

***In vivo* analysis of DC populations in two different infection models:  
*Listeria monocytogenes* vs. *Leishmania major***

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*Listeria monocytogenes* and *Leishmania major* are potent inducers of early Th1 and Th2 immune responses, respectively. Co-inoculation of *L. major* with *L. monocytogenes* blocked IL-4 expression from naïve T cells, indicating complete blockade of the Th2-inducing pathway. Dendritic cells play a central role in activating T cells for their differentiation towards Th1 or Th2 immune responses. Despite this, little is known about the distinct classes of dendritic cells and the molecular mechanisms involved using *in vivo* infection models. We analyzed DC populations in the draining lymph node after infection with *L. monocytogenes* or *L. major*. Although the initial kinetics of total lymph node cell accumulation were comparable in both models, *Listeria* induced a 12-fold increase in CD11c<sup>+</sup> dendritic cells that peaked at 72 hrs after infection, as opposed to only a four-fold increase observed after *Leishmania* infection. The majority of CD11c<sup>+</sup> cells recruited after *L. monocytogenes* began to appear after 24 hrs and consisted of an unusual population of CD8<sup>-</sup> CD11b<sup>+</sup> Gr-1<sup>+</sup> B220<sup>lo</sup> cells with a polymorphonuclear cell morphology. These cells were absent following *L. major* infection. Initial functional data indicate that they have only limited stimulatory capacity on naïve T cells. Potential roles for these cells in influencing a Th1/Th2 shift amongst naïve T cells are under investigation.