

Students' Annual Seminar

Studying Proline *cis-trans* isomerisation in T4 lysozyme Using CEST NMR Experiments

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T4 lysozyme (T4L) is a model protein to understand protein stability and folding. We have used CEST NMR experiments to study the folding of T4L. At 50°C CEST experiments detected two minor-states, the unfolded state (U) and an off-pathway intermediate state (B) exchanging with native state (F) on similar time-scale. Very slow interconversion from F to B was surprising as chemical shifts suggested no significant structural change in state B. During my annual seminar, I will present our results which indicate that slow interconversion from F to B is due to *cis-trans* isomerisation of a proline residue (P37). Residue P37, which is in *trans* conformation in the native state is isomerising to a *cis* conformation in state B. During my seminar, I will talk about all the evidences that suggest proline *cis-trans* isomerisation in T4 lysozyme.

Friday, May 12th 2023

4:00 PM (Tea / Coffee 03.45 PM)

Seminar Hall, TIFR-H