



City University of Hong Kong
Department of Biomedical Sciences and
Department of Mechanical and Biomedical Engineering

jointly present a seminar on

Genome engineering using the CRISPR-Cas9 system

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Singapore

Date: 16 September 2014 (Tuesday)
Time: 3:00–4:00 pm
Venue: B6605 (CSE Conference Room), Blue Zone (near Lift 3)
6/F Academic 1, City University of Hong Kong, Kowloon Tong

Abstract

Traditional techniques for generating genetic mutations in most organisms have relied on selection from large pools of randomly induced mutations for those of particular interest, or time-consuming gene targeting by homologous recombination. Discovery of targeted nucleases dramatically changed the genome-editing landscape. The RNA-guided Cas9 nuclease from the microbial clustered regularly interspaced short palindromic repeats (CRISPR) adaptive immune system facilitates efficient genome engineering in wide range of organisms. Cas9 creates a double strand break within the 20-nt targeting sequence contained on its guide RNA. This double strand break can be repaired by cell via nonhomologous end joining, resulting in most cases in a gene knock-out, or by homology-directed repair if a specific donor sequence is introduced, resulting in a knock-in. Introduction to the CRISPR/Cas9 system will be presented.

General Enquiry

3442-4538

All are welcome