



Independent and joint effects of the *IL-6* and *IL-10* gene polymorphisms in pulmonary tuberculosis among the Chinese Han population

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Genet. Mol. Res. 13 (3): 7766-7772 (2014)

Received July 27, 2013

Accepted February 7, 2014

Published September 26, 2014

DOI <http://dx.doi.org/10.4238/2014.September.26.14>

ABSTRACT. We investigated the association between interleukin (IL)-6 and IL-10 gene polymorphisms and the susceptibility to pulmonary tuberculosis (PTB). DNA samples were obtained from 191 Han Chinese patients with PTB and 191 healthy control subjects. *IL-6* (-572, -174, -597) and *IL-10* (-1082, -819) polymorphisms were analyzed using polymerase chain reaction-restriction fragment length polymorphism. The *IL-6* -572 C/C and *IL-10* -819 T/T genotypes were observed less frequently in the case group than in the control group, with crude odds ratios of 0.591 [95% confidence interval (CI) = 0.381-0.917] and 0.401 (95%CI = 0.257-0.627), respectively. A significant association remained after adjusting for environmental factors in multivariate logistic analysis. The homozygote genotypes

of *IL-6* -572 and *IL-10* -819 had an adjusted OR of 0.565 (95%CI = 0.356-0.898) and 0.341 (95%CI = 0.210-0.553), respectively. These results indicate that the mutant heterozygote *IL-10* -1082 A/G+G/G genotype and the homozygote *IL-10* -819 T/T genotype have a combined effect on PTB. These results suggest that the *IL-6* -572 C/C and *IL-10* -819 T/T genotype polymorphisms are protective factors against PTB.

Key words: Genetic polymorphism; Interleukin-6; Interleukin-10; Pulmonary tuberculosis