Johns Hopkins University

Department of Biology Seminar Series

Thursdays, 4:00pm

For more information go to:
https://bio.jhu.edu/events

Mudd Room 100 - September 21st, 2023

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Institute of Molecular Biology

Knight Campus, University
of Oregon

Host: John Kim

It's getting hot in here: mechanisms of temperature-induced transposon mobilization in spermatocytes

Sexually-reproducing organisms generate haploid gametes, such as sperm and eggs, to transmit their genome to the next generation. All tissues are susceptible to dramatic increases in temperature, however, developing sperm are unusually sensitive to small temperature fluctuations. In contrast to oogenesis, spermatogenesis requires a narrow isotherm of 2-7°C below core body temperature. One of the research focuses of my group is to elucidate the sexually dimorphic mechanisms that cause temperature-induced male infertility and genomic instability. In my talk, I will discuss our recent work with C. elegans and zebrafish that has identified how small RNA pathways and meiotic chromosome structures contribute to temperature-induced transposon mobilization specifically in spermatogenesis.