

## Pharmacogenetic markers in assessment of medical response in patients with Ischemic heart disease

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### Abstract

Aim of the study is to explore a pharmacogenetic markers with statin impact on drug response in patients with ischemic heart disease: stable exertional angina of the II-III functional classes. The pharmacogenetic study included 117 patients (men and women (postmenopausal) aged 40-70 years) with ischemic heart disease and also 991 DNA samples from the Research Institute of Genetic and Molecular Epidemiology of KSMU. Research was conducted over 12 months with plasma lipids, TIM, safety therapy control every 4 weeks. Research start included blood collection for genotyping. Selection of genes and polymorphisms included membrane transporter genes involved in rosuvastatin pharmacokinetics ABCG2 (rs1481012 and rs2199936), SLCO1B1 (rs12317268 and rs4149056). Molecular genetic methods included DNA isolation, Detection of SNPs. Statistical data analysis was presented by Associations of polymorphic variants of genes with lipid metabolism indices, TIM, dynamics of their changes were established by the method of linear regression analysis adjusted for gender, age, a dose of rosuvastatin. Due to the abnormal distribution, the data were transformed. For calculations, the statistical package SNPStats was used. Connection of polymorphic variants of mem-

brane transporter genes with the development of IHD showed that homozygous hosts A/A with gene ABCG2 (rs2199936) and also homozygous hosts G/G with gene ABCG2 (rs1481012) and with gene SLCO1B1 (rs12317268) was characterized by sufficient drug response on rosuvastatin. Rosuvastatin in starting dosage of 20 mg provide achieving of aiming target level of Cholesterol LDL in heterozygous G/A hosts with gene ABCG2 (rs2199936) and A/G with ABCG2 (rs1481012) gene.

### Biography:

Mal Galina Sergeevna throughout the 30 years dealing with the actual problems of cardiology, and clinical pharmacology. In 2005, defended MD degree, since 2005 she has been working as a professor of pharmacology and cardiology. She is the author of 500 scientific papers and develops issues of pharmacological correction of atherosclerosis of coronary heart disease, arterial hypertension. She studies pharmacogenetic approaches to the modification of the drug response in cardiac patients. Her approach to optimizing treatment is based on the pharmacokinetic, pharmacodynamic and pharmacogenetic aspects of the treatment of cardiac patients that allows to implement personalized medicine in real life.