Tata Institute of Fundamental Research
Survey No. 36/P, Gopanpally Village, Serilingampally, Ranga Reddy Dist., Hyderabad – 500 046

Seminar

Store-operated calcium signalling in the brain: a new twist on an old classic

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Store-operated calcium channels (SOCs) are a major pathway for calcium signaling in virtually all animal cells and serve a variety of functions ranging from gene expression, motility and secretion to tissue and organ development and the immune response. SOCs are activated by the depletion of calcium from the endoplasmic reticulum (ER), triggered physiologically through stimulation of a diverse set of metabotropic surface receptors. The identification of the STIM proteins as ER calcium sensors and the Orai proteins as the pre-forming subunits of store-operated channels 16 years ago has enabled rapid progress in understanding the unique and unusual mechanism of this calcium influx pathway. In this talk, I will discuss our recent work on the physiological roles of SOCs in the brain including regulation of gene expression, release of gliotransmitters and their role in controlling cognitive functions.

Friday, Oct 21st 2022

4:00 PM (Tea/Coffee at 3:45 PM)

Auditorium, TIFR-H