



THE HONG KONG UNIVERSITY OF SCIENCE & TECHNOLOGY
Division of Life Science

LIFS Seminar Series

“Reserve Stem Cell and Drug-resistant Cancer Stem Cells”

delivered by

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Abstract

Stem cells are a special class of cells that occur naturally in the body with amazing qualities that set them apart from other cell types. Stem cells have a special capacity for tissue generation and regeneration, which makes stem cells very useful in medical applications. We are interested in hematopoietic and intestinal stem cells and focus on understanding how stem cells are maintained in vivo by cellular microenvironments (niches), signaling, and intrinsic epigenetic regulations.

We propose a model of existing active and reserve (a back-up) stem cells in multiple tissues in mammals to fulfill the functions of homeostatic maintenance (by active stem cells) and post-injury regeneration (by reserve stem cells). We are studying the intrinsic and extrinsic (niche) regulation that distinguish active and reserve stem cells. What learned from this concept can shed an light on the drug-resistant cancer stem cell (CSC), which often escapes clinical chemoradiotherapy, and functions as a major resource of relapse. Understanding the intrinsic and extrinsic (niche) mechanisms that contribute to CSC's drug-resistance can provide a critical insight for therapeutic outcome of cancer treatment.

Date : **2 March 2018 (Friday)**

Time : **4:00 p.m.**

Venue : **Padma & Hari Harilela Lecture Theatre (LT-C)
HKUST, Clear Water Bay, Kowloon**

(Host faculty: Prof. Zhenguo Wu)

All are Welcome!