

Shared brain disruption illustrates similarities between mental illnesses

4 July 2013

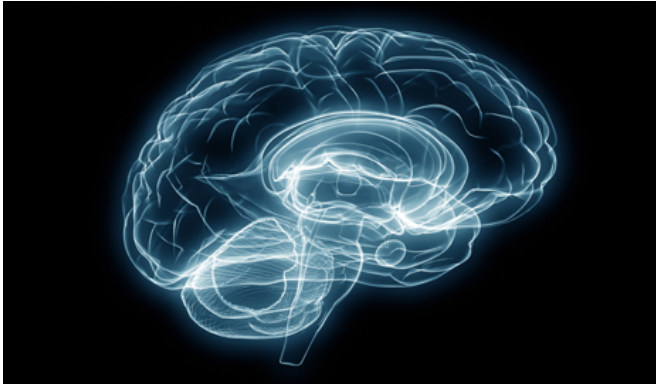


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(Medical Xpress)—A specific brain disruption is present both in individuals diagnosed with schizophrenia and those with bipolar disorder, adding to evidence that many mental illnesses have biological similarities.

The brain activity patterns identified by Yale University researchers and reported online July 3 in the journal *Cerebral Cortex* may serve as important biomarkers for diagnostic classification of complex [psychiatric illnesses](#).

Using state-of-the-art functional neuroimaging, investigators examined interactions between the thalamus, the [central hub](#) through which the majority of neural computations flow, and the rest of the brain. Researchers found communication was altered significantly between the thalamus and other regions of the brain in individuals with schizophrenia and those with bipolar disorder.

"This data provides the first brain-wide evidence that cortical-thalamic pathways are profoundly altered in schizophrenia, and strongly supports the hypothesis that [neuropsychiatric conditions](#) with shared symptoms actually exist on a continuum of

[brain activity](#)," said Alan Anticevic, assistant professor in psychiatry at the Yale School of Medicine and lead author of the study.

The research advances efforts to find new ways to classify [mental illnesses](#) based on neurobiological measures as well as observable behavior, a major goal of the National Institute of Mental Health.

"Present findings provide evidence for a robust brain-wide biomarker in schizophrenia that could possibly be used to better understand genetic risk for psychiatric illness," said David Glahn, associate professor of psychiatry and senior author of the study. Glahn is also affiliated with the Olin Neuropsychiatry Research Center at the Institute of Living.

Other Yale-affiliated authors on the study are Aleksandar Savic, John Murray, Anderson Winkler, John Krystal, and Godfrey Pearlson. Additional co-authors include Michael Cole of Washington University in St. Louis; Grega Repovs of University of Ljubljana, Slovenia; and Margaret Brumbaugh of the Olin Neuropsychiatry Research Center at the Institute of Living.

Anticevic is affiliated with the National Institute of Alcohol Abuse and Alcoholism Center for the Translational Neuroscience of Alcoholism and the Abraham Ribicoff Research Facilities of the Connecticut Mental Health Center.

More information: cercor.oxfordjournals.org/content/3/cercor.bht165.full

Provided by Yale University

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