



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

LIFS Seminar Series

On the way to trans-omic study of human diseases

by

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Abstract

Two recent trends in large-scale omic studies of human diseases are the increasing emphasis of non-coding regulatory regions and the integration of multiple data types. Both trends come with promises but at the same time also challenges. For instance, regulatory regions are not comprehensively cataloged, and their activities could vary among cell types or even individual cells. Target genes of regulatory regions and quantitative relationships between their activities are not well understood. Combining data from different omes should provide important insights, but exactly how data should be integrated is still under debate, and many studies simply take the intersection or union of regions identified from different data types, which is probably an underuse of the data.

In this seminar, I argue that these two trends can actually help each other. By integrating multiple types of data, we can identify regulatory regions, quantify their activities and estimate their effects more accurately. By considering regulatory regions, we can invent novel ways to integrate different types of omic data with biological justifications. I will illustrate these points by some recent work from my group and others, with a hope of generating new ideas for studying human diseases along the discussion.

Date : **6 October 2017 (Friday)**
Time : **4:00 p.m.**
Venue : **Lecture Theatre C (near Lift no. 26)**
The Hong Kong University of Science & Technology, Clear Water Bay, Kowloon

(Host faculty : Dr. Danny Leung)

All are Welcome!!