

6th Pharmacovigilance Congress

September 28-30, 2016 Toronto, Canada

The distribution of CYP2B6 variants in Roma from Croatia

Branka Janićijević and Marijana Peričić Salihović
Institute for Anthropological Research, Gajeva 32, Croatia

The ADME genes exhibit significant variation among the human populations due to the past demographic and evolutionary events. Genetic distinctiveness is especially pronounced in isolated populations where the exchange of genes with other populations is minimal and where the increased frequency of otherwise rare or private alleles emerges. The example of such population are the Roma, the transnational minority population of Indian origin with centuries long sociocultural isolation which left traces in their gene pool showing considerable differences in comparison to other populations. Therefore, we investigated the variation of a large panel of ADME genes among several Roma minority populations residing in Croatia. Here we present the results of CYP2B6 gene variation which was detected by genotyping five SNP loci (rs12721655, rs2279343, rs28399499, rs34097093, rs3745274, rs7260329, rs8192709) in the three socioculturally and geographically distinct Roma populations living in northern, central and eastern regions of Croatia. Two of the investigated loci (rs28399499, rs34097093) were monomorphic in all samples, while locus rs12721655 was polymorphic only in Roma population from the northern Croatian region of Medjimurje. Its MAF was 21.5% that is considerably high since the global MAF is <1%. MAFs of other loci (rs2279343, rs3745274, rs7260329, rs8192709) ranged from 17-30%, 12-26%, 24-45%, 5-17%, respectively, which is mostly in concordance with their global distributions. The exact test of population differentiation based on genotype frequencies showed marked differences between populations. Significant LD values between pairs of loci were detected in all three investigated populations. The results indicate the Roma population's distinctiveness and provide a theoretical basis for safer drug administration that may be relevant for treating diseases in this population.

Biography

In the year 1985, Branka Janicijevic has completed her Ph.D. in Biology, Faculty of Natural Sciences and Mathematics, University of Zagreb, Croatia. She is a Research Professor of Anthropology at the Institute for Anthropological Research in Zagreb and Professor of Anthropology, Faculty of Humanities and Social Sciences, University of Zagreb, Croatia. Her research interests are interdisciplinary biocultural research of isolated populations, population genetics and molecular anthropology. According to Web of Knowledge database she had 89 scientific papers, 1813 citations and h-index is 20.

branka@inantro.hr

Notes: