



Institute of  
Molecular and  
Cell Biology

## SEMINAR ANNOUNCEMENT

We would like to invite you to attend this seminar hosted by Prof. Wanjin Hong:

Date: 16 September 2014, Tuesday

Time: 11:00AM – 12:00PM

Venue: Level 3, IMCB Seminar Room 3-46, Proteos, Biopolis

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**Speaker:** Dr. Melissa Fullwood, Junior Principal Investigator, Cancer Science Institute Singapore

**Title:** 3-Dimensional Genome Organization and Transcriptional Control

Cancer involves changes in gene expression through a variety of mechanisms, including translocations and epigenetic alterations. Recent genome-wide approaches have revealed a plethora of distal regulatory elements, some of which have been associated with cancer initiation and progression. Chromatin interactions, which are two or more distant genomic regions that come together in close spatial proximity in the 3-Dimensional environment of the cell nucleus, may facilitate cancer through mechanisms such as transcriptional control by connecting distal regulatory elements with target genes. In this talk, I will present Chromatin Interaction Analysis with Paired-End Tags (ChIA-PET) sequencing, and present my lab's recent advances in refining the ChIA-PET method, analysis, and application of this method to better understand transcriptional control in cancer cell lines, as well as future goals in terms of translation of our results to the clinic.

### Biography:

Dr. Melissa J. Fullwood is a Junior Principal Investigator in the Cancer Science Institute with a joint appointment as an Assistant Professor at the Yale-NUS liberal arts college in Singapore. She completed her undergraduate degree at Stanford University and her PhD at NUS. She worked as a Lee Kuan Yew Post-doctoral Fellow in the Duke-NUS Graduate Medical School. Her work on chromatin interactions has led to 17 publications in journals such as Nature, which have been cited over 1500 times (H-index: 9), is a co-inventor on several patents regarding ChIA-PET. She is a recipient of the Agency for Science, Technology and Research (A\*STAR) National Science Scholarships, and one of three recipients of the inaugural L'Oreal-UNESCO for Women in Science National Fellowships in Singapore in 2009, and was the international winner of the GE and Science prize in 2010. In 2013, she received the National Research Foundation (NRF) fellowship.

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**ALL ARE WELCOME** (No registration required)