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Gene linked with schizophrenic development

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U.S. scientists say a gene related to brain development and function may play a casual role in schizophrenia development.

Schizophrenia is known to be associated with changes in myelin, which is formed around nerve fibers by a group of central nervous cells called oligodendrocytes, which are regulated by the gene oligodendrocyte lineage transcription factor 2, or OLIG2.

Professor Joseph Buxbaum and colleagues at the Mount Sinai School of Medicine collaborated with the United Kingdom's Cardiff University School of Medicine to analyze DNA in blood samples from 673 unrelated patients with schizophrenia and compared their genetic information to 716 patients who did not have the disease.

The study showed variation in OLIG2 was associated with schizophrenia. OLIG2 also showed a genetic association with schizophrenia when examined together with two other genes -- CNP and ERBB4 -- which are also active in myelin development.

"Multiple genes likely have a role in schizophrenia and there are probably many things happening in the brain of a schizophrenia patient," Buxbaum said. "The findings from this study help us tease out a potential biological cause that may be contributing to this debilitating illness."

The research appears in the Proceedings of National Academy of Sciences.

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