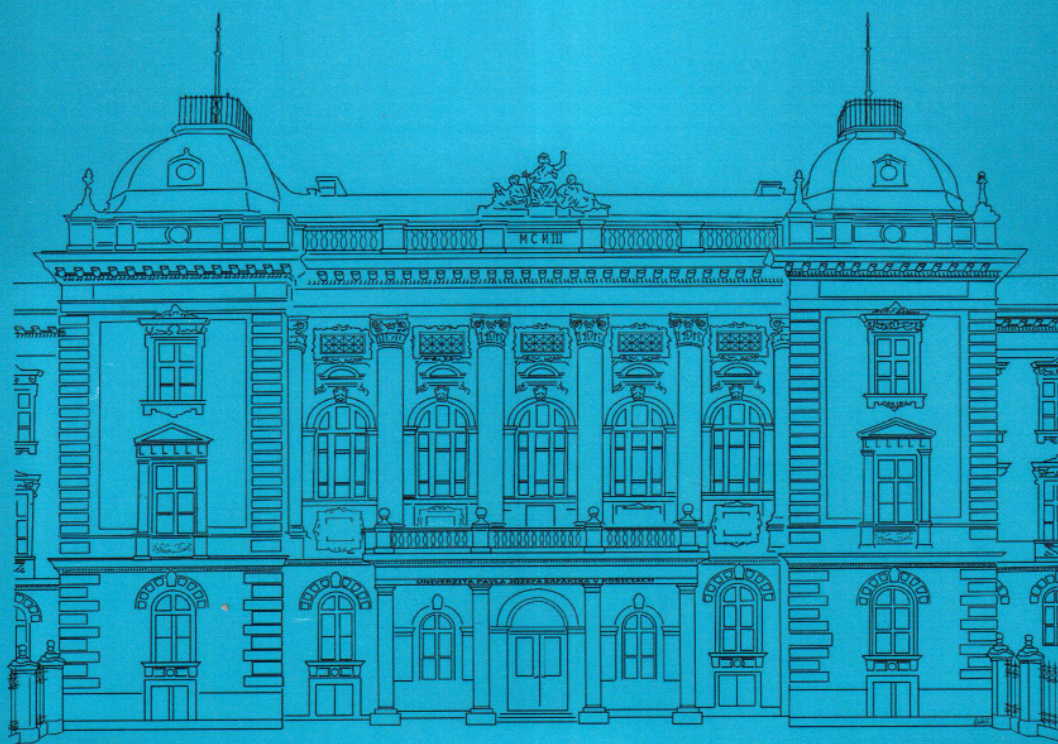




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FREQUENCY OF ALLELIC VARIANTS Lys198Asn POLYMORPHISM OF ENDOTHELIN -1 (EDN-1) GENE IN THE UKRAINIAN POPULATION

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Introduction

With implementation of molecular genetics methods into medical practice, study of genetic markers which condition occurrence of multifactorial diseases, became possible. One of genes-candidates, polymorphism of which can be connected with hereditary susceptibility to the number of diseases, is the gene of endothelin-1 (EDN-1). Gene EDN-1 of a human is contained in the long arm of the 6th chromosome (6p24-p23) [1].

Aim

Study of frequency of allelic variants Lys198Asn of EDN-1 gene polymorphism in the Ukrainian population and comparison of the obtained data with the results of research in other populations.

Material and Methods

For the study, the venous blood of 124 apparently healthy donors was used (36.3 % women and 63.7 % men), the average age was 76.7 ± 0.93 years. Determination of Lys198Asn polymorphism (rs5370) of the 5th exon of EDN-1 gene was held by means of polymerase chain reaction with the consequent analysis of length of restriction fragments at their detachment by means of electrophoresis in agarose gel. Statistical analysis was held with using of SPSS-17 programme package.

Results

During genotyping, it was detected that correlation of homozygotes by major allele (Lys/Lys), heterozygotes (Lys/Asn) and homozygotes by minor allele (Asn/Asn) amounts to 63.7; 32.3 i 4.0 %. The obtained data was compared with the results of study in other populations: Chinese, Russian, Spanish, Turkish, British, Greek, Japanese, Indian and Slovenian. Frequency analysis of allelic variants of EDN-1 gene by Lys198Asn polymorphism allowed to find the accurate difference between their distribution in the Ukrainian population, on one side, and in the Japanese population ($P=0.022$) from the other [2]. There were no differences detected between the studied indicator in Ukraine and in other countries.

Conclusion

There is a proved connection in distribution of genotypes according to Lys198Asn polymorphism of EDN-1 gene between the Ukrainians and persons of the Japanese population.