

AWARDEES
PARTNERSHIP FOR PEDIATRIC EPILEPSY RESEARCH
2005-2006
(Awarded \$75,000 for two years)

Investigator: Ann Elizabeth Anderson, M.D.
Title: Assistant Professor
Institution: Baylor College of Medicine
Title of Project: Activity-dependent ion channel regulation: A candidate mechanism in developmental epilepsy
Lay Summary: Ion channel gene defects have been identified in some forms of epilepsy; however, the underlying cause of the majority of epilepsies remains undefined. The researchers will test whether prolonged seizures early in life causing long-lasting changes in ion channels and whether this has a consequence on the development on seizures later in life.

Investigator: Gregory Neal Barnes, M.D., Ph.D.
Title: Assistant Professor
Institution: Vanderbilt University Medical Center
Title of Project: Anti-epileptic agents & synaptic reorganization - semaphorin signaling in developing hippocampal excitatory synapses
Lay Summary: Excessive electrical activity during childhood status epilepticus may trigger a re-wiring of the developing brain leading to maladaptive neuronal connections and acquired epilepsy. This study will investigate a molecular cue, named 3F signaling, which plays a critical role in hippocampal circuitry formation and epileptogenesis. The goal of this research is to develop treatments to disrupt the formation of aberrant synapses and brain circuitry, thereby preventing epilepsy and behavioral disturbances in brain injured children.

Investigator: Jennifer A. Kearney, Ph.D.
Title: Research Investigator
Institution: University of Michigan
Title of Project: Positional cloning of an epilepsy modifier gene
Lay Summary: The goal of this project is to identify a gene that influences epilepsy susceptibility and clinical severity. Identification of genes that influence disease susceptibility and progression will provide insight into the biological basis of epilepsy and will contribute to identifying pediatric patients who are at risk for developing epilepsy.

Investigator: Sookyong Koh, M.D., Ph.D.
Title: Assistant Professor
Institution: Children's Memorial Hospital
Title of Project: Gene therapy in childhood epilepsy
Lay Summary: Memory impairment, school failure and behavioral problems are common among children with epilepsy and often become the central focus for many families. The aim of this proposal is to use gene therapy to ameliorate seizure-induced memory and behavioral deficits in an animal model of childhood epilepsy.