

# Novel genetic region identified for childhood asthma in Mexicans

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Genetic variants in a region on chromosome 9q may influence asthma development in Mexican children, according to research published in the August 28 issue of the open-access journal *PLoS Genetics*.

Researchers from the National Institute of Environmental Health Sciences and the National Institute of Public Health (Mexico) and their collaborators at universities in the US and the UK conducted a genome-wide association (GWA) study, in which they looked at over 500,000 variants across the genome in 492 Mexican children with asthma and their parents to identify novel genes that may influence asthma development. The work points to the chromosome 9q21.31 region as a novel candidate region for [childhood asthma](#).

Asthma is a leading chronic childhood disease that is influenced by both genetic and environmental factors. However, few genes have been consistently associated with the disease. GWA studies have successfully identified novel genes for many common diseases, but to date there have been only a handful of GWA studies focused on asthma and even fewer focused on asthma in Hispanic populations.

The researchers also examined ancestry in this Mexican population and found that the chromosome 9q21.31 region may underlie some of the differences in childhood asthma prevalence that have been observed across ethnic groups. It remains unclear why [Mexicans](#) have lower rates of asthma than some other groups.

The chromosome 9q21.31 variants associated with childhood asthma in this study are located near the TLE4 gene, but the researchers state that "further work is needed to decipher whether TLE4 or a nearby gene explains the signals from the chromosome 9q21.31 region." In addition, it is likely that multiple genetic and environmental risk factors underlie the development of childhood asthma, and the researchers conclude that studies with very large sample sizes will be needed to identify the important interacting risk factors.

More information: Hancock DB, Romieu I, Shi M, Sienna-Monge J-J, Wu H, et al. (2009) Genome-Wide Association Study Implicates Chromosome 9q21.31 as a Susceptibility Locus for [Asthma](#) in Mexican Children. *PLoS Genet* 5(8): e1000623.  
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