

Seminar

Bendless mediated Marf degradation limits fusion of enlarged mitochondria

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One of the first descriptions of mitochondria ever reported was that they are “extremely variable bodies, which are continually moving and changing shape” (Lewis and Lewis 1915). Several studies since then have correlated mitochondrial morphology with its metabolic capabilities and cellular physiology. A balance of organellar fission and fusion helps cells maintain the overall morphology and quality of mitochondria. We show mitochondrial stress disrupts the balance of fission-fusion, resulting in the formation of large-globular mitochondria that are kept isolated. We identify a new player in the mitochondrial quality control pathway - Bendless, that isolates these globular mitochondria by aiding the degradation of the mitochondrial fusion protein, Marf. Suppression of this mitochondrial quality control mechanism results in the large globular mitochondria entering the mitochondrial network, however, with a detrimental impact on the viability of cells. In my talk, I will discuss the Bendless mediated quality control mechanism that limits mitochondrial fusion.

Wednesday, Oct 18th 2023

4:00 PM (Tea / Coffee 3.45 PM)

Auditorium, TIFR-H