Hunter College of the City University of New York
Department of Biological Sciences
Fall 2023 Inga Richter Seminar Series

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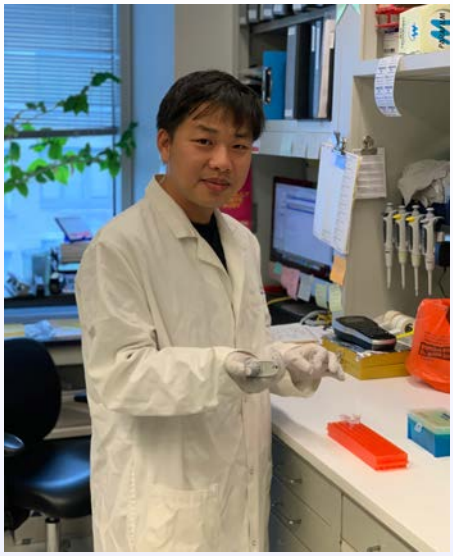
MSKCC



Visualizing meiotic DNA double-strand break machinery, one molecule at a time

Meiosis is a specialized cell division for generating gametes. Meiotic recombination of homologous chromosomes contributes to both stability and diversity of the genomes. During meiosis, germline cells deliberately introduce DNA double-strand breaks (DSBs) into each chromosome to initiate homologous recombination, which is crucial for proper segregation of homologous chromosomes. In *Saccharomyces cerevisiae*, these DSBs are generated by a core complex that includes the Spo11 transesterase, plus additional accessory proteins (Rec114, Mei4 and Mer2; RMM). However, how the RMM proteins interact with each other to regulate Spo11 activity has remained elusive due to a lack of biochemical and biophysical studies. I am using structural biology, biochemical and biophysical tools to understand the molecular basis of how meiotic DSB machinery generates DSBs.

Monday, Nov. 6, 2023 @12:30pm
Hunter North Room 926
Host: Hualin Zhong