

Seminar

Investigating the role of STX11 in Store-Operated Calcium Entry

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Store-operated calcium entry (SOCE) via CRAC channels is necessary for sustained calcium signalling in numerous cell types, but the molecular steps that regulate the activation of channels are not well understood. With the hypothesis that SNARE family proteins regulate SOCE, I investigated the molecular basis of STX11 mediated regulation of CRAC channel activity. I have found that STX11 co-localises with and directly binds resting Orail, the pore subunit of CRAC channels in plasma membrane. Systematic mutational analysis in both proteins suggests that STX11 acts as a molecular switch inducing a conformational change crucial for the gating of CRAC channels by the ER calcium sensor Stim1.

Friday, Mar 21st 2025

16:00 Hrs (Tea / Coffee 15:45 Hrs)

Auditorium, TIFRH