

## **Seminar**

### **Regulated membrane fusion and protein homeostasis: role in cellular plasticity**

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Cellular plasticity refers to the ability of cells to alter their phenotypes, irrespective of genetic mutations in response to environmental cues. The overall goal of our lab is to inspect the role of two fundamental biological processes in controlling cellular plasticity – 1) regulated vesicular secretion, and 2) protein homeostasis. Alteration in both the processes lead to pathological consequences. In the vesicular secretion project, we aim to identify cellular factors that control the quantal size during cellular secretion, which has consequences in cell-to-cell communication in various cell types (like neurons, neuroendocrine, endocrine, and immune cells). In the protein folding project we are tracing, at what point after a nascent polypeptide is synthesised on the ribosome, it starts to attain its functional conformation. Our motivation is to identify small molecule modulators, which can modulate the quantal size variation, and reduce the non-functional protein production at the disease onset.

***Friday, Sep 27<sup>th</sup> 2024***

***11:30 Hrs (Tea / Coffee 11:15 Hrs)***

***Auditorium, TIFR-H***