



Association of variants in renal salt reabsorption-related gene *SLC12A3* with essential hypertension in a Mongolian population

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ABSTRACT. Mounting evidence has implicated the *SLC12A3* gene in essential hypertension. Here, we examined the potential associations of common variants of the *SLC12A3* gene with blood pressure traits in Mongolians in China. Genomic DNA was extracted from 508 unrelated Mongolian patients with essential hypertension and 246 normotensive Mongolian subjects for genotyping. The genotype distributions of all selected polymorphisms were consistent with Hardy-Weinberg equilibrium. The presence of the G allele in the rs7187932 polymorphism was found to be associated with an increased risk of hypertension (OR: 1.30; 95%CI = 1.00-1.38; P = 0.048), whereas the rs2399594 G allele was associated with a reduced risk for hypertension (OR: 0.76; 95%CI = 0.60-0.97; P = 0.030). No significant difference was observed for other alleles. Haplotype analysis revealed an association of the rs2399594 and rs711746 GG haplotype with a reduced risk for hypertension (OR: 0.76; 95%CI = 0.60-0.97; P = 0.029). No significant association was

observed between other haplotypes and hypertension. These results suggest that the *SLC12A3* gene is a susceptibility gene for hypertension in the Mongolian population.

Key words: Hypertension; *SLC12A3*; TagSNP; Mongolian; Haplotype