



## Frequency of the C1236T, G2677T/A and C3435T *MDR1* gene polymorphisms in the Serbian population

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### Abstract:

The multi-drug resistance 1 (*MDR1*) gene encodes for a P-glycoprotein (PGP), which acts as a gate-keeper against various kinds of xenobiotics. Several single nucleotide polymorphisms (SNPs) in the *MDR1* gene that may influence PGP level and function have been identified. The aim of this study was to simultaneously analyze the three most important *MDR1* SNPs, C3435T, G2677T/A and C1236T, in the Serbian population and to compare the results with those published for other ethnic groups. A group of 158 unrelated, healthy subjects was included in the present study. For determination of *MDR1* SNPs, a multiplexed mutagenically separated PCR was performed. The genotype frequency of the analyzed *MDR1* SNPs was as follows: 3435 nt – 0.19 (CC), 0.54 (CT) and 0.27 (TT); 2677 nt – 0.26 (GG), 0.52 (GT), 0.15 (TT), 0.03 (GA) and 0.064 (TA), and 1236 nt – 0.23 (CC), 0.61 (CT) and 0.16 (TT). Our results for the Serbian population could be relevant for further investigation of drugs that are substrates of PGP and for studies of interethnic diversity in *MDR1* polymorphism frequency.

### Key words:

*MDR1*, genetic polymorphism, P-glycoprotein, C1266T, G2677T/A, C3435T

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