

**National Institute of Mental Health  
Professional Coalition for Research Progress  
March 30, 2007  
Washington, DC**

The National Institute of Mental Health (NIMH) held its third annual Professional Coalition for Research Progress (The Coalition) Meeting on March 30, 2007 in Washington, D.C. The major themes of the meeting included The View from NIH and Science to Services Research. The meeting afforded participants the opportunity to: hear about exciting and new mental health research; discuss important information on changes in the field; network with colleagues and discuss issues relevant to stakeholders; and interact with and express their views directly to the NIMH Director, Dr. Thomas Insel, and senior level staff. Participants included representatives from professional organizations with an interest in NIMH research.

## **I. THE VIEW FROM NIH**

### **Update on NIMH**

Dr. Insel opened with an update on current NIMH research priorities and directions. In a brief review, Dr. Insel described 1990-2000 as the “Decade of the Brain,” a period of revolution in science and society concerning the view, perception, and study of the brain. He called 2000-2010 the “Decade of Discovery” because of the tools and resources available to assist researchers in gaining understanding into the points of discovery for mental illnesses. Dr. Insel elaborated on work currently underway relating to the study of genes, cells, systems, individuals, and social interactions to identify the major players, reveal basic principles, and change the culture of science. Dr. Insel went on to discuss findings from the NIMH Clinical Trials Network (<http://www.nimh.nih.gov/studies/index.cfm>) and his research vision for mental health.

### **Biomarkers Consortium & Genetic Association Information Network**

Mr. David Wholley, from the Foundation for the National Institutes of Health (FNIH), told Coalition members about research currently underway via two public-private partnership programs managed by FNIH – the Biomarkers Consortium (Consortium) and the Genetic Association Information Network (GAIN) program. One of the functions of the FNIH is to create innovative public-private partnerships involving industry, academia, and the philanthropic community that complement and enhance NIH priorities and activities. Mr. Wholley spoke briefly about the goals, organization, and infrastructure of the Consortium, formed in 2006, as well as the outlook for the program’s second year. The GAIN program, also launched in 2006, was established largely in response to the success of the HapMap project and the decrease in costs associated with genotyping. The goal of GAIN is to enable whole genome association studies related to common diseases. In order to achieve this goal, the program genotypes samples from existing case-control studies and makes the data available through the National Center for Biotechnology Information (NCBI) database. Mr. Wholley noted the program policies surrounding data access and publication, and talked about the first round of awards, which focus on mental illnesses such as attention deficit hyperactivity disorder, major depression, schizophrenia, and bipolar disorder. Genotype information for these illnesses is expected to be released by December 2007. More information can be found at <http://www.fnih.org/home.shtml>.

## **II. SCIENCE AND SERVICE RESEARCH**

### **Genetic Mechanisms for Personality and Temperament in the Human Brain**

Dr. Andreas Meyer-Lindenberg, of NIMH, discussed the genetic mechanisms of temperament and the complex relationship and path from gene to behavior. He noted that psychiatry lags far behind other medical disciplines in the development of mechanistically targeted drugs due largely to the fact that researchers do not clearly understand the pathophysiology of brain disorders to develop specific and targeted treatments. In addition, he mentioned that heritable serious mental disorders are often the result of the interactions of multiple genes, and therefore any two patients may have different genetic deletions or risks for mental illness. Dr. Meyer-Lindenberg presented information about his research to understand how genes affect treatment response and social behavior, specifically effects on the brain and personality. More about Dr. Meyer-Lindenberg's research on personality and temperament can be found at [http://www.nimh.nih.gov/press/oxytocin\\_amygdala.cfm](http://www.nimh.nih.gov/press/oxytocin_amygdala.cfm).

### **Long Term Potentiation and Learning**

Dr. Mark Bear, of the Massachusetts Institute of Technology, described a study focusing on synaptic transmission and long-term potentiation (LTP). He explained how memories are encoded via changes in patterns of synaptic connectivity that occur following an experience. As these neural changes are widespread, they serve to prevent the loss of a specific memory following damage to a subset of neurons. One of the objectives of the study was to determine whether the process of memory formation could reveal the underlying synaptic change. Dr. Bear further described in-vivo induction of LTP and provided additional examples of how learning induces LTP. He finished by noting the results of the study could potentially guide the way toward treating anxiety disorders. More information on Dr. Bear's research can be found at <http://www.nimh.nih.gov/press/sciencebreakthru-2006.cfm>.

### **Economic Benefits of Treating Depression in the Workplace**

Dr. Philip Wang, of NIMH, discussed the effects of depression on workplace productivity and the economic benefits of treatment for employers. He said that depression in the workplace is associated with increased days of absenteeism and presenteeism (when an individual is present at work but is not productive), decreased ratings for quality of work and overall performance ratings, and an increased number of sick days. Dr. Wang noted that depressed individuals often have difficulty because they do not receive care, experience long delays from onset to when treatment is sought, or seek assistance outside of the health care system. He described research that showed positive outcomes and economic benefits for employers of depressed employees who participated in a mental health intervention. He noted that the return on investment in a program intervention would be evident by the second year of the intervention, and the benefits would continue up to 5 years following the initial rollout. More information on Dr. Wang's research in this area can be found at <http://www.nimh.nih.gov/press/cost-benefitsimulation.cfm>.

## **III. DISCUSSION**

During the discussion periods, Coalition members had the opportunity to direct comments and questions to Dr. Insel, presenters, and senior NIMH staff about any topic, including the presentations. Topics discussed throughout the day included translational research, return on investment for mental health interventions in the workplace, and future directions in research.

Coalition members discussed the importance of understanding how best to translate scientific research to clinical practice and package the information in a way most useful for clinicians. Dr. Insel agreed that the research must reach those who need it most. He noted that there are two challenges to translating exciting and innovative research: (1) it is unclear if some advances, such as neuroimaging, will actually help individuals with a mental illness; and, (2) there is concern that the costs of implementing new discoveries in a clinical setting are making health care more expensive. Dr. Insel told participants that Congress expects the research supported through NIH will help lower the cost of health care. NIMH must be mindful that research provides treatments that “aren’t just high tech, highly expensive, and available to few people, but will have a real impact on costs and could be broadly available.”

Following the presentation by Dr. Bear, Coalition members engaged in discussion on how his research, and that of Dr. Meyer-Lindenberg, could be applied and would be beneficial to the field. Dr. Bear told participants about his research on Fragile-X Syndrome and a study of Rett syndrome modeled in mice in which he found that the overarching trajectory of brain development could be overcome and recovery seen by restoring a missing protein. Coalition members endorsed Dr. Meyer-Lindenberg’s statement that researchers must understand the pathophysiology of mental disorders in order to develop rational treatments.

Coalition members also discussed the importance and need for mental health treatments and interventions in the workplace, including businesses and state or local government agencies. Participants noted that the mental health of employees should be an important issue for employers and that research showing a return on investment and the benefits of treatment should encourage employers to develop worksite programs. Coalition members also discussed the potential cost savings for several stakeholders including the Federal Government. Examples of Federal stakeholders include Medicaid, which is one of the largest payers in the public mental health system, the juvenile justice and corrections systems, which has many jails and prisons serving as de facto institutions for the mentally ill, and the social services system.

Additional comments from participants included a request to incorporate eating disorder research into future meetings, a call for research on college mental health, the absence of adequate services on college campuses and the lack of support following graduation, and a request for information on the status grant funding. In response to these comments Dr. Insel noted that more genetic information on eating disorders is needed in databases and clearinghouses for scientific analysis, that there are research avenues currently available on the subject of college mental health, and that NIMH is above average for grant awards when compared to other Institutes.

In closing Dr. Insel summarized the key points discussed during the meeting and thanked Coalition members for providing helpful feedback and expertise. He reiterated that the annual meeting serves as a valuable opportunity for NIMH to get essential feedback from professional organizations as well as to foster dialogue on the future path and directions of NIMH-funded research. Participants also thanked Dr. Insel and the presenters for using the meeting to show how research links to a particular disorder and how research influences clinical practice. Finally, they appreciated the opportunity to network with each other and to interact directly with NIMH leadership.

**Photographs**



(L to R) Dr. Meyer-Lindenberg, Dr. Bear, Dr. Insel, Dr. Wang, and Mr. Wholly



Coalition members



Dr. Jean Shin provides comments



Coalition members

National Institute of Mental Health  
**NIMH Professional Coalition for Research Progress**  
March 30, 2007  
Washington, DC

**8:30 am – 9:00 am**                      **Registration & Continental Breakfast**

**THE VIEW FROM NIH**

**9:00 am – 9:30 am**                      **Update on NIMH**  
**Thomas R. Insel, M.D.,** *Director, NIMH*

**9:30 am – 9:50 am**                      **Biomarkers Consortium & the Genetic Association Information Network (GAIN)**  
**David Wholley, M.A.,** *Director, Research Administration & Director, GAIN, FNIH*

**9:50 am – 10:10 am**                      **Discussion**

**10:10 am – 10:30 am**                      **Break & Networking**

**SCIENCE AND SERVICE RESEARCH**

**10:30 am – 11:15 am**                      **Genetic Mechanisms for Personality and Temperament in Human Brain**

**Andreas Meyer-Lindenberg, M.D., Ph.D., M.Sc.,** *Chief, Unit for Systems Neuroscience in Psychiatry & Co-Director of the Imaging Core Facility, Division of Intramural Research Programs, NIMH*

**11:15 am – 12:00 noon**                      **Long Term Potentiation and Learning**  
**Mark F. Bear, Ph.D.,** *Picower Professor of Neuroscience, Massachusetts Institute of Technology*

**12:00 pm – 1:00 pm**                      **Discussion & Lunch**                      **Coalition Participants,  
NIMH Director and Staff**

**1:00 pm – 1:45 pm**                      **Economic Benefits of Treating Depression in the Workplace**  
**Philip Wang, M.D., Dr. P.H.,** *Director, Division of Services & Intervention Research, NIMH*

**1:45 pm – 2:15 pm**                      **Break & Networking**

**2:15 pm – 3:00 pm**                      **Discussion & Wrap up**                      **Coalition Participants,  
NIMH Director and Staff**

