Research Interest

Thrust area: Cell signaling, long non coding RNA, Drug screening

TOR signalling in cell growth

Development of anticancer therapeutics is an intense area of research due to constant increase in number of newer cases of cancer. A major challenge in cancer therapy is incomplete understanding of growth associated complex cell signalling pathways and hence less number of available drug targets. The highly conserved Target of Rapamycin (TOR) pathway is central regulator of cell growth across eukaryotes. It controls cell growth in response to vivid environmental conditions. A dysregulated TOR promotes tumorigenesis and cancer. We are interested in deciphering the role of TOR signalling in various aspects of cell growth using *Saccharomyces cerevisiae* as model organism. Large scale genomics and transcriptomics based approaches are used to elaborate on TOR signalling. Infact we have observed role of TOR signalling in different steps of asymmetric cell division. Several novel transcripts and regulatory long non coding RNAs have been identified through transcriptomics. We are also interested in screening and characterization of novel ATP kinase inhibitors of ser/thr kinase TOR for treatment for mTOR mediated cancers.