DukeNUS Medical School | National Cancer Centre Singapore SingHealth | CSCB Cancer and Stem Cell Biology Seminar Series

A lecture for cells: on the importance of sorting out your enzymes to control your aggressiveness & cancerous tendencies

Abstract:

Protein glycosylation drastically modifies cell surface proteins and controls cell-cell and cell-matrix interactions. GalNac O-glycosylation is altered in malignant tumors. We found that the enzymes GALNTs are by sub-cellular localisation: a process nicknamed GALA. GALA stimulates the glycosylation of roughly 200 proteins. One of them is the metalloprotease MMP14, whose glycosylation strongly increases activity. In mouse liver tumors, stimulating GALA strongly accelerates tumor progression, while inhibition blocks it completely. ~80-90% of human tumors display GALA activation. Thus, GALA appears to be activated in virtually all malignant tumors and required for growth.



Speaker:

Dr. Frederic BARD

Program Coordinator
Multi-Modal Molecular Biology (M3B) Programme
Institute of Molecular and Cell Biology (IMCB)
Singapore

Captivated by cell biology, Frederic studied at the Ecole Normale Superieure of Lyon in France, then did his PhD at Yale University, focusing on sub-cellular compartmentalization. With Vivek Malhotra at UCSD (2001-2006), he identified the TANGO genes. Frederic joined IMCB in 2006 and established the first RNAi screening platform in Singapore. His research now focuses on understanding how signaling pathways regulate compartmentalization and ultimately control protein glycosylation and cell behaviour.

Date:

8 March 2019 (Friday)

Venue:

Meeting Rm 7C, Level 7
Duke-NUS Medical School
8, College Road,
Singapore 169857

Time:

10:00 – 11:00 a.m.

Host:

Dr. Kanaga SABAPATHY
Professor
Head and Principal Investigator
Division of Cellular & Molecular Research
National Cancer Centre Singapore

No registration is required.
All are welcome.
Any enquiries, please contact:
Lilian Poon (6601 3779)