investigator at the Karolinska Institute. He leads a research group focusing on nervous system development, differentiation and behavioral output.

ALL ARE WELCOME *(No registration required)*

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Thank you.