Titel des Beitrags:
The alarmin Mrp8/14 as regulator of the adaptive immune response during allergic contact dermatitis.

Abstract:
Mrp8 and Mrp14 are endogenous alarmins amplifying inflammation via Toll-like receptor-4 (TLR-4) activation. Due to their pro-inflammatory properties, alarmins are supposed to enhance adaptive immunity via activation of dendritic cells (DCs). In contrast, analysing a model of allergic contact dermatitis (ACD) we observed a more severe disease outcome in Mrp8/14-deficient compared to wild-type mice. This unexpected phenotype was associated with an enhanced T-cell response due to an accelerated maturation of DCs in Mrp8/14-deficient mice. Accordingly, Mrp8, the active component of the heterocomplex, inhibits early DC maturation and antigen presentation in a TLR-4-dependent manner. Transfer of DCs purified from the local lymph nodes of sensitized Mrp8/14-deficient to wild-type mice determined the outcome of ACD. Our results link a pro-inflammatory role of the endogenous TLR-4 ligand Mrp8/14 to a regulatory function in adaptive immunity, which shows some similarities with the 'hygiene hypothesis' regarding continuous TLR-4 stimulation and decreased risk of allergy.