

ALLERGY, GENETICS

# THE LARGEST STUDY SO FAR ON SERUM CYTOKINES

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We just published [the largest study so far of human serum cytokines](https://www.wjst.de/blog/sciencesurf/2010/12/the-largest-study-so-far-on-serum-cytokines/) providing for the first time reference values.

In this study we investigated serum samples from 944 individuals of 218 asthma-affected families by a multiplex, microsphere based system detecting at high sensitivity eleven asthma associated mediators: eotaxin (CCL11), granulocyte macrophage stimulating factor (GM-CSF), interferon gamma (IFN $\gamma$ ), interleukin-4 (IL-4), IL-5, IL-8, IL-10, IL-12 (p40), IL-13, IL-17 and tumor necrosis factor alpha (TNF $\alpha$ ).

Single cytokine levels were largely similar between asthmatic and healthy individuals when analysing asthma as single disease entity. Regulatory differences between parental and pediatric asthma were reflected by six of the eleven mediators analyzed (eotaxin, IL-4, IL-5, IL-10, IL-12, TNF $\alpha$ ). IL-12 (p40) and IL-5 were the best predictor for extrinsic asthma in children with an increased odds ratio of 2.85 and 1.96 per log pg/ml increase (IL-12 (p40): 1.2-6.8,  $p = 0.019$ , and IL-5: 1.2-2.5,  $p = 0.025$ ).

while the next paper (currently under revision) will describe heritability, linkage and association results.