1116-VH-2410   **Shantia Yarahmadian*** (`syarahmadian@math.msstate.edu`), **Leonard Richard Young** and **Meisam Sharify**. *A Mathematical Model for Alzheimer Disease and its Treatment Based on the anti-aggregation inhibitors drugs.* Preliminary report.

Alzheimer's disease (AD) is characterized by impaired memory and cognition. A principal criteria for the underlying cause of the disease is the amyloid hypothesis, which argues that amyloid $A\beta$ peptide dysregulation initiates a cascade of neuropathological formation of amyloid plaques, neurofibrillary tangles, synaptic loss, and neurodegeneration that ultimately result in the abrupt decline in cognition and ability to function in daily life that define AD dementia. In this work, we propose a mathematical model as a set of coupled kinetic equations that captures the formation of the $A\beta$ fibrils as well as the impact of small molecule anti-aggregation inhibitors acting as a drug in degradadtion clearance. (Received September 22, 2015)