

# GLN27GLU AND ARG16GLY $\beta_2$ -ADRENERGIC RECEPTOR GENE POLYMORPHISM IN PATIENTS WITH BRONCHIAL ASTHMA AND OBESITY

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**Abstract.** It is known that bronchial asthma (BA) associated with obesity forms separate phenotype, which is characterized with more severe course of the disease and a lower response to basic therapy. BA and obesity are recognized as a classic multifactorial diseases that occur in people with a certain genotype under the influence of environmental provoking factors. The study of candidate genes for asthma and obesity will help deepen our knowledge and understanding of the general genetic basis of these diseases. *The aim of the study.* A review of the literature containing the results of studies of Arg16Gly and Gln27Glu polymorphisms of the  $\beta_2$ -adrenoceptor ( $\beta_2$ -AR) gene, which are considered as common candidates for the occurrence of BA and obesity, which will understand and justify the direction of further research. *Materials and methods of research.* The publications containing the results of studies on the role of Arg16Gly and Gln27Glu polymorphisms of the  $\beta_2$ -AR gene in the occurrence of BA and obesity were analyzed. *Research results.* The data of the literature analysis on the research problem have contradictory, and sometimes discordant character. It is shown that the strength of the association between Arg16Gly and Gln27Glu polymorphisms and the presence of asthma and obesity is not always sufficient to explain this relationship. This emphasizes the presence of unresolved issues that require further research. *Conclusion.* The analysis of the search for common genetic markers on the example of Arg16Gly and Gln27Glu polymorphisms of the  $\beta_2$ -AR gene in patients with asthma and obesity indicates the need for further study of this problem to improve diagnostic, therapeutic and prophylactic measures.

**Key words:** bronchial asthma, obesity, Arg16Gly and Gln27Glu  $\beta_2$ -adrenoceptor gene polymorphisms.

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