

Students' Annual Seminar

Atomic resolution structure of a sparsely populated folding intermediate provides detailed insights into the folding of the FF domain

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Proteins sample different conformational states that are important for its folding and function. However, detection and characterisation of these states remains a challenge due to their low population and short lifetimes. Using novel Chemical Exchange Saturation Transfer (CEST) NMR experiments it was shown that the FF domain folds via two intermediates (I1 and I2) and two pathways on a volcano shaped free energy surface. In this talk, I will discuss the CEST derived atomistic resolution structure of the I2 folding intermediate of the FF domain. The structure of I2 has been verified using appropriately designed mutants. Later, I will also discuss how to obtain the urea m-values of all the conformational and transition states involved using CEST NMR experiment and how it gives insights into the structural changes taking place along each step of folding.

Tuesday, Apr 23rd 2024

14:00 Hrs (Tea / Coffee 13:45 Hrs)

Seminar Hall, TIFR-H