

Vitali C, Mingozzi F, Broggi A, Barresi S, Zolezzi F, Bayry J, Raimondi G, Zanoni I and Granucci F. (2012). Migratory and not lymphoid-resident dendritic cells maintain peripheral self-tolerance and prevent autoimmunity via induction of iTreg cells. *Blood* 120:1237-1245

There is evidence that dendritic cells (DCs) induce peripheral tolerance. Nevertheless, it is not known whether immature DCs in general are able to tolerize CD4(+) T cells or if this is a prerogative of specialized subtypes. Here we show that, when autoantigen presentation is extended to all conventional mouse DCs, immature lymphoid tissue resident DCs are unable to induce autoantigen-specific regulatory T (iTreg) cell conversion. In contrast, this is an exclusive prerogative of steady-state migratory DCs. Because only lymph nodes host migratory DCs, iTreg cells develop and are retained solely in lymph nodes, and not in the spleen. Mechanistically, in cutaneous lymph nodes, DC-derived CCL22 contributes to the retention of iTreg cells. The importance of the local generation of iTreg cells is emphasized by their essential role in preventing autoimmunity.