FALL FY08 AWARDS ROSTER
RESEARCH & TRAINING FELLOWSHIPS FOR CLINICIANS

$100,000 award for two years

Name: Gabriel Ustin Martz
Institution: University of Virginia
Project: Intracerebral Infusion to Treat Limbic Epilepsy
Preceptor: Edward H. Bertram, M.D.
Lay Summary: Epilepsy is a very common disease that affects up to 1% of people. The standard drug treatments don't work for many of these patients. This may be because the drug causes side effects, or because it isn't reaching the part of the brain causing the seizures. Putting small amounts of drug right into a key part of the brain may be able to stop the seizure without causing the side effects that occur when the drug goes to the entire brain after taking a pill. The type of device that would be needed is already being used commonly to treat other disorders. Also, doctors are already able to safely place devices into the part of the brain that we will be studying in these experiments. This project aims to show that this treatment will work on animals with seizures so that eventually we can use it in people.
Supported by the American Epilepsy Society and is named the R.S. Morison Fellowship through the generous support of The Grass Foundation

$50,000 awards for one year

Name: Daniel Friedman, M.D.
Institution: Columbia University
Project: The role of entorhinal cortex in seizures and epileptogenesis in an *in vivo* model of temporal lobe epilepsy.
Preceptor: Helen Sharfman, Ph.D.
Co-Preceptor: Frank Gilliam, M.D., M.P.H
Lay Summary: Despite over a century of study, the link between changes in brain structure and seizures in temporal lobe epilepsy is not clear. Many studies have focused on the hippocampus as the structure responsible for generating seizures but more recent evidence points to another area of the temporal lobe, the entorhinal cortex, as a possible origin for seizures in this disorder. This study proposes to look at the role of entorhinal cortex in triggering seizures and the processes that result in epilepsy after brain injury in an animal model of epilepsy. The study's results will improve our understanding of the brain circuits responsible for temporal lobe epilepsy and may provide targets for future therapies to prevent epilepsy and control seizures.
Named the William Gowers Fellowship through the generous support of Abbott Laboratories

Name: Sara Krause Inati
Institution: Columbia University Medical Center
Project: Epilepsy Monitoring with Subpial Micro-Electrode Array: Improved Identification of the Epileptogenic Zone
Preceptor: Ronald G. Emerson, M.D.
Lay Summary: This research utilizes a very small grid of electrodes called a microelectrode array to record electrical activity in the brains of patients undergoing evaluation for epilepsy surgery. Small groups of neurons involved in the generation of seizures will be identified. Careful analysis of the location of the groups of neurons, and of the patterns of their activity, should lead to more accurate identification of the seizure producing area, with the ultimate goal of improving the efficacy of epilepsy surgery.

Name: Beth Ami Leeman
Institution: Beth Israel Deaconess Medical Center, Harvard Medical School
Project: A trial of memantine for the treatment of verbal memory dysfunction in patients with left temporal lobe epilepsy
Preceptor: Steven Schachter, M.D.
Lay Summary: Many people with seizures have difficulty remembering things and doing simple thinking tests. The memory problems are often bothersome and sometimes restrict the things that people can do in life. Unfortunately, treatment options for the memory loss are limited. This study looks at whether memantine (also called Namenda), can improve memory for words in people with left temporal lobe epilepsy. Memantine blocks the abnormal brain activity that is thought to cause memory loss in some people with seizures. This drug is used for the memory loss caused by Alzheimer's disease, but it is unknown if it will provide benefit for people with memory problems and epilepsy. This study will raise awareness within the neurology community regarding the presence of memory problems in epilepsy, emphasize the importance of screening for these deficits, and hopefully point the way to a new treatment.

Name: Susan J. Shaw, M.D.
Institution: Johns Hopkins University School of Medicine
Project: Investigational physiologic/anatomic studies in patients undergoing clinical investigations for neurological disorders
Preceptor: Nathan E. Crone, M.D.
Lay Summary: When patients with epilepsy have surgery to control their seizures, it is important to know which areas of the brain are needed for speech so that the surgery will not damage them. This is usually done is by stimulating different brain areas to see if it causes interference with speech. However, interference is sometimes found in areas of the brain even though they are safe to remove. This research project uses three new ways of mapping the brain to improve our ability to identify brain areas that are necessary for speech and to improve the safety of surgery for patients with epilepsy.

Name: William Charles Stacey, M.D., Ph.D.
Institution: Hospital of the University of Pennsylvania
Project: Improving the Efficacy of Antiepileptic Devices: From Cellular Models to Bedside
Preceptor: Brian Litt, M.D.
Lay Summary: The goal of this project is to create a computer simulation of a section of epileptic brain. This simulation will then be used to test how an electrical stimulus can be used to stop seizures from occurring. The results of these simulations will later be used to guide development of future, improved antiseizure devices for use in humans.

Merritt-Putnam Fellowship through the generous support of Pfizer, Inc.