Columbia Technology Ventures

**Mouse model for the development of more effective schizophrenia drugs**

*Technology #cu15276*

Treatments for schizophrenia are currently lacking, even though it affects 1% of the population globally. This technology is a mouse model of the human ZDHHC8 gene. The deletion of this gene is known to be the leading cause of nonfamilial schizophrenia. Genetic variance in this gene causes a defect in neuron structure and brain function that most commonly manifests as schizophrenia. This technology may provide a route towards effective schizophrenia therapies.

**An accurate genetic model of schizophrenia leads to more successful treatment strategies**

Currently, there is a lack of drug development for schizophrenia; previous attempts ended in failure because of the lack of an evidence-based approach. This technology is a well-defined mouse model of nonfamilial schizophrenia. The ZDHHC8 gene encodes a palmitoyltransferase that is essential for proper neuron growth. Deficiency in this protein causes disruption of neuronal axon growth, and manifests in schizophrenia-like behavior in mice and humans. Replacement of this enzyme was shown to normalize behavior and may lead to a potential therapeutic approach.

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**Applications:**

- Drug development for schizophrenia medication
- Tool to study disease mechanism and pathophysiology

**Advantages:**

- Causative genetic association with disease
- Clear correlation between molecular mechanism and pathological outcome
Related Publications:


Inventors

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