



# Association of CD14 C159T polymorphism with atopic asthma susceptibility in children from Southeastern China: a case-control study

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**ABSTRACT.** CD14 is involved in primary immune and inflammatory responses. The -159 C/T variation in the CD14 gene plays an important role in regulating CD14 expression and has been associated with the susceptibility to various diseases, including allergies. In this study, we examined the association between the C-159T polymorphism and atopic asthma susceptibility in children from Southeastern China. The study population included 746 unrelated children of Chinese Han nationality (362 patients with atopic asthma and 384 healthy controls). CD14 gene polymorphisms were identified by direct sequencing of polymerase chain reaction products. Total immunoglobulin E (IgE) levels in human serum samples were determined using an enzyme-linked immunosorbent assay. Individuals carrying the TT genotypes for rs2569190 were significantly associated with an increased risk of atopic asthma compared with those carrying the wild-type homozygous CC genotypes [adjusted odds ratio (OR) by gender and age, from 1.075-

2.398, P = 0.025]. Total serum IgE levels in TT genotype carriers were significantly higher than those in CC genotype carriers in atopic asthma patients ( $286.3 \pm 161.5$  IU/mL vs  $248.3 \pm 147.8$  IU/mL). Our data suggest that the CD14 TT genotype may be a genetic susceptibility marker for atopic asthma in Chinese Han children.

**Key words:** Atopic asthma; CD14; Polymorphism