

P18-11. DALIA: dendritic cell and lipopeptide-induced immunity against AIDS: a phase I trial

Jacques Banchereau, Carson Harrod, Amanda Cobb, Geneviève Chêne, Louis Sloan, Karolina Palucka, Yves Levy

► **To cite this version:**

Jacques Banchereau, Carson Harrod, Amanda Cobb, Geneviève Chêne, Louis Sloan, et al.. P18-11. DALIA: dendritic cell and lipopeptide-induced immunity against AIDS: a phase I trial. Anna Laura Ross. AIDS Vaccine 2009, Oct 2009, Paris, France. BioMed Central, 6 (Suppl 3), pp.P320, 2009, Retrovirology. <10.1186/1742-4690-6-S3-P320>. <inserm-00663917>

HAL Id: inserm-00663917

<http://www.hal.inserm.fr/inserm-00663917>

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

PI8-11. DALIA: dendritic cell and lipopeptide-induced immunity against AIDS: a phase I trial

J Banchereau¹, C Harrod^{*1}, A Cobb¹, G Chene², L Sloan³, K Palucka¹, Y Levy⁴ and DALIA Team¹

Address: ¹Baylor Institute for Immunology Research (INSERM Unit 899), Dallas, TX, USA, ²Institut de Santé Publique, d'Epidémiologie et de Développement, Bordeaux, France, ³North Texas Infectious Diseases Clinic, Dallas, TX, USA and ⁴Agence Nationale de Recherche sur le Sida et les hépatites virales, Paris, France

* Corresponding author

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

Published: 22 October 2009

Retrovirology 2009, 6(Suppl 3):P320 doi:10.1186/1742-4690-6-S3-P320

This abstract is available from: <http://www.retrovirology.com/content/6/S3/P320>

© 2009 Banchereau et al; licensee BioMed Central Ltd.

Background

The advent of highly active antiretroviral therapies (HAART) changed the course of human immunodeficiency virus (HIV) infection. However, HAART induces a large range of toxicities, highlighting the need for novel therapeutic strategies, such as an effective therapeutic vaccine. Vaccines act via dendritic cells (DCs), which induce, regulate and maintain immune responses.

Methods

In our view, three parameters are critical for the generation of potent *ex vivo*-generated DC vaccines for HIV patients: 1) antigen; 2) DC type; and 3) activation signal. With this in mind, we designed a clinical trial (IRB#008-017; BB-IND #13748) to test the safety and immune efficacy of a therapeutic HIV vaccine consisting of autologous DCs generated *ex vivo* from monocytes cultured with GM-CSF/IFN- α and loaded with five lipidated HIV antigens (LIPO5). Our trial exploits a combination of: 1) HIV-derived lipopeptides that cover nef, gag and pol epitopes – binding to >90% of HLA molecules and permitting presentation of T cell epitopes and generation of humoral immunity; 2) Interferon (IFN)-DCs, which demonstrate powerful priming functions *in vitro*; and 3) LPS activation, which enhances priming by IFN-DCs. Such a vaccine is expected to induce strong and diverse HIV-specific immune responses.

Results

This phase I clinical trial in 19 asymptomatic HIV-infected patients with undetectable viral load while treated with HAART will test the safety of DC vaccination and of analytical treatment interruption (ATI). Patients receive four monthly DC vaccinations in conjunction with antiretroviral therapy. Twelve weeks after the fourth vaccine, patients who meet the pre-specified criteria will stop HAART. ATI will last for up to six months.

Conclusion

The primary end point of the trial is safety. Secondary end-points are immune, including: strength of HIV-specific CD4/CD8 responses, proportion of responders, and breadth of T cell responses. Immune responses will be assessed using IFN- γ ELISPOT, polychromatic flow cytometry, EPIMAX and transcriptional profiling.