STUDY OF HIAPP FOLDING WITH FTIR AND 2DIR

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It is very likely that type 2 diabetes is caused by the human islet amyloid polypeptide (hIAPP) which forms fibrils in pancreas. We are studying the structures and kinetics of this folding mechanism using FTIR and 2DIR spectroscopies. We will report hIAPP secondary structure changes during the fibrillogenesis pathway as the peptide converts from random coil into beta-sheet fibers. Until now, the only structural information of the folding process comes from circular dichroism spectroscopy. With 2D IR spectroscopy, a much more explicit and accurate picture of the folding process is being gained.