URP collaborating on national OCD study

BY THE DAILY SUN STAFF AND WIRE SERVICES

Dr. Gregory Quirk, head of the University of Puerto Rico’s Fear Learning Laboratory, is among seven key collaborators participating in a five-year, joint effort by six institutions throughout the nation to focus on how deep brain stimulation affects people with obsessive compulsive disorder.

The scientists will be working exploring deep brain stimulation as a potential new treatment for OCD at the new Silvio O. Conte research center established by the University of Rochester Medical School.

The research project is one of the largest ever undertaken in the search for further understanding and treatment of OCD, an anxiety disorder that affects more than 2 million Americans. While some patients who have OCD find relief either through medication or through behavioral therapy, the disease is life-altering for the approximately 10 percent of patients who don’t find relief through any of today’s treatments.

Dr. Suzanne Habel — professor of pharmacology and physiology at University of Rochester’s School of Medicine and recognized world leader in the field of deep brain stimulation — is spearheading the effort.

Key collaborators in addition to Habel and Quirk include:

- Barry Connors, Ph.D., professor and chair of the Department of Neuroscience at Brown University
- Dana Drager, M.D., associate professor of psychiatry at Harvard Medical School and director of the Neurotherapeutics Division at Massachusetts General Hospital
- Emaid Eskandar, M.D., associate professor in surgery at Harvard Medical School and director of Stereotactic and Functional Neurosurgery at Massachusetts General Hospital
- Anthony Grace, Ph.D., professor of neuroscience, psychiatry, and psychology at the University of Pittsburgh
- Benjamin Greenberg, M.D., Ph.D., associate professor of psychiatry and human behavior at the Warren Alpert Medical School of Brown University and chief of outpatient services at Butler Hospital

“Obsessive-compulsive disorder is a truly debilitating disease,” Habel said. “While treatment helps most patients lead fulfilling lives, there are a few who today’s therapies simply don’t work. Our center is designed to explore the science and the effects of deep brain stimulation, which has been effective for some other diseases involving the brain, such as Parkinson’s disease.”

Previous research conducted by Habel’s group on OCD has helped physicians improve deep brain stimulation surgery and lessen its side effects for OCD patients. The latest accrual marks a major expansion of the previous project, which included many of the same scientists around the country.

The group will look at precisely what happens in the brain when deep brain stimulation occurs and will look for ways to improve the procedure for patients. While deep brain stimulation is an approved treatment for movement disorders such as Parkinson’s disease, it’s under study for possible use in psychiatric disorders like depression and OCD. The technique is approved by the U.S. Food and Drug Administration for humanitarian use for patients with OCD, but scientists and physicians want to understand the effects of the technique in OCD patients more fully.

Altering the signals

In OCD patients, surgeons use the technique to alter the signaling in bundles of nerve fibers that connect different regions of the brain much like large super-highways connect large cities. Deep brain stimulation is the equivalent of an intervention to change the flow of “traffic” or information in the brain in an effort to relieve a patient’s symptoms.

Learning how to position DBS electrodes precisely to improve the lives of patients with OCD is one aim of the new project.

In addition to Habel’s laboratory, which specializes in the anatomy and circuitry of the brain, the team includes experts on OCD, DBS, and the physiology that underlies certain behaviors such as weighing the risks and rewards of actions. The team will study how a person’s behavior changes as a result of the technique and will track exactly which parts of the brain are involved in the process.

The center includes a team of physicians, nurses, and other medical professionals...