Intestinal Macrophages Control Commensal Th17 Cell Responses

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How different subsets of intestinal mononuclear phagocytes (MNPs) control mucosal T cell responses in general, and responses to commensal bacteria in particular, has not been well studied in vivo. To address this, we examined the induction of antigen-specific Th17 cell responses to segmented filamentous bacteria in various models of genetic ablation of individual MNPs. We found an unexpected function of intestinal macrophages in generation of both SFB-specific CD4 T cells and differentiation of these cells to the Th17 cell lineage. We discuss potential mechanisms of control of CD4 T cell responses by intestinal macrophages.