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Projects & Grantees

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Neural Synchrony and the Cognitive Deficits of Schizophrenia

Category : SCHIZOPHRENIA/PSYCHOTIC DISORDERS

Grantee : [Edward S. Boyden, Ph.D.](#)

Type : Young Investigator

Year : 2008

Institution: Massachusetts Institute of Technology

Summary : Edward S. Boyden, Ph.D. is helping to develop technology to assess the role of neural synchrony the cognitive deficits of schizophrenia. Many symptoms of schizophrenia are hypothesized to result from problems in coordinating activity of sets of neurons in the cerebral cortex, but until now it has not been possible to manipulate neural synchrony precisely enough to assess its role in cognition. The new technology will be used to disrupt gamma oscillations to determine whether gamma synchronized neural activity is necessary for proper behavioral function, and to amplify oscillations to see if that can remedy disordered perceptual and cognitive processing in schizophrenia.