

## *Amyloid $\beta$ complex formation through electrostatic interaction with polyelectrolytes.*



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We recently initiated investigations of the structure formation upon the amyloid  $\beta$  (1-42) ( $A\beta_{42}$ ) interaction with polyions, in particular short synthetic single stranded nucleotide sequences. We evidenced that electrostatic interactions prevent fibril formation and disassemble amyloid fibrils through the formation of interpolyelectrolyte complexes. Since the accumulation of misfolded  $A\beta_{42}$  proteins is a key feature of Alzheimer's disease, aggregation promotion or reduction at any stage of fibril genesis is of high relevance to advance the current understanding of the pathophysiology to identify in the future a cure against this disease that concerns an ever aging population.