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Oligomer stability of Amyloid-β (Aβ) 25-35 : A Dissipative Particle Dynamics study IGOR PIVKIN, EMANUEL PETER, University of Lugano — Alzheimer's disease is strongly associated with an accumulation of Amyloid-β (Aβ) peptide plaques in the human brain. Aβ is a 43 residues long intrinsically disordered peptide and has a strong tendency to form aggregates. Evidence accumulates that Aβ acts toxic to the neurons in the brain through the formation of small soluble oligomers. Aβ 25-35 is the smallest fragment of Aβ which still retains its toxicity and its ability to form extended fibrils. In this talk we will present the results from simulations of aggregation of up to 100 Aβ 25-35 peptides using a novel polarizable coarse-grained protein model in combination with Dissipative Particle Dynamics.

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