

Investigation of polymorphic variants of SLC6A4, Tph-1 and Tph-2 genes in completed suicideDuygu Yavuz¹, Ozge Cumaogullari¹, Nevriye Temel Yilmaz², Nergis Canturk¹, Bedriye Oncu¹, Hilal Ozdag¹ and N Lale Satiroglu Tufan¹¹Ankara University, Turkey²Forensic Medicine Institution, Turkey

Suicide is a big health problem in the world. Studies have shown that suicidal behavior has psychiatric, sociological, economic and biological causes. In this thesis project, possible relationship between suicidal behavior and genetic structure was analyzed. Studies in the literature have shown that serotonergic system affects the behaviors of people. Hence, polymorphic variant of rs1800532, rs7305115, rs6355, rs1386494 regarding TPH-1, TPH-2 and SLC6A4 genes having important roles in serotonin production and degradation pathways were selected for analysis. 100 completed suicide samples and 100 healthy control samples were included in this study. Age (18-65) and the gender distribution were selected to be similar in suicide and control groups. Absence of psychiatric disorder history other than depression, schizophrenia, bipolar mood disorder, mental retardation, chronic illness, drug and alcohol addiction were noted in sample selection. DNA isolation was made from blood samples and then polymorphic variants, rs6355, rs1800532, rs7305115, rs1386494, of TPH-1, TPH-2 and SLC6A4 genes were analyzed by KASP (Competitive Allele Specific PCR) method. No significant difference in gender and age distribution was observed between suicide and control groups. Our results showed that genotype and individual allele frequencies of polymorphic variants (rs1800532, rs7305115, rs6355, rs1386494) were not significantly different in two groups. In conclusion, no association between TPH-1, TPH-2 and SLC6A4 gene polymorphisms was observed in completed suicide samples.

Biography

Duygu Yavuz received her undergraduate degree in Biology at Hacettepe University in Ankara, Turkey. She is studying for her Master's degree in Forensic Biology at Forensic Science Institute, Ankara University. She is expected to receive the degree at the end of July. This study is her thesis project.

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