Discovery Science Emerging Scholars Lecture

"Setting a Timer for Mitosis: How Do Cells Slip Out?"



Mary Jane Tsang, Ph.D. Postdoctoral Fellow Whitehead Institute for Biomedical Research The Spindle Assembly Checkpoint is the key regulatory pathway that delays anaphase onset until mitotic chromosome segregation defects are corrected. However, in the presence of persistent, unresolvable errors, cells can undergo "mitotic slippage", exiting mitosis into a tetraploid G1 state and escaping the cell death that results from a prolonged arrest. The molecular logic that allows cells to balance these dueling mitotic arrest and slippage behaviors remains unclear. We have uncovered that human cells modulate their mitotic arrest duration through the presence of conserved, alternative translational isoforms of the essential APC/C co-activator Cdc20, thus providing a new paradigm for controlling cell cycle events.

Tuesday April 12, 2022 4:00 pm CT 1220 MRB III

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