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: 4 October 2019, Friday
Time: 11:00AM – 12:00NN
Venue: Level 3, IMCB Seminar Room 3-46, Proteos, Biopolis

Speaker: Dr Sarah C. Goetz, Assistant Professor, Department of Pharmacology and Cancer Biology, Duke University School of Medicine, USA
Title: Ciliary signalling in human disease: From neurodegeneration to cancer

Abstract

Primary cilia are organelles that transduce vital intercellular signals, and extend from most types of cells in vertebrates. Because of their role in developmental signaling pathways, dysfunction of primary cilia is linked to many hereditary developmental disorders. While most cells in adult tissues also remain ciliated, the roles of cilia in signal transduction in adulthood are largely unknown. My lab uses mouse genetic models such as conditional mutants of key ciliary proteins to define the requirements for cilia and ciliary signals in specific tissues both during embryonic and postnatal development as well as adulthood. Through this approach, we have identified a requirement for primary cilia in the adult cerebellum in maintaining the connectivity and viability of Purkinje neurons. Our data suggest that primary cilia play an integral role in maintaining adult neuronal function, and reveal novel insights into the mechanisms involved in neurodegeneration. Additionally, our lab has been exploring possible connections between ciliary signaling and mammary tumor dormancy and recurrence, finding that cilia are associated with recurrent tumors in a mouse tumor-progression model.

Biography

Sarah Goetz earned her PhD in Molecular, Cellular, and Developmental Biology from the University of North Carolina at Chapel Hill, studying vertebrate heart development in the lab of Frank Conlon. She then pursued postdoctoral training in mouse developmental genetics in the lab of Kathryn Anderson at Sloan-Kettering Institute in New York City. In 2015 Sarah joined the Department of Pharmacology and Cancer Biology at Duke University School of medicine to start her independent laboratory.

ALL ARE WELCOME *(No registration required)*

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