

## **P16-29. HIV Nef-specific T cells: Th1/CTL, Th2 and Th17 responses**

Monica Montes, Nicolas Loof, Amanda Cobb, David Jutras, Charlie Queen, J Plants, Bryan King, Sandra Zurawski, Louis Sloan, Yves Levy, et al.

### **► To cite this version:**

Monica Montes, Nicolas Loof, Amanda Cobb, David Jutras, Charlie Queen, et al.. P16-29. HIV Nef-specific T cells: Th1/CTL, Th2 and Th17 responses. *AIDS Vaccine* 2009, Oct 2009, Paris, France. BioMed Central, 6 (Suppl 3), pp.P258, 2009, Retrovirology. <10.1186/1742-4690-6-S3-P258>. <inserm-00663926>

**HAL Id: inserm-00663926**

**<http://www.hal.inserm.fr/inserm-00663926>**

Submitted on 27 Jan 2012

**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 destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.

Poster presentation

Open Access

## PI6-29. HIV Nef-specific T cells: Th1/CTL, Th2 and Th17 responses

M Montes<sup>1</sup>, N Loof<sup>1</sup>, A Cobb<sup>1</sup>, D Jutras<sup>1</sup>, C Queen<sup>1</sup>, J Plants<sup>1</sup>, B King<sup>1</sup>, S Zurawski<sup>1</sup>, L Sloan<sup>1</sup>, Y Levy<sup>2</sup> and J Banchereau\*<sup>1</sup>

Address: <sup>1</sup>HIV Vaccine, Baylor Institute for Immunology Research, Dallas, TX, USA and <sup>2</sup>INSERM U841, Créteil, France

\* Corresponding author

from AIDS Vaccine 2009  
Paris, France. 19–22 October 2009

Published: 22 October 2009

*Retrovirology* 2009, **6**(Suppl 3):P258 doi:10.1186/1742-4690-6-S3-P258

This abstract is available from: <http://www.retrovirology.com/content/6/S3/P258>

© 2009 Montes et al; licensee BioMed Central Ltd.

### Background

Identification of promiscuous antigenic regions is crucial for the design of an epitope-based vaccine. Still, the quality of the responses has been underestimated in most cases when only IFN- $\gamma$  is used to measure anti-HIV cellular immunity. Luminex multiplexing system allows the identification of T cell responses characteristic of T cell subtypes through their secretion of not only Th1/CTL but other important sets of cytokines, including IL-5, IL-10, IL-13, IL-21 and IL-17.

### Methods

We have studied the full spectrum of Nef-specific T cell memory recall responses in chronically infected HIV patients on HAART expressing a broad spectrum of HLA types. Briefly, short-term PBMC cultures were stimulated with 15-mer overlapping peptides from Nef in the presence of IL-2, conditions which favor expansion of antigen-specific T cells. Luminex analysis of the culture supernatants were used for simultaneous identification of a diverse array of peptide-specific cytokine profiles.

### Results

We observed strong Th1/CTL responses against two previously described highly immunogenic regions in the central Nef sequence: Nef 67–101 and Nef 103–148. All of the 16 patients that we analyzed responded to peptides from one or both regions by secreting IFN- $\gamma$  and TNF- $\alpha$ . However, Th2 responses (IL-5, IL-13) against peptides covering the Nef 67–97 were observed in half of the patients. This region is also able to stimulate Th1/CTL specific cells. Interestingly, we also observed high levels of IL-

17 secretion in 7 out of 16 patients in response to at least one peptide, yet no specific region in the protein could be associated with IL-17 responses.

### Conclusion

In order to design new vaccines we need a deep understanding of both the quantity and quality of the responses induced by any antigen. A more complete study of T cell responses to HIV antigens is essential for the selection of epitopes that should be included in future trials.