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Genetic Polymorphisms of the Human Organic Cation Transporter 2 gene, SLC22A2, in the Zulu population

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Abstract : Organic Cation Transporters play a vital role in the absorption, tissue distribution and elimination of various substrates. Numerous studies have suggested that variations in non-synonymous single nucleotide polymorphisms (SNPs) of SLC22A2 could influence an individual's response to various treatments, including clinically important drugs. This study is the first to determine the baseline frequency distribution for twenty SNPs of SLC22A2in the Zulu population. DNA was collected from 101 unrelated "healthy" Zulu participants. Genotypes of all samples were determined using a multiplex PCR and SNaPshot assay followed by the generation of the haplotype structure. This is the first time that the baseline frequency distribution of SNPs is reported for the Zulu population. Data from this study could be used in in vitro and in vivo pharmacogenetic and pharmacokinetic studies to evaluate the potential role the studied SNPs play in the therapeutic efficacy of clinically important drugs.

Keywords : SLC22A2 gene, SNaPshot assay, PCR, Zulu population
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