

**МІНІСТЕРСТВО ОСВІТИ І НАУКИ УКРАЇНИ
СУМСЬКИЙ ДЕРЖАВНИЙ УНІВЕРСИТЕТ
КАФЕДРА ІНОЗЕМНИХ МОВ
ЛІНГВІСТИЧНИЙ НАВЧАЛЬНО-МЕТОДИЧНИЙ
ЦЕНТР**

**МАТЕРІАЛИ
X ВСЕУКРАЇНСЬКОЇ НАУКОВО-ПРАКТИЧНОЇ
КОНФЕРЕНЦІЇ СТУДЕНТІВ, АСПІРАНТІВ ТА
ВИКЛАДАЧІВ
ЛІНГВІСТИЧНОГО НАВЧАЛЬНО-МЕТОДИЧНОГО
ЦЕНТРУ КАФЕДРИ ІНОЗЕМНИХ МОВ**

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ASSOCIATION OF K121Q POLYMORPHISM ENPP1 GENE WITH T2DM IN PERSONS OF DIFFERENT SEXES IN UKRAINIAN POPULATION

I. V. Marchenko, Sumy State University

S. G. Zolotova – E L Adviser

Nowadays, the biological role of Ectonucleotide Pyrophosphatase Phosphodiesterase 1 (ENPP1) is not fully understood, but there are two groups of evidences concerning the ENPP1 significance in pathogenesis of some pathological processes and diseases. One of them is about the ability of ENPP1 to influence insulin sensitivity by downregulating insulin receptor signaling. This is considered to be in association with insulin resistance and type 2 diabetes mellitus (T2DM).

Venous blood from 163 patients with T2DM and 110 healthy individuals (control group) was used for genotyping. The definition of K121Q polymorphism (rs1044498) of ENPP1 gene has been examined by PCR-RFLP. The association between the K121Q polymorphism of ENPP1 gene and the development of T2DM has been revealed with the use of χ^2 -Pearson criterion. It was shown that in patients with T2DM the value of homozygotes for major allele (K/K) and minor allele (K/Q+Q/Q) is 65.0 and 35.0% respectively, while in the control group – 75.5 and 24.5% respectively ($P=0.067$). The value of the given options, polymorphism in females is unreliable in patients with T2DM KK genotype – 59.8% and KQ+QQ genotypes – 40.2%, in the control group genotype KK – 78,1% and genotypes KQ+QQ – 21.9% respectively ($P=0.063$). The distribution of allelic portions K121Q polymorphism in males also didn't differ in comparison with patients with T2DM genotype KK – 71.1% and genotypes KQ+QQ – 28.9% those of the control group genotype KK – 74.4% and genotypes KQ+QQ – 25.6% respectively ($P=0.645$).

There is no link between the polymorphism K121Q of gene ENPP1 and the T2DM in males and females in Ukrainian population.