Family trees may hold key to unlocking mystery of autism, Alzheimer's risk

The standard approach for unearthing genetic variants linked to a particular condition is a genome-wide association study (GWAS). For this type of study, scientists often must recruit tens of thousands of people with a condition to uncover statistically significant connections.

[However,] amassing these numbers is much easier for common conditions, such as heart disease, than it is for ones such as autism.
The new approach…is called genome-wide association study by proxy (GWAX). It allows researchers to cast a wider net for variants by asking people in the general population what conditions their immediate relatives have. Because people share 50 percent of their DNA with each of their parents, siblings and children, the DNA of the participants holds clues to the conditions of these relatives.

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Researchers tested the approach using data from the UK Biobank, a repository of genomic and medical information from about 500,000 people…Using GWAX, the researchers uncovered four new variants associated with Alzheimer's disease; two of these affect genes involved in the immune response.

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"We're able to uncover what we think is pretty interesting and exciting biology by applying this approach," says lead researcher Joe Pickrell, assistant investigator at the New York Genome Center.

[The study can be found here.]

The GLP aggregated and excerpted this blog/article to reflect the diversity of news, opinion, and analysis. Read full, original post: New method taps family trees for clues about conditions