

## **Seminar**

### **Grand world of small RNAs: Navigating the balance between translation and small RNA biogenesis**

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In *C. elegans* germline, thousands of mRNAs are concomitantly expressed with antisense small RNAs, which are loaded by an essential germline Argonaute CSR-1. Despite their essential functions for animal fertility and embryonic development, how CSR-1 associated small RNAs are produced remains unknown. I will talk about the function of CSR-1 pathway in germline and embryo development, while mainly focusing on the biogenesis of CSR-1 associated small RNAs. I will highlight how the interplay of argonaute slicer activity and translation efficiency of target mRNAs dictate the activity of an RNA-dependent RNA polymerase to synthesise CSR-1-associated small RNAs.

I will also talk about my new ventures into the field of infection biology and role of small RNAs in host-pathogen interaction by highlighting our findings on a SARS-CoV-2 derived microRNA which hijacks host RNAi machinery to suppress the activation of host interferon stimulated genes to evade immune response.

***Thursday, Mar 30<sup>th</sup> 2023***

***4:00 PM (Tea / Coffee 3.45 PM)***

***Auditorium, TIFR-H***