

Correspondence

Reply

To the Editor:

We recently reported on the influence of *IL10* polymorphisms on regulatory T cells and T_H1/T_H2 and proinflammatory cytokine secretion in cord blood and further development of immune-mediated diseases, such as atopic dermatitis and wheeze, later in childhood at the age of 3 years.¹ We thank Koponen et al² for the interest in our study and are encouraged to read about their results on a further *IL10* promoter polymorphism (rs1800896), emphasizing the critical role of *IL10* polymorphisms on immune regulation early in life.

The promoter single nucleotide polymorphism (SNP) rs1800896, which was investigated in their study, is in complete or very high linkage disequilibrium with 2 of our reported SNPs, the *IL10* promoter SNP rs1800893 and the intronic SNP rs1878672, to which they probably refer in their correspondence (they noted rs1878673).² Consequently, as Koponen et al² suggested, it is quite likely that homozygous carriers of the SNP rs1800896 have an increased risk for the development of symptoms of atopic dermatitis, wheeze, or both at age 3 years, as reported for homozygous carriers of the SNPs rs1800893 and rs1878672 within our study.

Differences between our study and the study of Koponen et al² lie in the study design and the clinical phenotypes. Although we investigated initially healthy children with the *IL10* SNPs compared with wild-type children and performed a follow-up until 3 years of age in which we detected symptoms of atopic dermatitis, wheeze, or both, Koponen et al examined children with bronchiolitis.

Koponen et al² did not observe an association with wheezing at a very early time point, namely 6 to 18 months of age. This could be an indication for an influence of *IL10* SNPs on wheeze starting later in childhood; however, the authors focused especially on postbronchiolitis wheezing within their study.² Thus the cause of wheeze might be different.

Moreover, reports on changes in IL-10 levels for carriers of *IL10* SNPs are contradictory. As reported in the correspondence² and further publications,³ *IL10* polymorphisms seem to affect IL-10 levels, whereas we did not find changes in IL-10 either at the mRNA or protein level in carriers of our investigated *IL10* SNPs.

Interestingly, in line with the recently published findings of Nie et al,⁴ Koponen et al² reported a trendwise association for homozygous carriers of the SNP rs18800896 with postbronchiolitic asthma. We are currently performing the follow-up of our study population until school age and will precisely assess the atopic phenotypes, including wheeze later in life and, importantly, asthma, which can be diagnosed objectively by the age of 6 years.

In general, there seems to be increasing evidence that *IL10* polymorphisms play a critical role in early immune maturation, including the development of wheeze and childhood asthma. However, further studies are needed to confirm these findings and to elucidate the underlying mechanisms.

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