

Internal Seminar

Role of HSP70 in inhibiting protein aggregation in type II diabetes

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Amylin (IAPP) is a 37 amino acid peptide hormone co-secreted with insulin in pancreatic beta cells. However, aggregation of amylin in the pancreas is believed to play a major role in the progression of Type 2 diabetes. Heat shock protein (HSP70) has been shown to prevent or delay formation of amyloid deposits in multiple diseases. However, the molecular mechanism of inhibition of amyloid formation by HSP70 is not well understood. We find that HSP70 inhibits amylin aggregation at sub stoichiometric concentration (25 nM of HSP70 can inhibit aggregation of 1 μ M amylin) in vitro. We have studied the mechanism by which HSP70 inhibits amylin aggregation by various fluorescence methods including FRET and FCS. I will discuss our progress in understanding the underlying mechanism of inhibition of aggregation of amylin by HSP70.

Thursday, Jun 7th 2018

2:30 PM (Tea/Coffee at 2:00 PM)

Seminar Hall, TIFR-H