

## MULTIDIMENSIONAL SCALING ANALYSIS OF THE ASSOCIATION OF SNPS RELATED 5-HTR2A SIGNAL PATHWAY AND THE PHENOTYPE CHARACTERISTICS OF MAJOR DEPRESSION IN CHINESE HAN

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**Objective:** Our aim was to explore the possible association between four SNPs related with 5-HTR2A signal pathways and phenotype characteristics of major depressive disorder (MDD) in Chinese Han.

**Methods:** 194 patients with recurrent major depressive episodes were from Chinese Han origin. 4 SNPs were detected with LDR (ligase detection reaction). The multidimensional scaling analysis was used for testing the association between different genotypes of four SNPs (5-HTR2A rs6311, Gβ3 rs5443, ADCY9 rs2230739 and PDE1A rs1549870 related with 5-HT<sub>2A</sub> signal pathway) and phenotype characteristic of MDD.

**Results:** The multidimensional scaling illustrated: rs6311CC, rs5443CC and rs1549870GG with the certainly-existed fundamental symptom 2 were in the same zone; rs6311CC and accessory symptoms 7, and rs6311CC and depressive episode with psychotic symptoms and repeated episodes are in the same zone. The results showed rs6311CC had a close correlation with depressive symptoms.

**Conclusions:** It is concluded that rs6311 may be the functional point of the 5-HT<sub>2A</sub> gene in MDD; It is presumed that different genotypes of rs5443 and rs2230739 can modulate the second message signal pathways in MDD.