FASSBERG SEMINAR SERIES

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Special Date

Serena Sanulli

Department of Pharmaceutical Chemistry (Gross lab)
Department of Biochemistry and Biophysics (Narlikar lab)
University of California, San Francisco (UCSF)

Heterochromatin organization and dynamics

DNA is wrapped around nucleosomes, forming chromatin chains that are further organized in three-dimensional assemblies. The architecture of these assemblies is crucial in determining cell transcriptional programs. Yet, the principles that underlie and regulate the architecture and organization of chromatin are poorly understood. I will present hydrogen-deuterium exchange, NMR, and mass-spectrometry data illustrating how HP1 proteins drive chromatin compaction into heterochromatin. I will propose a model for heterochromatin organization in which HP1 proteins couple chromatin compaction and phase separation by increasing the accessibility and dynamics of nucleosomes. I will further discuss the biophysical and biological implications of the proposed model in chromatin assemblies beyond heterochromatin.

Host: Marina Rodnina

Thursday / 30.01.2020 / 10:00

Max Planck Institute for Biophysical Chemistry
Ludwig Prandtl Hall / Administration Building