Seminar/Talk

Mechanical control of DNA organization and movements throughout the cell cycle

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Host: Andela Saric

Three-dimensional organization and physical rearrangements of DNA and chromosomes are essential for correct gene regulation, repair, recombination, and cell division. However, molecular mechanisms underlying mechanics of these processes remain poorly understood.Our group uses combination of single-molecule microscopy, force-spectroscopy, cell biology and computational modelling to investigate how individual motor and non-motor molecules inside cells integrate their mechanical forces to provide accurate and reliable organization of the DNA and mitotic spindle.In this talk, I will share two recent stories from our group. In the first one, we determined how single molecules of SMC protein complex cohesin, which is involved in organization of DNA in interphase, generate mechanical forces; and in the other we discovered new design principle of how cytoskeleton microtubules are rearranged in mitosis to ensure accurate DNA segregation.

Monday, July 14, 2025 10:00am - 10:45am
Sunstone Bldg / Ground floor / Big Seminar Room B / 63 seats (I23.EG.102)

This invitation is valid as a ticket for the ISTA Shuttle from and to Heiligenstadt Station.
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