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Increased Dendritic Cell Frequency During Persistent Intracellular Bacteria Infection

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Dendritic cells are major antigen presenting cells that are responsible for inducing adaptive immunity. They present microbial antigens to T cells and secrete inflammatory factors to mediate T cell differentiation. Even though dendritic cells have been extensively studied in intracellular bacterial infections, their role during persistent infection is not well understood. We have addressed dendritic cell function during persistent intracellular bacterial infection. *Ehrlichiae muris* is an obligate, intracellular pathogen that causes persistent infection in its host. Thirty days post *E. muris* challenge, we observed a 3 fold increase of the frequency of dendritic cells in the spleen. The dendritic cells were CD11c^{int} and CD11b⁺. There was no upregulation of activation markers CD80 and CD86 and a downregulation of CD40. These findings suggest that thirty days post *E. muris* challenge, dendritic cells are involved with immune response against the persistent intracellular pathogen.