

New databases put wings on search for bipolar risk genes

July 31 2007

A novel, free, public online database opening this week should greatly speed efforts to find genes linked to increase risk of bipolar disorder. The Bipolar Disorder Phenome Database—a joint project of Johns Hopkins Psychiatry and the National Institute of Mental Health—is the first of its kind, offering detailed descriptions of symptoms and course of disease on more than 5,000 people with bipolar illness, a mood disorder commonly marked by alternating bouts of depression and manic or overexcited behavior.

Because DNA samples also are available for this group, the database will let researchers correlate specific symptoms with sequences of genetic material. The new database, available [here](#) is meant to complement the massive bodies of genetic data generated already by the Human Genome Project, the International HapMap Consortium and the Genetic Analysis Information Network.

“This database describes the clinical picture of bipolar disorder in the fullest detail possible,” says James Potash, M.D., who led the Hopkins portion of efforts to assemble the site. “It also lets us pick out meaningful clusters of symptoms that will ultimately help identify genes.”

Using this newer clinical subtyping approach to gene hunting, scientists winnow out “pure” groups of patients with a key characteristic—like those whose bipolar disorder (BD) begins earlier than usual or those who also experience panic attacks. Suspect stretches of DNA—including

genes—are more likely to stand out in such groups. The approach has been effective in finding genes associated with Alzheimer’s disease and breast cancer, Potash says.

Collecting accurate descriptions of patients in large enough numbers to ensure reliable results is costly and time-consuming, he adds. The Bipolar Disorder Phenome Database lets researchers tap into information from two national studies of BD families collected over 20 years through patient surveys and interviews. The studies included patients with well-documented bipolar disorder who had first-degree relatives with a major mood illness.

Described this month in *The American Journal of Psychiatry*, the database is one of two now available at Hopkins’ BioinformOODics web site.

A second offering on the BioinformOODics site—QuickSNP— is also set up to streamline gene searches but, unlike the BD database, it isn’t specific to mood disorders research.

The tool enables users to intelligently select the specific DNA signposts or markers—the single nucleotide polymorphisms, or SNPs—present in specific chromosome regions most likely to yield meaningful results. It also tells researchers if genes they want to study are represented on commercially-available gene chips.

Source: Johns Hopkins Medical Institutions

Citation: New databases put wings on search for bipolar risk genes (2007, July 31) retrieved 6 May 2024 from <https://medicalxpress.com/news/2007-07-databases-wings-bipolar-genes.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.