1135-VF-2782 **Syed Abid Rizvi*** (srizvi@email.wm.edu). *Investigating the Mechanism of Oscillatory Frequency Changes due to NMDA in the CA3 Neural Network of the Hippocampus.* Preliminary report.

Computational models and in vitro experiments have shown that in response to stimulation, the CA3 network experiences gamma oscillations, which are 40 Hz oscillations of the total field potential. Further more, in vitro studies have shown that the oscillation frequency increases to approximately 60 Hz in response to NMDA's presence during stimulation. We model the CA3 network using the Hodgkin Huxley differential equations to simulate each neuron. We will then analyze the system to determine the cause of the frequency shift. This information will help elucidate how the hippocampus is involved in the formation of long-term memory. (Received September 26, 2017)