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## INVESTIGATION OF TRANSMEMBRANE PROTEIN 18 (TMEM18) AND NEURONAL GROWTH REGULATOR 1 (NEGR1) GENE POLYMORPHISMS' EFFECTS ON BODY MASS INDEX IN OBESE PATIENTS

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**O**besity is a complex disorder which has reached epidemic proportions in many parts of the world. Genetic studies have demonstrated a high heritability for obesity and established associations of certain candidate genes and their variations with respect to race, geographical location/country of origin. Genome wide association studies (GWAS) have identified more than 50 genetic loci associated with body mass and obesity in the last decade. However functional mechanisms and different ethnic data of these loci are very insufficient. In this study, NEGR1 gene rs2815752 and TMEM18 gene rs6548238 single nucleotide polymorphisms (SNPs) were investigated for association in a sample of obesity patients who reside in Afyonkarahisar province. This was a case-control study. Polymorphisms were genotyped in 172 obese patients and 77 healthy controls. According to obtained results, there were no significant differences between obese and controls in terms of allele and genotype frequencies of NEGR1 gene rs2815752 and TMEM18 gene rs6548238 polymorphisms. Also there were no significant differences between obese patients with regard to anthropometric measurements and body composition parameters for rs2815752 polymorphism. However, several significant differences were found for rs6548238 polymorphism with regard to anthropometric measurements and body composition. Consequently, there are no significant differences in NEGR1 gene rs2815752 and TMEM18 gene rs6548238 polymorphisms for genotype and allele frequencies comparing the obese group and controls. Similarly, no significant association was found for anthropometric measurements and body composition parameters within obese patients for rs2815752 while there were significant differences for rs6548238 polymorphism.

### Biography

Mujgan O. ERDOGAN graduated from Istanbul University Medical Faculty Department of Medical Biological Sciences in 1998 and completed his master's degree in Medical Biology Department of Eskisehir Osmangazi University Medical Sciences Institute in 2001. Mujgan Ozdemir Erdogan has completed her PhD at the age of 30 years from Eskisehir Osmangazi University School of Medicine. She has published more than 20 papers in reputed journals. Erdogan is working at the Faculty of Medicine, Medical Biology, Afyon Kocatepe University, where she is associate professor.

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