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EVIDENCE FOR A NEGATIVE ASSOCIATION BETWEEN SCHIZOPHRENIA AND A POLYMORPHISM IN THE INSULIN RECEPTOR SUBSTRATE-3 (*IRS-3*) GENE

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Introduction: Since there are clear indications that schizophrenia is a systemic disorder, we sought for a common molecular basis for schizophrenia abnormalities in brain and body. Our hypothesis was that an impaired insulin/ insulin-like growth factor signalling in cells might underlie changes in both brain and body in schizophrenia. In this regard, the intracellular insulin receptor substrates 1-4 proteins might be of interest to study genetically.
Objective/aim: In this study, we chose to investigate the insulin receptor substrate-3 (*IRS-3*) gene as a candidate gene in schizophrenia.
Methods: The *IRS-3* gene of 93 patients with the diagnosis of schizophrenia according to DSM-IV criteria and 57 healthy control subjects was screened for DNA sequence variations, followed by case-control analyses of total 10 detected polymorphisms.
Results: The A/G genotype of the single nucleotide polymorphism (SNP) at position 100166597 in the *IRS-3* gene occurred in 5.3% of the control subjects compared with in 0% of the patients (p=0.05).
Conclusion: Our finding suggests that individuals carrying the A allele of this A/G SNP in the *IRS-3* gene have a protection against schizophrenia development.

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