

Students' Annual Seminar

Tissue-specific roles of EGFR signaling in regulating cell proliferation

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The EGFR signaling pathway plays important roles in regulating cell proliferation during the development of the fruit-fly *Drosophila melanogaster*. Multiple activating ligands and feedback loops mediated by positive and negative regulators of the pathway (like Argos, Kekkon-1, Rhomboid, Sprouty) fine-tune the signaling spatiotemporally, aiding cell proliferation in some cases and inhibiting it in others. The details of such effects on cell proliferation are poorly understood, and depend very much on the tissue context. Transcription being the first readable output of the signaling cascade, I will present how we adapted single molecule RNA detection to whole mount tissues and what insights it is providing us compared to classical in situ hybridization techniques. Using methods such as these together with tuning of the feedback loops of EGFR signaling and following the mitotic indices of cells in specific tissues of interest like the larval wing and eye imaginal discs and adult testes, we aim to investigate the tissue-specific regulation of cell proliferation by EGFR signaling.

Monday, Mar 26th 2018

11:30 AM (Tea/Coffee at 11:00 AM)

Seminar Hall, TIFR-H