



Department of Biological Sciences Seminar Announcement

Rice Genomes and Beyond: Agricultural Genomics

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The rice genome (*Oryza sativa*) holds fundamental information for its biology. Using a “whole genome shotgun” approach, we produced a draft rice genome sequence of *Oryza sativa* ssp. *indica*, the major crop rice subspecies in China. We have gone on to assemble fine gene-centric sequence maps of the two rice subspecies, *indica* and *japonica*. Our initial analyses have focused on the genome compositional and organizational dynamics in comparison to other sequenced genomes, especially the *Arabidopsis* genome. We found major differences between animal and plant genomes and between monocot and dicot plant genomes. We noticed that a significant fraction of the rice genes are fast evolving, perhaps to acquire new function or becoming pseudogenes, based on data from genomic and proteomic studies. There are still more challenges in understand the cellular mechanisms that create and maintain genome dynamics at different levels, such as gene/genome duplications and polyploidy. We call upon an internationally coordinated effort to sequence more plant genomes, justified by their economic values and scientific importance.

Date: 14 February 2003, Friday
Time: 4 - 5pm
Venue: LT20
Host: Prof Hew Choy Leong

All are welcome