



# Study of the relationship between *IL-10* polymorphism and serum lipoprotein levels in Han Chinese individuals

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**ABSTRACT.** Previous studies have shown that cytokines can affect serum lipoprotein concentrations. The aim of this study was to examine the association between *IL-10* gene polymorphisms and serum lipoprotein levels of Han Chinese individuals. A total of 359 Han Chinese people were enrolled in this investigation. *IL-10* -592, -819, and -1082 genotypes were established using polymerase chain reaction-restriction fragment length polymorphism analysis. An automatic biochemistry analyzer was used to determine serum concentrations of total cholesterol (TC), triglycerides (TG), low-density lipoprotein (LDL), high-density lipoprotein (HDL), and very low-density lipoprotein (VLDL) in each individual. We observed that the three *IL-10* polymorphisms did not significantly differ in terms of age or age of carrier ( $P > 0.05$ ), and the -592 and -819 variants did not significantly affect serum lipoprotein levels ( $P > 0.05$ ). HDL concentrations were higher and TG levels were lower in carriers of the -1082 GA genotype compared to those with the AA genotype, and these differences were statistically significant ( $P < 0.05$ ). However, TC, VLDL, and LDL levels were unaffected

by this sequence variation ( $P > 0.05$ ). Our results suggest that the polymorphism at position -1082 in the promoter region of *IL-10* may affect serum HDL and TG concentrations, while other variants of this gene appear to have no relationship with serum lipoprotein levels.

**Key words:** Interleukin-10 Serum lipoprotein; Genetic polymorphism