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

Comprehensive Seminar

Emerging roles of astrocyte-neuron crosstalk in synapse modulation

Rythem

TIFR, Hyderabad

Astrocytes are the most abundant glial cells in the brain, performing multiple functions that contribute to brain homeostasis. The critical roles of astrocytes in the formation and maintenance of synapses, neurotransmitter recycling, providing energetic support to neurons, and regulating the blood-brain-barrier are emerging concepts in neuroscience [1,2]. Astrocytes achieve these functions either by directly contacting synapses or indirectly using secreted molecules [3,4]. In my talk, I will discuss the roles of astrocytes in the brain by providing a current literature overview on the complex and diverse activities of astrocytes in modulating synapses and the ways they influence the behaviour of an organism. Furthermore, I will discuss the existing tools for studying astrocyte-neuron communications and our motivation to develop a molecular tool to better understand neuron-glia interactions throughout the brain.

Tuesday, Jan 7th 2025

09:00 Hrs (Tea / Coffee 08:45 Hrs)

Seminar Hall, TIFRH