



HAL
open science

Distinct DC subsets are not equally susceptible to HTLV-1 infection

Sandrine Alais, Audrey Glaize, Anne Cachat, Florian Lamouche, Renaud Mahieux, H el ene Dutartre

► **To cite this version:**

Sandrine Alais, Audrey Glaize, Anne Cachat, Florian Lamouche, Renaud Mahieux, et al.. Distinct DC subsets are not equally susceptible to HTLV-1 infection. 16th International Conference on Human Retroviruses: HTLV and Related Viruses, Jun 2013, Montreal, Canada. pp.O20, 10.1186/1742-4690-11-S1-O20 . inserm-00924953

HAL Id: inserm-00924953

<https://inserm.hal.science/inserm-00924953>

Submitted on 7 Jan 2014

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destin ee au d ep ot et  a la diffusion de documents scientifiques de niveau recherche, publi es ou non,  emanant des  tablissements d'enseignement et de recherche fran ais ou  trangers, des laboratoires publics ou priv es.



ORAL PRESENTATION

Open Access

Distinct DC subsets are not equally susceptible to HTLV-1 infection

Sandrine Alais, Audrey Glaize, Anne Cachat, Florian Lamouche, Renaud Mahieux, H el ene Dutartre*

From 16th International Conference on Human Retroviruses: HTLV and Related Viruses
Montreal, Canada. 26-30 June 2013

Beside lymphocytes, HTLV-1 can infect monocytes, blood- or monocytes-derived dendritic cells (DCs) and plasmacytoid DCs in vitro. Considering that DCs might be the first cells to be infected during primo infection, we hypothesize that they may constitute viral reservoirs and eventually spread the virus to surrounding lymphocytes. Interestingly, ATL and HAM/TSP diseases display opposite immunological features, i.e. an impaired CTL response versus a chronic inflammation respectively. Since DCs are major effectors of both innate and adaptative immune responses, infection of specific DC subsets and the subsequent alteration of their functions might also lead to the orientation of the adaptive immune response towards either viral tolerance associated with impaired CTL responses or chronic inflammation, and thus directly participate to the determination of the infection outcome. Using various cytokines cocktails, we therefore generated distinct monocytes-derived DC (MDDC) subsets and infected these cells with HTLV-1 biofilm. We first show that the different MDDC subsets are not equally susceptible to HTLV-1 infection, as measured by FACS analyses and real time PCR assays. We then show that following infection, DC activation or IFN alpha production are not affected by infection in the MDDC subtypes tested. However, while DC maturation alters their susceptibility to the virus, we demonstrate that IFN alpha treatment does not. Finally, the ability of MDDC subsets to transmit HTLV-1 to T-cells will be discussed. Taken together, our results suggest that differential susceptibility of various DC subsets to HTLV-1 infection could differently shape immune responses and therefore affect viral pathogenesis.

Published: 7 January 2014

* Correspondence: helene.dutartre@ens-lyon.fr
Oncogen ese R etrovirale, label Ligue Nationale Contre le Cancer, CIRI, Labex Ecofect, INSERM U1111-CNRS UMR5308, Ecole Normale Sup erieure, Universit  Lyon 1 (UCLB) Lyon, Cedex 07, France

doi:10.1186/1742-4690-11-S1-O20

Cite this article as: Alais et al.: Distinct DC subsets are not equally susceptible to HTLV-1 infection. *Retrovirology* 2014 11(Suppl 1):O20.

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

