Seminar/Talk

Alternative mechanisms for the same goal: diversity and evolution of the bacterial cell division machinery

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The bacterial cell envelope is a physical barrier and constitutes the primary defense system of bacteria. During propagation, the cell envelope enlarges and divides to generate two daughter cells. These mechanisms have been studied extensively in model organisms such as Escherichia coli and Bacillus subtilis. However, diverse bacterial lineages exhibit alternative strategies for cell division and envelope remodeling that differ significantly from these well-characterized models. One striking example is the Mycobacteriales a large order that includes important human pathogens such as Mycobacterium tuberculosis and Corynebacterium diphtheriae where many cell cycle components described in model organisms have either been lost or replaced. These alternative machineries highlight the evolutionary plasticity of bacterial cell division and emphasize the importance of expanding our knowledge beyond model organisms to better understand these processes and develop more effective treatments.

Wednesday, April 9, 2025 10:00am - 11:00am
Sunstone Bldg / Ground floor / Big Seminar Room A / 27 seats (I23.EG.102)

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