



# Association between *STAT3* gene polymorphisms and ulcerative colitis susceptibility: a case-control study in the Chinese Han population

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Genet. Mol. Res. 13 (2): 2343-2348 (2014)

Received March 30, 2013

Accepted June 7, 2013

Published April 3, 2014

DOI <http://dx.doi.org/10.4238/2014.April.3.6>

**ABSTRACT.** Ulcerative colitis (UC) is a chronic inflammation of the large intestine. The aim of this study was to investigate the association of two polymorphisms in *STAT3* with the risk of UC development in the Chinese Han population. This is a hospital-based case-control study involving 56 UC patients and 274 controls. Genotyping was performed using the polymerase chain reaction with sequence-specific primers (PCR-

SSP) method. Statistical analyses were conducted using logistic regression and genotype risk score. Overall, there was a significant difference between patients and controls in the genotype distribution of rs2293152 ( $P = 0.044$ ). The risk for UC associated with the rs2293152-G mutant allele was increased (odds ratio = 2.76; 95% confidence interval = 1.06-7.24) under the dominant model. However, we failed to find any obvious differences in the rs4796793 genotype or allele distributions between the UC patients and controls, and did not detect any significant association of the rs4796793 polymorphism with UC across different genetic models of inheritance. Our study implies that the *STAT3* rs2293152 polymorphism may be associated with the occurrence of UC and might be used as a predictive factor for UC in the Chinese Han population.

**Key words:** *STAT3* gene; Ulcerative colitis; Polymorphism