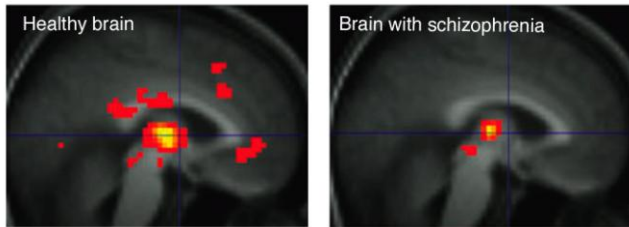


U of M Depression Center Funds – Update January 2011

The University of Michigan Depression Center is honored and grateful for being chosen again as one of the recipients of the proceeds from the **Mind Over Matter (M.O.M.)** race. The gifts to the Depression Center have been used to further the research of **Stephan Taylor, M.D.**, Professor of Psychiatry at the University of Michigan Medical School. Dr. Taylor has extensive experience with the treatment of schizophrenia and related psychotic disorders. One of the major focuses of Dr. Taylor's research is to seek a better understanding of the cognitive-emotional disturbances which characterize this devastating illness. With the past proceeds from the M.O.M. Race, Dr. Taylor established the "**Boledovich Schizophrenia Research Fund,**" which has provided important support to several projects in the Depression Center.

Dr. Taylor has been using brain imaging, with **functional magnetic resonance imaging** (known as 'fMRI'), to study how the brains of people with schizophrenia differ from individuals without schizophrenia. One area of interest concerns the connections between brain regions, since many of the symptoms of psychosis might reflect impairments in the ability of brain regions to 'talk to' one another. The figure, from a study published in *Schizophrenia Bulletin* and partially funded by the **Boledovich Schizophrenia Research Fund**, shows how healthy subjects show connections between the thalamus and the anterior cingulate cortex, a circuit thought to be important for regulating emotions and higher cognitive functions. The people with schizophrenia did not show this connection. By identifying 'circuits' that do not function properly, medications may be better targeted, for example, to help restore the connections between brain regions.



Work in the last year has focused on the development of an imaging project in conjunction with an early intervention programs directed at youth who are at high risk of psychosis. Developing treatments that can alter the course or even prevent the development of schizophrenia is one of the cutting-edge research fields in psychiatry. Dr. Taylor is working with a program, funded by the Robert Wood Johnson Foundation and carried out as a joint venture between the Department of Psychiatry and Washtenaw Community Health Organization. The aim of Dr. Taylor's project is to perform fMRI scans on individuals on the cusp of a psychotic breakdown. While some high risk individuals (10- 40 %) go on to develop psychosis, most do not. Therefore, the development of predictors of who will go on to develop psychosis is essential for giving the appropriate treatment.

This project is being conducted with collaborators at the University of California Davis, the University of California San Francisco. At this time, the group has performed fMRI scans on approximately 35 individuals at high risk of psychosis, 6 of whom have been studied at the University of Michigan. The group is also beginning to study youth at risk of bipolar disorder, another devastating psychiatric disorder that often strikes in young adulthood.

A new project underway involves the use of transcranial magnetic stimulation (TMS), which employs magnetic energy to induce electrical currents in the brain. It is non-invasive and can be applied in an office setting. The technique has been approved by the FDA for depression, and there are promising studies showing that it is effective in reducing auditory hallucinations in schizophrenia. Dr. Taylor is in the final stages of obtaining approval to begin recruitment for the pilot phase of a study, which will use information from fMRI scans to guide the treatment. TMS is an exciting research venture, since it offers the hope of a direct benefit for participants in studies.

Once again, the Depression Center and Dr. Taylor gratefully acknowledge the support of the Mind Over Matter organization. With the generous donations provided by the annual M.O.M. race, research moves ever closer to improving the diagnosis and treatment of a terrible mental disorder. Thank you!

For more information about the University of Michigan Depression Center please visit www.depressioncenter.org or call (734) 232-0175.