

## **Abstract**

Protein folding is the process through which a protein folds into its characteristic and functional three dimensional structure. This folding of protein into the 'Native' state is determined by the intrinsic properties of amino acid sequence and the particular environment of the protein. The failure of a protein to correctly fold can result in a toxic gain of function, which leads to malfunctioning of living system. Protein misfolding and aggregation are linked to a number of devastating diseases. In this thesis, we have investigated aggregation of  $\alpha$ -Synuclein under normal physiological conditions (in vitro) using Thioflavin-T (ThT) fluorescence intensity and CD spectroscopy.