

Feinstein Institute and Cold Spring Harbor Lab join forces, seek manic depression genes

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Psychiatry and genetics researchers tackle the genetics of early-onset bipolar disorder in children and adolescents

Psychiatric researchers from The Zucker Hillside Hospital campus of The Feinstein Institute for Medical Research announced today they have launched a collaborative research project spearheaded by James Watson, PhD, the co-discoverer of the DNA double helix, and a team of researchers at Cold Spring Harbor Laboratory (CSHL) to identify key genetic underpinnings of bipolar disorder (BPD), a mental illness that is known to run in families. Expected to last two to three years, the study will focus on early-onset BPD and will involve children with the illness and their parents.

"For complex illnesses like bipolar disorder that vary dramatically in symptoms and severity among affected individuals, especially children and adolescents, identifying genetic underpinnings is very difficult," said Anil Malhotra, MD, lead investigator for The Feinstein. "It is also critical to accelerating and confirming a bipolar diagnosis and developing more rational and effective treatments. Collaborating with Cold Spring Harbor Laboratory will help make this a reality."

The collaboration will allow the team to leverage the unique clinical populations at Zucker Hillside, a renowned psychiatric hospital in Glen Oaks, NY, with state-of-the-art molecular tools available at CSHL in Cold Spring Harbor, NY, and The Feinstein Institute in Manhasset, NY.

Commonly referred to as manic depression, BPD is a mood disorder that

goes beyond the day's ordinary ups and downs, becoming a serious medical condition and an important health concern in the United States. More than 2.3 million American adults are diagnosed with bipolar disorder, and research suggests that at least a quarter of a million children and adolescents are also affected by bipolar spectrum disorders, though some estimates are much higher. The disorder is characterized by periodic episodes of extreme elation, elevated mood or irritability (also called mania) countered by periodic depressive episodes.

"This collaboration brings together the major elements necessary to understand a complex illness such as BPD," said Dr. Watson. "The clinical and scientific expertise of the physician-scientists at The Feinstein Institute combined with CSHL's breakthrough genetics research is a perfect match. I expect this collaboration to contribute a great deal to our understanding of the genes involved in bipolar disorder and to the diagnosis and treatment of this illness."

Bipolar disorder usually develops in the teens or early twenties but can also affect children. Diagnosis of early-onset BPD is tough, though, because some of the symptoms mimic emotions and behaviors that are initially thought to be typical of children. Unlike normal mood changes, however, bipolar disorder significantly impairs functioning in school with peers and at home with family. Diagnosis is also hampered by the symptoms often being confused with other childhood-onset mental disorders such as attention deficit-hyperactivity disorder (ADHD) or oppositional defiant disorder.

Children and adolescents who were diagnosed with BPD between the ages of 7 and 18 and who have two living parents will be invited to participate in the study. The researchers will analyze DNA from blood samples of the children and both parents. The participants will also undergo cognitive and behavioral tests and brain MRIs. The Feinstein research team members, including Vivian Kafantaris, MD, and Todd

Lencz, PhD, in addition to Dr. Malhotra, plan to enroll 1,500 participants in the study -- 500 children and 1,000 parents.

According to the National Institute of Mental Health, bipolar disorder that begins in childhood or early adolescence may be a different, possibly more severe, form of the illness than older adolescent- and adult-onset bipolar disorder. Using novel genetic technologies, the research team hopes to identify for the first time genes that influence the risk of developing bipolar disorder at an early age. Such knowledge could help researchers develop preventative strategies and better treatments for this disabling illness.

Source: North Shore-Long Island Jewish (LIJ) Health System

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