



ORAL PRESENTATION

Open Access

C-type lectins in HIV-1 infection

Teunis BH Geijtenbeek

From *Frontiers of Retrovirology* 2011
Amsterdam, The Netherlands. 3-5 October 2011

Adaptive immune responses by dendritic cells (DCs) are controlled by pattern recognition receptors such as Toll-like receptors (TLRs) and C-type lectins. C-type lectins interact with carbohydrate structures on pathogens. Upon pathogen binding, C-type lectins trigger signaling pathways that induce specific cytokines to dictate T cell polarization. Thus, C-type lectins are crucial in tailoring immune responses to pathogens. HIV-1 is recognized by the C-type lectin DC-SIGN. Previous data have shown that DC-SIGN is involved in HIV-1 transmission by DCs. DCs efficiently capture HIV-1 and transmit the virus to T cells. However, recent data show that DC-SIGN also induces signaling that shape adaptive immune responses. Here I will discuss the molecular signaling pathways induced by DC-SIGN that are involved in adaptive immunity to HIV-1. Notably, HIV-1 hijacks the signaling by DC-SIGN and TLR8 for its own replication and transmission. The subversion of these crucial immune signaling pathways by HIV-1 and the consequences for HIV-1 infection will also be discussed.

Published: 3 October 2011

doi:10.1186/1742-4690-8-S2-O27

Cite this article as: Geijtenbeek: C-type lectins in HIV-1 infection. *Retrovirology* 2011 **8**(Suppl 2):O27.

**Submit your next manuscript to BioMed Central
and take full advantage of:**

- Convenient online submission
- Thorough peer review
- No space constraints or color figure charges
- Immediate publication on acceptance
- Inclusion in PubMed, CAS, Scopus and Google Scholar
- Research which is freely available for redistribution

Submit your manuscript at
www.biomedcentral.com/submit



Host Defense group, Center for Experimental and Molecular Medicine,
Academic Medical Center, Amsterdam, The Netherlands

