

## **Seminar**

### **An in vivo Approach to Investigate Sensorineural Morphogenesis**

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Acquisition of sensory information such as sound is achieved by the mechanosensory hair cells of the inner ear that transform mechanical energy into electrical signals, which are propagated to the brain by the innervating neurons. Accurate construction of the hair cells with proper spatial arrangement of neuronal projections is central to the function of the auditory system. Unfortunately, the interplay of active morphogenetic events – such as cellular dynamics, neuronal pathfinding, and transmission of neural signals – that construct a functional mechanosensory organ remain undetermined, especially in a living animal. Zebrafish's posterior lateral line (PLL), which bears a high degree of evolutionary resemblance to the mammalian auditory system, serves as an ideal *in vivo* platform to investigate the dynamic morphogenetic behaviours involving cellular movements, long-range neuronal migration, and targeted innervation that sculpt a complex sensory organ. Utilising the PLL system, my research interest lies in deciphering the molecular mechanisms and topological principles that underlie sensorineural morphogenesis in a living vertebrate model organ.

***Tuesday, Feb 14<sup>th</sup> 2023***

***04:00 PM (Tea / Coffee 03.45 PM)***

***Auditorium, TIFR-H***