Cancer Science Institute of Singapore

SEMINAR ANNOUNCEMENT

Calvin Kuo

Professor of Medicine (Hematology)
Professor of Chemical and Systems Biology
Stanford University



Biology of Actively Cycling and Reserve Intestinal Stem Cells

Date: Tuesday, 18 July 2017
Time: 3pm – 4pm
Venue: #01-01B Learning Room, MD6
(14 Medical Drive, Singapore 117599)
Chair: Prof Yoshiaki Ito

Abstract:

The extensive turnover of the intestinal epithelium is maintained by both actively cycling and reserve intestinal stem cells. Signaling within the niche is essential for regulating the balance between intestinal stem cell self-renewal and differentiation, as well as injury inducibility. Cooperativity between niche factors is essential for intestinal stem cell fate decisions, with establishment of competency versus self-renewal of actively cycling populations. Additionally, substantial plasticity underlies the activation of reserve intestinal stem cells by injury. In these studies, the use of synthetic bioengineered niche factors as probes for intestinal stem cell biology will be described.