



HAL
open science

OA04-01. Safety and immunogenicity of LIPO-5, a HIV-1 lipopeptide vaccine: results of ANRS VAC18, a phase 2, randomized, double-blind, placebo-controlled trial

Dominique Salmon-Céron, Christine Durier, Corinne Desaint, Lise Cuzin, Mathieu Surénaud, Yvette Hénin, Jean-Daniel Lelièvre, B Bonnet, Gilles Pialoux, Isabelle Poizot-Martin, et al.

► **To cite this version:**

Dominique Salmon-Céron, Christine Durier, Corinne Desaint, Lise Cuzin, Mathieu Surénaud, et al.. OA04-01. Safety and immunogenicity of LIPO-5, a HIV-1 lipopeptide vaccine: results of ANRS VAC18, a phase 2, randomized, double-blind, placebo-controlled trial. AIDS Vaccine 2009, Oct 2009, Paris, France. pp.O25, 10.1186/1742-4690-6-S3-O25 . inserm-00663582

HAL Id: inserm-00663582

<https://inserm.hal.science/inserm-00663582>

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.

Oral presentation

Open Access

OA04-01. Safety and immunogenicity of LIPO-5, a HIV-1 lipopeptide vaccine: results of ANRS VAC18, a phase 2, randomized, double-blind, placebo-controlled trial

D Salmon-Céron*^{1,3}, C Durier², C Desaint¹⁰, Cuzin⁴, M Surenaud⁵, Y Hénin¹⁰, J Lelièvre⁶, B Bonnet⁷, G Pialoux⁸, I Poizot-Martin⁹, N Ben Hamouda⁵, A Jackson⁵, C Flys⁵, C Guérin¹⁰, J Aboulker², J Choppin⁵ and O Launay¹⁰

Address: ¹Hôpital Cochin, Université Paris Descartes, Paris, France, ²Inserm, SC10, Villejuif, France, ³CIC de Vaccinologie Cochin-Pasteur, Paris, France, ⁴Hôpital Purpan, Toulouse, France, ⁵Institut Cochin, Université Paris Descartes, CNRS (UMR 8104), Inserm U567, Paris, France, ⁶Hôpital Henri Mondor, Université Paris 12, Créteil, France, ⁷Hôpital Hôtel-Dieu, Nantes, France, ⁸Hôpital Tenon, Paris, France, ⁹Hôpital Sainte Marguerite, Marseille, France and ¹⁰CIC de Vaccinologie Cochin-Pasteur, Hôpital Cochin, Université Paris Descartes, Paris, France

* Corresponding author

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

Published: 22 October 2009

Retrovirology 2009, 6(Suppl 3):O25 doi:10.1186/1742-4690-6-S3-O25

This abstract is available from: <http://www.retrovirology.com/content/6/S3/O25>

© 2009 Salmon-Céron et al; licensee BioMed Central Ltd.

Background

ANRS HIV-LIPO-5 vaccine includes 5 long peptides, Gag17–35, 253–284, Pol325–355, Nef66–97 and 116–145, containing multiple CD8+ and CD4+ T-cell epitopes, coupled to a palmytoil tail. Phase 1 studies have shown that vaccine dosage at 500 µg/lipopeptide elicits cellular immune responses. Whether HIV-LIPO5 immunogenicity varies with the dosage is unknown.

Methods

One hundred and thirty two 21- to 55-year-old HIV negative volunteers, enrolled in 6 HIV-vaccine clinical sites, were randomized to receive either the HIV-LIPO-5 vaccine at 50 µg/lipopeptide (N = 32; LIPO-5 50), 150 µg (N = 32; LIPO-5 150), 500 µg (N = 33; LIPO-5 500) or placebo (N = 34). Vaccinations were given IM at weeks 0, 4, 12 and 24. HIV-1 specific CD8+ (IFN-gamma ELISpot on PBMC cultured 12-days) and CD4+ responses (PBMC lymphoproliferation) were assessed at baseline, two weeks after each injection, and at week 48.

Results

No adverse events attributable to vaccine were noted throughout the study. Local reactions appeared dose-dependent; no differences in systemic reactions were observed between groups. Sustained (at least on 2 separate occasions) CD8+ response rates to at least one HIV-1 pool were: 5/32 (16%) for placebo, 22/32 (69%) for LIPO-5 50, 21/33 (64%) for LIPO-5 150 and 21/34 (62%) for LIPO-5 500 groups ($P \leq .0001$ for all comparisons to placebo). Cumulative CD4+ response rates were: placebo: 2/32 (6%), LIPO-5 50: 15/32 (47%), LIPO-5 150: 18/33 (55%) and LIPO-5 500: 15/34 (44%) ($P < .0001$ for all comparisons to placebo). The majority of CD4+ (75%) and CD8+ (60%) responses were directed towards Gag253–284. CD8+ responses against Nef, Pol were noted in 36% and 33% of vaccinees, respectively. At week 48, CD8+ responses persisted in 47/91 (52%) HIV-LIPO-5 recipients.

Conclusion

ANRS VAC18 shows that low and high doses of HIV-LIPO-5 vaccine elicit sustained CD8+ and CD4+ T-cell responses. According to the good tolerance of the vaccine,

the lowest dose of 50 µg appears as the most appropriate to be used in further trials.

Publish with **BioMed Central** and every scientist can read your work free of charge

"BioMed Central will be the most significant development for disseminating the results of biomedical research in our lifetime."

Sir Paul Nurse, Cancer Research UK

Your research papers will be:

- available free of charge to the entire biomedical community
- peer reviewed and published immediately upon acceptance
- cited in PubMed and archived on PubMed Central
- yours — you keep the copyright

Submit your manuscript here:
http://www.biomedcentral.com/info/publishing_adv.asp

