

## **Control of adaptive immune responses by Toll-like receptors**

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TLRs play a critical role in innate sensing of infection and in the initiation of adaptive immune responses (1). TLRs control the adaptive immunity through multiple mechanisms, including the control of dendritic cell (DC) maturation, induction of cytokines, chemokines and co-stimulatory molecules (2,3). This presentation will describe an additional mechanism whereby DCs distinguish between self and microbial antigens. This mechanism relies on TLR-dependent control of phagosome maturation (3) and results in phagosome-autonomous selection of microbial antigens for the presentation to T cells. Implication of this novel mechanism for self/non-self discrimination and for vaccine development will also be discussed.

### References:

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3. Pasare, C. and Medzhitov, R. Toll-dependent control mechanisms of CD4 T cell activation. *Immunity*, 21:733-741, 2004
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