



Yale SCHOOL OF MEDICINE

GENETICS DEPARTMENT SEMINAR SERIES

Genome regulation by ATP-dependent chromatin remodeling and phase-separation

Our group is interested in understanding the biophysical mechanisms underlying chromatin regulation. Towards this goal we study how chromatin remodeling machines work and how heterochromatin functions. In my talk I will share two sets of findings, one in each of these two areas. In the context of chromatin remodeling, I will describe how INO80, a conserved remodeling machine shows a substantial preference for sliding subnucleosomal particles over complete nucleosomes. These findings may explain how subnucleosomal particles are repositioned in cells in the wake of transcription and other disruptive processes. In the context of heterochromatin, I will describe how a pool of weakly bound heterochromatin proteins capitalize on the polymer properties of DNA to produce phase-separated domains that are simultaneously resistant to large forces and susceptible to competition by other molecules. I will use these and other results to propose that phase-separation confers biologically useful properties to heterochromatin.



Dr. Geeta Narlikar, PhD

Professor

University of California, San Francisco

Host: Dr. Siyuan Wang, PhD

Assistant Professor

YSM Department of Genetics

Tuesday, November 2, 2021

11:30am - 12:30pm

Zoom Link

pw: 473124

The Genetics Calendar of Events can be viewed on-line at
<https://medicine.yale.edu/genetics/events/seminars.aspx>