

**Behavioral Science Postdoctoral Fellowship  
Spring 2007 Award Recipient - \$40,000**

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**Institution:** Medical College of Wisconsin

**Project:** *Electrical Stimulation Mapping Using Visual and Auditory Category Specific Naming*

**Preceptor:** Sara J. Swanson, Ph.D.

Individuals who have brain surgery to cure their epilepsy are at risk for experiencing changes in their language abilities. This is particularly the case in those who have surgery on the left or language dominant hemisphere. Various methods have been undertaken in order to improve language outcome after epilepsy surgery. One such method is to conduct stimulation mapping of language areas prior to surgery using a grid of electrodes. This grid mapping shows which parts of the brain are necessary for speech and language. The goal of the present study is to improve the manner in which the grid mapping is conducted. Patients will be asked to name different categories of objects (common and proper nouns) using both visual (naming a picture) and auditory (naming in response to a verbal phrase such as "Jewelry for the finger") cues. It is anticipated that naming in response to a verbal cue and naming proper nouns such as the names of people will be more specific to the anterior temporal lobe which is the most common site for epilepsy surgery. The purpose of the present study is to develop better mapping techniques for use during electrical stimulation mapping in order to improve language outcome after epilepsy surgery.