

**P019** Controlled aggregation of amyloids in confined environment

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Aggregation of beta amyloids is known to be the fundamental process involved in Alzheimer' disease. Unfortunately the cause and the mechanism of this aggregation is still unknown. Understanding and controlling this complex process may give the crucial information for developing efficient therapies or even prevention. We present preliminary results on self-organisation of these peptides in a size/shape controlled environment. MIMIC technique (Micromolding in Capillaries) provides bi-dimensional constrained microchannels that induce controlled self-organisations of beta amyloids. 3-dimensional well defined geometry is obtained by bead close packing structures forming tetrahedral cavities which size depends on bead diameter. Thus other morphologies are obtained by self aggregation of binary systems composed of beta amyloids infilled into the tetrahedral cavities of packed mono dispersed polymeric beads. This approach enables the understanding of the constrain-shape environment on beta amyloids self organization.