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Richard Leonard and **Shantia Yarahmadian***, Department of Mathematics and Statistics, Mississippi State University, Mississippi State, MS 39762, and **Seth Oppenheimer**. *A Mathematical Model for the Cholinesterase Inhibitors in the Treatment of Alzheimer's Disease.*

Recent studies reveals that from pathological standpoint, Alzheimer disease (AD) is described by the cerebral deposition of amyloid- peptides in the form of amyloid plaques. We introduces a new mathematical model for the treatment of Alzheimer disease in the presence of inhibitory drugs. Two types of drugs are considered. Anti-in ammatory drugs (NSAIDs), which reacts with amyloid-beta 42 (A 42) protein monomers and the second type, which reacts with amyloid-beta 42 aggregated polymers and clears them from creating around neurons. (Received September 26, 2017)