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## The Effects of Multiple Injections of $\beta$ -Amyloid (25-35) into the Medial Septal Area on Spatial Learning in the Male Rat

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Poster Presentation 27

**THE EFFECTS OF MULTIPLE INJECTIONS OF  $\beta$ -AMYLOID (25-35)  
INTO THE MEDIAL SEPTAL AREA ON SPATIAL LEARNING IN THE  
MALE RAT**

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Alzheimer's Disease (AD) is a progressive, irreversible neurological disorder that has a profound effect on memory and personality. Although when it was first diagnosed by the physician Alois Alzheimer in 1907 AD was considered a rare disorder, it is now recognized as the most common form of dementia affecting an estimated 4 million American Adults. Most people diagnosed with AD are older than 65; however, AD can occur in people in their 40s and 50s. The pathological hallmarks of AD is the neuritic plaque (comprised of  $\beta$ -amyloid), and the neurofibrillary tangle (comprised of an abnormally phosphorylated tau protein. Only a few years ago,  $\beta$ -amyloid was thought to be an inert deposit devoid of biological activity. Accumulating research, however, strongly suggests that  $\beta$ -amyloid initiates a cascade of events culminating in the death of the nerve cell. One focus of this laboratory over the last two years has been to inject a variety of amyloid fragments into the hippocampus, and assess the effects of these injections on a variety of spatial learning tasks in the rat. In order to expand on previous findings in our laboratory, in this study male rats received multiple injections of  $\beta$ -amyloid (25-35) into the medial septal area. Following a post surgical recovery period all animals were tested for spatial learning using the radial arm maze. The results of this study will be presented at the conference.