

# STATE OF MIND

The **Mind**  
RESEARCH NETWORK  
FOR NEURODIAGNOSTIC DISCOVERY

WINTER 2007/08

Newsletter of the Mind Research Network

## MRN to Launch FIRST Program

### Emphasis is On Early Detection of Schizophrenia

The Mind Research Network, and its partners at Massachusetts General Hospital (MGH), the University of Minnesota and the University of New Mexico, have launched the Functional Imaging for Research and Schizophrenia Treatment (FIRST) Program. FIRST is a clinical research program designed to provide assistance to individuals who are experiencing early symptoms of schizophrenia. The research specializes in the early diagnosis and treatment of individuals struggling with changes in their thoughts, behavior, and emotions that may be indicative of developing a serious mental illness.

Approximately 2.2 million adults in the U.S. alone have schizophrenia (National Institutes of Mental Health), a potentially devastating mental illness that affects one percent of the population. The disease, which often develops in a person's late teens or early twenties, can affect all aspects of life—from career and education, to relationships with others. Typically, the longer a psychotic illness is left untreated, the greater the disruption to the person's life. Moreover, some research suggests that delays in treatment can lead to a slower and/or less complete recovery.

However, early diagnosis and medical intervention can significantly improve the patient's insight into his or her condition. With counseling, medication and support from family and friends, thinking and behavior can be stabilized more quickly. Psychosis rarely goes away on its own, so the sooner treatment begins after onset, the better the outcome will be.

The MRN already began to address this severe mental illness by forming the Mind Clinical Imaging Consortium (MCIC) in 2003. Under this program, over 400 patients and healthy controls were studied

across four sites. The resultant data established a large information bank that contains anatomical and functional MRI, MEG and genetic data.

The FIRST Program, a clinical research study which is an extension of the MCIC, will focus on the early diagnosis and treatment of schizophrenia. It is well established that early detection and intervention is associated with better treatment and functional outcomes for individuals with psychotic disorders. Participants in the studies will be asked to complete a thorough assessment process, which will include diagnostic interviews, cognitive testing, neuroimaging (including MRI, MRS, and DTI), genotyping of genes thought to be involved in schizophrenia, as well as a brief medical and neurological exam. Patients enrolled in the FIRST program will have their symptoms, medication side effects and functioning monitored on a regular basis.

Dr. Corinne Cather, a psychologist for MGH in Boston who specializes in cognitive behavioral therapy (CBT) in psychosis has been working in their schizophrenia program since 1999. "CBT is a highly collaborative therapy approach focused on optimizing coping strategies...it is important to recognize how confusing it can be for an individual and family confronted with a potential psychotic disorder. There is so much misinformation about schizophrenia, it is not surprising that hopelessness is such a common reaction." She continues, "Additionally, belief that the illness is untreatable or that symptoms are uncontrollable seriously compromise recovery. Often these feelings of confusion and hopelessness are more damaging than the psychosis itself."

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## Letter from the President



As we begin a new year and The Mind enters its second decade of existence, it is a perfect time to reflect on what we have accomplished and where we are going.

It is important to remember that we exist today because of Senator Domenici's vision to establish a top-notch neurodiagnostic facility in New Mexico. His commitment to mental illness and neuroscience research is relentless, and it has led us to where we are today—an innovative and talented group of individuals dedicated to improving the diagnosis of mental illness and brain disorders.

MRN has come a long way during its first ten years. We began as an organization that functioned as a quasi foundation by providing grant funds to various partners throughout the country, and have transformed ourselves into the well-respected, standalone neuroimaging research center that Senator Domenici envisioned. But not only have we redesigned our structure, we have also turned the corner on becoming a self-sustaining entity.

The last two years were critical to this self-sufficiency. We committed ourselves to finding ways to decrease our dependence on Department of Energy funds. In 2007, our funding mix changed dramatically. The percentage of DOE monies decreased from 90% to 50%, and the number and amount of competitive grants from the National Institute's of Health, as well as support from the State of New Mexico and other agencies and donors increased significantly—and we anticipate this trend continuing in 2008 and beyond.

Of course, our success at leveraging federal funds with further federal, state, and other external funding, has provided us with the resources necessary to grow the organization, as well as impact the economic development of the city and state.

For example, during the past two years, newly recruited researchers have not only generated over \$17 million in established and new funding, but their research dollars have created over 50 new jobs; and our research provides training and educational opportunities to undergraduate and graduate students at the University of New Mexico and other partner institutions, thus educating individuals to become more productive citizens.

I am confident that this is only the beginning. 2008 will bring additional growth and development, not only in terms of funding, but also in terms of the brain diseases and illnesses that we study and our unique utilization of state-of-the-art neuroimaging, modern neurogenetic mapping and pioneering bioinformatics.

As The Mind continues to expand and evolve, one thing is certain, we are just as devoted today as we were ten years ago, to Senator Domenici's vision to become a world-class neurodiagnostic center that positively impacts the lives of millions of people.

John Rasure

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## FIRST Program

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To address this issue, FIRST will include education and case management, as well as social services to all participants in the program to assess needs and to help them access community resources. "The program is set up to help the individual and his or her family negotiate the maze of mental health services." Dr. Cather elaborates, "There are agencies out there that can assist an individual with a return to work or school program. Offering a participant in the FIRST Program these additional services, as well as therapy, benefits everyone." The hope is that the FIRST program can transcend some of the problems associated with the long term study of individuals with early psychosis—untreated illness often interrupts their life, which can mean discontinuing their participation in the study. "By providing early intervention and intensive treatment, we hope to help as many of our patients as possible to maintain their functioning or get back on track as soon as possible after becoming ill, so that we can support them to reconnect with their goals and strive for what is important to them."

The hope of the FIRST Program is to advance the research of schizophrenia and its early diagnosis

and prognosis through a brain imaging program—sophisticated imaging techniques used to pinpoint brain regions that may be overactive or underactive in patients with schizophrenia. Another research component that will enhance FIRST is MRN's genetics program. Under the direction of MRN researcher Dr. Kent Hutchison, the new neurogenetics lab will investigate possible links between genes and schizophrenia.

Since early intervention has been shown to be so vitally important to a positive outcome, MRN and UNM are also forming EARLY (Early Assessment and Resource Linkage for Youth), a prodrome program to be launched along with FIRST. Under the direction of co-investigators Drs. Kent Kiehl and Steven Adelsheim, the purpose of the program is to create community awareness throughout New Mexico of the early warning signs and symptoms of psychosis and the benefits of early intervention. Among the groups targeted will be schools, primary care providers and parent organizations. "Education and training for the professionals who are most likely to observe early signs of a psychosis in youth at risk is the most critical and

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## Profiles

### Robert D. Taichert, JD

The Board of Trustees October meeting not only included the induction of several new members, but the election of a new Board Chair. Along with new members Alan Bishop, Gwil Newman, W. Tim Pohl and Terry Yates, Robert Taichert was installed as Chairman. Mr. Taichert, recently retired from the practice of law, replaces Chair Julie Weaks Gutiérrez, who has agreed to serve as Vice-Chair and continue her work to make The Mind Research Network a leader in the field of neuroscience research.



### How did you first become involved with the Mind Research Network?

Senator Domenici and Leonard Napolitano engaged me to set up what is now the Mind Research Network as a New Mexico independent nonprofit foundation in 1998, when Senator Domenici was successful in getting Congress to appropriate \$10,000,000 to study schizophrenia. I had a strong healthcare background. Previously I had served

as General Counsel for Presbyterian Hospital Center, organized New Mexico Physician's Mutual Liability Company and represented the University of New Mexico in negotiating the lease of the old Bernalillo County Medical Center to become the University of New Mexico Hospital. MRN's first name was the National Foundation for Functional Brain Imaging (NFFBI).

### Obviously the mission of the organization has changed since then.

Our mission has expanded. As a leading neuroimaging center, our expertise in non-invasive brain study and analysis looking for clinical ways to treat schizophrenia has expanded to include the study of addiction, psychopathy, traumatic brain injury, and infant brain development.

### The expansion of the mission must have created new challenges for the administration.

There were major challenges. Beginning in 1998, the MIND Institute was 100% dependent on federal funds. In 2006, when John Rasure came on board as CEO, he cleared a major deficit and reduced our dependence on Federal funds to 90%. For 2007, John reduced the federal fund dependency to 50%. We now have over \$30,000,000 in grants and we are adding more outstanding scientists.

### As Chair, what do you hope to accomplish?

We must continue to build a world class board, and begin to build a major endowment to assure MRN's long term financial stability. We are optimistic, and are determined to eliminate any dependency on Federal appropriations as soon as possible, and hope to do so in the next two years.

### How?

Our first priority is to continue to recruit first-rate scientists. Our recent additions have all come with substantial NIH grants of their own; and their presence, as well as MRN's infrastructure, will make it easier to attract more of these world-class researchers. Also, as Chair, I would like to see our Board become an effective money raising conduit for obtaining substantial private donations. As it was first set up, the Board's main task was to monitor how the federal funds were being spent. The Board now needs to become a fund-raising organization with a national scope.

### Anything else?

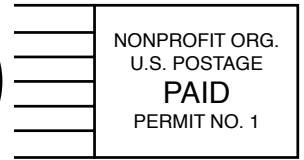
We need to find a longer term Chairman, and continue to build the strength of the Board.

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## NEWS & NOTES

- The Mind and UNM will hold the MRN fMRI Image Acquisition and Analyses Course February 4th-6th on the campus of the University of New Mexico, in Albuquerque. Hosted by MRN Investigators Dr. Vince Calhoun and Dr. Kent Kiehl, the course will cover experimental design, image acquisition, introductory MR physics, optimized image processing, statistical analyses (i.e., SPM2/5 with General Linear Model and Statistical Nonparametric Mapping (SnPM)) and Independent Component Analyses of functional magnetic resonance imaging (fMRI) data. It is designed for fMRI researchers who range from beginning to intermediate skill levels. See our website for more information on the course, agenda, suggested readings, travel information and to register.
- After leaving Mind in May, the Mobile MRI has been deployed to the Western Men's Prison in Grants and the Youth Diagnostic and Detention Facility in Albuquerque where it has been collecting neuroimaging data from members of the local populations. To date, fMRI, EEG, and diagnostic assessments have been collected on over 300 subjects. This valuable data will be used as part of three studies—juvenile and adult psychopathy, and a substance abuse treatment study. For participating, research subjects are all eligible for 12 weeks of individualized substance abuse counseling from MRN therapists. The 300 total participants is the largest data set in the world from incarcerated populations.
- The MRN would like to congratulate the new additions to our Board of Trustees. Along with our new Board Chair Robert D. Taichert, we would also like to announce new members Alan Bishop, Gwil Newman, W. Tim Pohl and Terry L. Yates. Please see the Profiles section of this issue for an interview with Bob Taichert. A complete list of current Board members can be found on our website.
- The Weems International ArtFest was held in Albuquerque in November and the MRN was one of five organizations named as a "Charity of Choice." Through a silent auction, over \$7000.00 was raised for our organization alone. The money raised will be used for MRN's FIRST Program, featured in this newsletter. We would like to recognize artists Jo Nelson, Secundino Sandoval, David Lloyd Stewart, Andrew Rodriguez and B.C. Nowlin for their generous contributions, the various individuals who purchased their work and the Weems organizers for making this a successful event.
- The Mind Research Network will appear on the NBC Nightly News with Brian Williams in February. The segment, one in a series of five dealing with mental health issues, will feature Kent Kiehl's psychopathy research utilizing the Mobile MRI Imaging System. Please check the welcome page on our website for the date and time.
- The Mind has appeared in the news several times over the last few months. In addition to articles in the Albuquerque Journal, the Tribune and The Santa Fe New Mexican featuring the research of Kent Kiehl, Rex Jung, Kent Hutchison and John Phillips, there have been appearances on local television as well. Please visit [www.mrn.org](http://www.mrn.org) and follow the "Newsroom" link for copies of all the articles and videos.
- MRN Headquarters in Albuquerque has seen several visitors over the last few months, including Congresswoman Heather Wilson and UNM President Dr. David Schmidly. Also visiting were Alfredo Vigil, Secretary, NM Department of Health; Brenda Claiborne, Dean of UNM's College of Arts and Sciences; Anita Morales, Assistant to State Senator Dede Feldman; Lisa Kuuttila, President, UNM Science and Technology Corporation; Barry Bitzer, Albuquerque Mayor Martin Chávez' Chief of Staff; and Linda Roebuck, NM Governor Bill Richardson's "Behavioral Health Czar".
- This summer saw the arrival of our newest investigator, Dr. Francesca Filbey. Dr. Filbey will combine her genetics studies conducted at the University of Colorado with MRN's advanced imaging techniques to find associations between neural abnormalities and genetic risk to substance use disorders. Her focus is in determining the role of candidate genes (i.e., CRN1, CHRNA4, DRD4) in modifying the effects of drugs and alcohol on brain function in the developing adolescent brain. The significance of Dr. Filbey's research is in the understanding of the neural pathways involved in substance abuse, which can aid in the development of more effective prevention strategies and pharmacotherapies.
- Congratulations to MRN's new Board Chair Robert Taichert on being named "Outstanding Lawyer of the Year" by the Albuquerque Bar Association. The association noted Taichert's varied career, as well as his involvement in the community and public service activities. As a member of the Joint Committee of the New Mexico Bar and New Mexico Medical Association, he helped create the State's Medical Malpractice Screening Panel and acting on behalf of the Medical Society helped author the New Mexico Medical Malpractice Act. He has been active in the Santa Fe Opera, New Mexico Symphony, Sandia Prep School and ACCION New Mexico. In addition to the MRN Board of Trustees, he also serves on the board of the University of New Mexico Foundation and has been an arbitrator for the New Mexico Arbitration Association for more than 30 years.

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## **FIRST Program** *continued from second page*

indispensable element of the early prodrome model", states Kiehl. Once at-risk youths are identified, the EARLY access team will accept local referrals for state-of-the-art evaluation and diagnosis, and then provide timely and effective treatment with follow-up, including a family psychoeducational component, medication management, school and employment support and other interventions as appropriate.

The EARLY program is based on an international model for early identification of youth at risk for psychotic illness that began in Australia. Currently there are five similar programs funded by the Robert Wood Johnson Foundation (RWJ) to evaluate the effectiveness of this model in the U.S. The National Center for the RWJ implementation, the PIER Program in Portland, Maine, will be providing the protocols and training support for getting the EARLY Program started. According to Adelsheim, "We are very excited to have the support of our PIER Project colleagues, RWJ, MRN and UNM in giving us the opportunity to implement this model in New Mexico, which we hope will be of great benefit to many of our young

people and their families." People between the ages of 15 and 40 years who have experienced psychotic symptoms which were not drug-induced, or who have been diagnosed with a psychotic illness such as schizophrenia or schizoaffective disorder for less than two years are eligible to participate in FIRST. The EARLY Program will be for young people ages 12-26 who may be experiencing early warning signs and symptoms of psychotic thinking, but who have not yet developed a psychotic illness. Of course, being a research study, the program will recruit emotionally and physically healthy participants to serve as a control group. Participation in all studies is strictly voluntary and can be discontinued at any time. Participants generally incur no cost for study procedures and will be reimbursed for their time.

We at The Mind want to thank Susanne Poole for her generous donation that allowed us to develop and implement the FIRST and EARLY programs.

The Mind Research Network is a non-profit partnership dedicated to helping people now by improving the diagnosis and understanding of neurological disorders, and in the future by finding methods of prevention, better treatments and ultimately cures. Based in Albuquerque, New Mexico, MRN scientists collaborate with colleagues at nationally renowned partner sites across the country including the University of New Mexico, Massachusetts General Hospital, University of Minnesota, and Sandia and Los Alamos National Labs

For more information, visit our website at [www.mrn.org](http://www.mrn.org) or call us at **505-272-5028**, or toll free at **866-254-6463**. Please direct any questions or comments about this newsletter to [info@mrn.org](mailto:info@mrn.org)

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