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Modeling the Progression of Alzheimer's Disease.

Alzheimer's disease is a progressive brain disorder that affects over 5 million people in the United States every year. The disease causes neuron connections to deteriorate within the brain and eventually death of the brain cells. Researchers have identified abnormalities in the brain of people with Alzheimer's, including amyloid-beta plaques and tau protein tangles. We will present a mathematical model of seven coupled ordinary differential equations that describes the effect of amyloid-beta in the brain. We will further explore this model to better understand the degeneration of the brain from this disease. (Received September 08, 2016)