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SLCO1B1 gene polymorphisms pattern among Croatian Roma

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Our recent extensive research of the Roma (Gypsy) population in Croatia pointed to a significant load of risk factors for the different diseases which accompany economic transition, indicating a rising prevalence of cardiovascular diseases (CVD) in the future. This may lead to the increase of appropriate drugs consumption in this population. The active transport of numerous medications for CVD treatment is mediated by OATP1B1 protein encoded by *SLCO1B1* gene. This gene has numerous variants which can cause adverse drug response and some of them significantly differentiate among populations. The Roma are transnational minority whose gene pool results from their Indian ancestry, subsequent admixture with surrounding populations and their socio-cultural isolation. Their reactions to different drugs are poorly documented. Therefore we analyzed 8 SNP loci within *SLCO1B1* gene in 434 Roma individuals from three socio-culturally different Roma groups (Balkan Roma, Vlax Roma from Baranja and Medjimurje). All but one locus, *rs4149056*, were monomorphic. The polymorphic locus shows significantly different genotype distributions among the investigated populations ($p<0.01$). Genotype CC, responsible for the adverse response to several drugs, was present only in the population of Baranja, where frequency of C allele was the highest (16.8%). Comparison of allele frequencies of here investigated Roma populations with major population groups from 1000 genomes database did not reveal any significant difference compared to European populations but indicated difference between the Roma and South Asian populations. The results, obtained for *rs4149056*, indicate that the investigated Roma population shows sub-population specificity within the bounds of European populations.

Biography

Tatjana Skaric-Juric is a Research Professor at the Institute for Anthropological Research, Croatia and an Associate Professor of Anthropology at University of Zagreb where she participates in several undergraduate and postgraduate programs. She has participated in 15 Croatian and international scientific projects (PI in 3 projects) and published over 50 papers. Her research interests covers: Biological anthropology, aging, growth and development, quantitative and population genetics, genetic epidemiology, public and minority health.

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