Diagnostic tool to determine risk of schizophrenia

Technology #2866

This technology is a diagnostic tool for predicting the risk of schizophrenia based on copy number variation in the vasoactive intestinal peptide receptor gene (VIPR2).

Unmet Need: Simple method to determine risk of schizophrenia

Current methods for the diagnosis of schizophrenia rely on complex and subjective physical and psychiatric evaluations that are only possible after a patient is symptomatic. Consequently, this prevents early treatment from being administered, which has the highest probability of reducing or preventing disease progression. As such, an assay that predicts the risk of schizophrenia before symptoms are observed would improve diagnosis and disease management.

The Technology: Variation in the VIPR2 gene predicts risk of schizophrenia

This technology is a diagnostic tool that enables early detection of schizophrenia through the analysis of copy number variants (CNV) in the VIPR2 gene. Based on the finding that CNVs in the VIPR2 gene confer an increased risk for schizophrenia, this technology provides a simple genetic screen for assessing a patient’s risk of developing schizophrenia. In contrast to complex physical and psychiatric evaluations, this technology can detect risk of schizophrenia before a patient is symptomatic, allowing at-risk patients to be monitored for symptoms and receive early treatment if symptoms occur. Additionally, the association between CNVs in the VIPR2 gene and schizophrenia suggest VIPR2 could serve as a potential therapeutic target for improved antipsychotics.

Applications:

- Diagnostic tool to determine risk of schizophrenia
- Therapeutic target for antipsychotics targeting schizophrenia
- Identification of other pathways interacting with VIPR2 signaling that contribute to schizophrenia
Advantages:

- Identified by genome-wide analysis of DNA copy-number variations in over 1,500 patients
- Present in approximately 0.35 % of schizophrenia patients, compared to only 0.03 % of control patients
- Implication of altered VIPR2 signaling in the pathogenesis of schizophrenia

Lead Inventor:

Maria Karayiorgou, M.D.

Patent Information:

Patent Pending (US 20140171371)

Related Publications:


Tech Ventures Reference:

- IR 2866
- Licensing Contact: Joan Martinez

Inventors

Maria Karayiorgou