The causative agent of tuberculosis, Mycobacterium tuberculosis, has infected over a third of the world's population and poses a massive burden to health care systems and human well-being. Most M. tuberculosis infections are latent and are not cleared fully by the host immune system due to the highly sophisticated infectious machinery employed by the bacterium. The dendritic cell (DC) plays a crucial role in shaping the nature of the immune response after exposure to pathogens, and the interaction between M. tuberculosis and the dendritic cell is of profound importance for the course of infection. During their interaction, the DC is exposed to multiple M. tuberculosis-derived ligands recognized by a range of pattern recognition receptors, but the result is typically an immune response that is not very effective at clearing the bacteria from the host. The reason why the induced immune response is ineffective at clearing the bacteria is not fully understood, but clues may be given in the signaling pathways induced in DCs upon M. tuberculosis-exposure.