



Even in today's difficult economic environment, the NYU Child Study Center (CSC) continues to outpace the national average for Federal funding. Research

institutions across the country tallied an average 20 percent success rate last year but 39 percent of the NYU CSC's proposals were funded, yet another testament to the outstanding work and dedication of the NYU CSC researchers. We continue to demonstrate leadership in the field of child and adolescent mental health and look forward to another year of discovery here at the NYU CSC.

F. Xavier Castellanos, M.D., *Director of Research; Director, Phyllis Green and Randolph Cowen Institute for Pediatric Neuroscience; Brooke and Daniel Neidich Professor of Child and Adolescent Psychiatry; Professor of Radiology, NYU School of Medicine*

## FUNDING UPDATE 2007-08

**21** Federal Grants  
Submitted

**6** Funded

**39** % Success

**20** % National  
Average Success

## Brain-Based Causes of Psychiatric Disorders

Researchers at the NYU CSC have taken the next step in mapping patterns of spontaneous brain activity in children to illustrate how the different areas of the brain communicate. Using resonance-based imaging (fMRI), this remarkable discovery makes it possible to identify objective indicators of abnormal brain functioning, much in the same way that EKGs can tell cardiologists if a patient is having a heart attack. These findings could pave the way to a concrete method of diagnosis for mental disorders in children and teens in as little as five years.

In a study soon to be published in Oxford University journal *Cerebral Cortex*, A.M. Clare Kelly, Ph.D., and her colleagues found differences between children and adults in brain activity patterns, suggesting that an early snapshot of brain maturity may be able to predict future psychiatric conditions. This could give mental health professionals objective markers that they will be able to use in the same way a pediatrician takes a child's height, weight and head circumference to map a child's developmental trajectory. Studies to test this theory are now underway at the NYU CSC on conditions such as attention deficit disorder, autism, anxiety disorders, depression and Tourette's Disorder.

This ongoing work was funded with support from the Stavros Niarchos Foundation, the Leon Lowenstein Foundation, Inc., NARSAD (The Mental Health Research Association), Linda and Richard Schaps, Jill and Bob Smith, and The Taubman Foundation.

## Innovative Leon Levy Foundation Gift Supports Early Career Investigators

The Leon Levy Foundation awarded the NYU CSC a one-of-a-kind gift of \$1.2 million over five years to establish the Leon Levy Assistant Research Professors Program. This gift supports up to three child and adolescent psychiatrists at the NYU CSC, addressing a critical need in the field of mental health research to support talented investigators early in their careers.

The first three Leon Levy appointments for 2008-2009 are held by Brady Case, M.D., Anthony Charuvastra, M.D., and Vilma Gabbay, M.D.

## INDIVIDUAL GRANTS

**A.M. Clare Kelly, Ph.D.**, was awarded a one-year grant totaling \$263,163 by NIH/NIDA to study how the brain works in a person addicted to cocaine. This work will use two types of imaging (fMRI and diffusion tensor imaging) to assess connectivity in two brain areas implicated in addiction. The project will lay the groundwork for future studies that will examine the clinical implications of decreased connectivity and how this may affect relapse, mood, and cognitive rehabilitation.

**L. Oriana Linares, Ph.D.**, was awarded a \$900,000 three-year grant by the National Center for Injury Prevention and Control of the CDC to adapt and evaluate a short-term preventive intervention to reduce the risk of violence between siblings ages five to nine in foster care. Neglected children in foster homes are at high-risk for sibling-to-sibling violence due to their past exposure to family violence.

**Brady Case, M.D.**, was awarded a \$60,000 Young Investigator grant by the National Alliance for Research on Schizophrenia and Depression to investigate the effectiveness of lithium in the treatment of pediatric bipolar disorder. This study is designed to determine whether the use of lithium is key to the decreased risk of suicide attempts in U.S. youth diagnosed with bipolar disorder. Results of the study may guide treatment and result in better outcomes for pediatric bipolar disorder.

**Colleen O'Neal, Ph.D.**, was awarded a \$60,000 Young Investigator grant by the National Alliance for Research on Schizophrenia and Depression to examine what causes depression among high-risk, low-income, minority youth, focusing on early biological and psychosocial factors. Study findings will guide the development of interventions for depression and may help to identify specific groups who are in need of preventive interventions.

## How to Successfully Treat Child Mental Health in Culturally Diverse Populations

The NYU CSC has partnered with the Nathan S. Kline Institute for Psychiatric Research (NKI) to develop best practices for mental health professionals for use with culturally diverse populations. These Evidence Based Practices or EBPs are based on accepted research and highlight practices that consistently work well in improving outcomes of children with mental disorders.

This study is one of two major projects in the Center of Excellence in Culturally Competent Mental Health Care, funded by New York State. The first version of the guidance document, which will be tested and revised during the project's second year, will be completed by November 2008.

Lead researchers on this project are: Laurie Miller Brotman, Ph.D., L. Oriana Linares, Ph.D., Judith Samuels, Ph.D., and Brady Case, M.D.

## Tackling Tourette's Disorder

Recent brain imaging studies of children and adolescents with chronic Tourette's Disorder suggest that faulty organization within the motor section of the brain may cause this disorder. The NYU CSC was awarded two of 21 Tourette Syndrome Association (TSA) distinguished research grants, each in the amount of \$75,000, to further investigate this finding and assess how effective a new treatment of medication plus behavioral modification therapy is in alleviating this condition.

**F. Xavier Castellanos, M.D.**, and colleagues will use fMRI to examine spontaneous brain activity to show how brain circuitry in children with Tourette's differs from typically developing children for the purposes of diagnosis and treatment.

**Barbara Coffey, M.D., M.S.**, and co-investigator Douglas Woods, Ph.D., of the University of Wisconsin at Milwaukee, will compare the effects of a stimulant medication versus placebo to help suppress tics in children and adolescents with Tourette's and co-occurring Attention-Deficit/Hyperactivity Disorder (ADHD).

