

## **P-709 - ASSOCIATION BETWEEN BODY MASS INDEX AND INSULIN RECEPTOR SUBSTRATE-4 (IRS-4) GENE POLYMORPHISMS IN PATIENTS WITH SCHIZOPHRENIA**

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**Introduction/ objective:** The insulin receptor substrate-4 (IRS-4) protein is highly expressed in the hypothalamus that plays a main role in the regulation of body weight. At the same time, overweight and obesity are more common in patients with schizophrenia compared to the general population. Therefore, this study was undertaken to investigate potential associations between body mass index (BMI) or height and polymorphisms in the *IRS-4* gene in schizophrenia patients and healthy control subjects.

**Methods:** The whole *IRS-4* gene of 93 patients and 59 control subjects was screened for DNA sequence variations, and then 10 detected single nucleotide polymorphisms (SNPs) were investigated in relation to BMI and height of patients and control subjects.

**Results:** Mean BMI was higher in patients than in control subjects, whereas there was no difference regarding height. Significant associations were found between patients' BMI and genotypes of six *IRS-4* SNPs or a haplotype including these six SNPs. In contrast, no associations were found between BMI or height of control subjects, or height of patients, and the genotypes or haplotypes.

**Conclusion:** This study clearly demonstrates associations between BMI and *IRS-4* gene variants in schizophrenia patients, but not in healthy control subjects, pointing to a possible involvement of *IRS-4* in the control of body weight in schizophrenia.