

Seminar Announcement

3D Genome Organization for Transcriptional Regulation in Cells

Date: 5 February 2016 Friday

Time: 4pm

Venue: Classroom 1, SBS

Speaker: Asst/Prof. Melissa J. Fullwood

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Abstract

Chromatin interactions are two or more regions that come together in close spatial proximity in the complex 3-D organization of our genome, and can bring non-coding regions such as enhancers, near to target gene promoters. Using novel methods to analyse chromatin interactions such as Chromatin Interaction Analysis with Paired-End Tag Sequencing (ChIA-PET) and Circular Chromosome Conformation Capture (4C), my lab and other labs have uncovered the presence of many chromatin interactions. We have found that a novel class of enhancers, called “super-enhancers”, is highly associated with chromatin interactions, and associated with cell specificity. In addition, to explore repressive chromatin interactions, we have constructed chromatin interaction maps using ChIA-PET, which suggest a complex network of interactions within our cells for gene regulatory control. Our results offer the possibility of future developments in chromatin interaction-based biomarkers and therapies in cancer.