Molecular Psychiatry press release

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20-Mar-2007 01:00 US Eastern time | 05:00 London time | 14:00 Japanese time | 16:00 Australian Eastern time

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This press release contains the following item(s):

Whole genome association reveals schizophrenia gene
DOI: 10.1038/sj.mp.4001983

For papers that will be published online on 20-Mar-2007

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A genetic basis for schizophrenia found on both the X and Y chromosomes, is presented online in *Molecular Psychiatry* this week. Todd Lencz and colleagues examined over 500,000 genetic markers with a method known as Whole Genome Association (WGA) to determine potential susceptibility genes for the disease.

Schizophrenia is the third-leading cause of disability in the US among individuals aged 15 to 44. This highly heritable disorder shortens patients' life spans by an average of 10 years. It is widely researched, but despite active efforts to identify key genes, the factors contributing to the condition are still poorly understood.

The results from this analysis show a link with schizophrenia from a marker located in a chromosomal region called pseudoautosomal region 1 (PAR1), which is on both the X and Y chromosomes, and was located adjacent to two genes, *CSF2RA* and *IL3RA*. These genes, previously thought to play a role in inflammation and autoimmune disorders, produce receptors for two cytokines, GM-CSF and interleukin-3. The involvement of cytokines may help to explain the often-observed autoimmune disorders that accompany schizophrenia. The research team extended the association findings to an independent sequencing sample that exhibited common genetic patterns and rare mutations in the same cytokine gene regions. Together, the results of these two genetic analyses constitute the first examination of these particular cytokine genes as predictors of schizophrenia.

**Author contacts:**
Todd Lencz (Zucker Hillside Hospital, Glen Oaks, NY, USA)
Tel: +1 718 470 8126; E-mail: lencz@lij.edu

**Editorial contact:**
Joyce-Rachel John (Nature Publishing Group, New York, NY, USA)
Tel: +1 212 726 9214; E-mail: j.john@natureny.com