

## **AIDS Vaccine 2009 - Scientific Program**

### **Monday, 19 October 2009**

**08:00 - 16:00**

**Satellite Sessions**

**17:00 - 18:30**

**Welcome and Opening Remarks**

Jean-François Delfraissy, ANRS, France

Alan Bernstein, Global HIV Vaccine Enterprise, USA

Michel Kazatchkine, The Global Fund to Fight AIDS, Tuberculosis and Malaria, Switzerland

Michel Sidibé, UNAIDS, Switzerland

**17:40 - 18:05**

**The state of HIV prevention: How well are we doing in preventing HIV worldwide, and how can we do better?**

Peter Piot, Global Health Institute, Imperial College, UK

**18:05 - 18:30**

**Partner, participants and problem-solvers: Expanding from "Informed Consent" to "Informed Communities" in the Search for the AIDS Vaccine**

Mitchell Warren, AVAC, USA

### **Tuesday, 20 October 2009**

**08:30 - 10:00**

**Special Session: Recent Lessons From Clinical Trials**

**08:30 - 09:00**

**AIDS Vaccine Clinical Evaluation: Where Are We and Where Can We Go?**

Gary Nabel, Vaccine Research Center, NIH, USA

**09:00 - 09:20**

**Clinical Outcomes from the STEP Study**

Susan Buchbinder, HIV Research Section, San Francisco Department of Public Health, USA

**09:20 - 09:40**

**Recent Immunologic Findings from the Step and Related HIV Vaccine Clinical Trials**

Nicole Frahm, Fred Hutchinson Cancer Research Center, USA

**09:40 - 10:00**

**Interim Efficacy Analysis of HVTN 503/Phambili: A phase IIB test of concept trial of the MRKAd5 HIV-1 gag/pol/nef vaccine conducted in HIV-1 uninfected adults in South Africa**

Glenda Gray, Perinatal HIV Research Unit, University of Witwatersrand, South Africa

- 10:00 - 10:50**      **New Session: Spotlight on RV144, the phase III Thai trial**
- 10:00 - 10:20      **Phase III Trial of HIV Prime-Boost Vaccine Combination in Thailand: Result of Final Analysis**  
Supachai Rerks-Ngarm, Ministry of Health, Thailand
- 10:20 - 10:35      **Post-infection cellular immune responses in recipients following ALVAC-HIV + AIDSVax B/E prime-boost vaccination in the Thai phase III trial**  
Jerome Kim, Military HIV Research Program, USA
- 10:35 - 10:50      **Immunogenicity of ALVAC-HIV® (vCP1521) and AIDSVAX® B/E prime boost vaccination in RV144, the Thai phase III HIV vaccine trial**  
Mark de Souza, US Military HIV Research Program/AFRIMS, Thailand
- 10:50 - 11:15      **Coffee Break**
- 11:15 - 12:45**      **Plenary Session 1: Initiation of the Immune Response**
- 11:15 - 11:45      **Innate Control of Adaptive Immunity to Vaccines and Pathogens**  
Bali Pulendran, Emory Vaccine Center, Emory University, USA
- 11:45 - 12:15      **Harnessing Human Dendritic Cell Subsets for HIV Vaccines**  
Jacques Banchereau, Baylor Institute for Immunology Research, USA
- 12:15 - 12:45      **T cell control and viral escape**  
Phil Goulder, University of Oxford, UK
- 12:45 - 14:00**      **Lunch + Poster Session 01**
- 14:00 - 16:00**      **Symposium 1: Mechanisms of Protection against Transmission and Disease Progression**
- 14:00 - 14:25      **Epigenetic control of retroelements**  
Didier Trono, École Polytechnique Fédérale de Lausanne, Switzerland
- 14:25 - 14:50      **Crosstalk between RNAi and HIV**  
Moncef Benkirane, Institut de Génétique Humaine, France
- 14:50 - 15:15      **Regulation of Harmful Immune Activation during Non Pathogenic SIVagm Infection in African Green Monkeys**  
Michaela Müller Trutwin, Institut Pasteur, France
- 15:15 - 15:30      **Phenotypic Analyses of CD8+ T cells that Mediate Virus Inhibition from HIV-1 Vaccinees and HIV-1+ Virus Controllers**  
Stephanie Freel, Duke University Medical School, USA
- 15:30 - 15:45      **HLA-A\*7401 is Associated with Protection from HIV-1 Acquisition and Disease Progression in Mbeya, Tanzania**  
Rebecca Koehler, US Military HIV Research Program/ Henry M Jackson Foundation, USA
- 15:45 - 16:00      **HIV Specific T Cell Responses and Response Patterns Associated with Viral Control Independent of Classical Non-Progressor HLA class I Alleles**  
Christian Brander, Irsicaixa AIDS Research Institute, Spain

- 14:00 - 16:00**      **Symposium 2: Generation of Antibody Responses and Diversity**
- 14:00 - 14:25      **Regulation of Broadly Neutralizing Antibody Responses: The Initial B Cell Repertoire To HIV-1 Envelope**  
Barton Haynes, Duke University Medical Center, USA
- 14:25 - 14:50      **Factors Associated with the Development of HIV Neutralization Breadth**  
Lynn Morris, National Institute for Communicable Diseases, South Africa
- 14:50 - 15:15      **Eliciting Broad Anti-HIV Neutralizing Antibodies by Vaccination: Lessons Learned from Natural Infection**  
Leonidas Stamatatos, Seattle Biomedical Research Institute, USA
- 15:15 - 15:30      **A Large-Scale Analysis of Immunoglobulin Sequences Derived From Plasmablasts/Plasma Cells in Acute HIV-1 Infection Subjects**  
Supriya Munshaw, Duke University, USA
- 15:30 - 15:45      **Broadly neutralizing anti-HIV-1 antibodies disrupt a hinge-related function of gp41 at the membrane interface**  
Mikyung Kim, Dana-Farber Cancer Institute, USA
- 15:45 - 16:00      **Potent and Broad Neutralizing Antibodies from HIV-1 non-Clade B Infected Donor Reveal a New HIV-1 Vaccine Target**  
Sanjay Phogat, IAVI, USA
- 16:00 - 17:00      **Coffee Break + Poster Viewing**
- 17:00 - 18:30**      **Oral Abstract Session 1: Early Events in Transmission and Infection**
- 17:00 - 17:15      **Early events of human immunodeficiency virus type 1 (HIV-1) ex vivo penetration in the foreskin mimicking HIV-1 sexual transmission**  
Yonatan Ganor, Cochin Institute, France
- 17:15 - 17:30      **Defining the Mechanisms of HIV Entry and Interactions with the Female Genital Tract**  
Ann Carias, Northwestern University, USA
- 17:30 - 17:45      **Clusterin, a natural ligand of DC-SIGN present in human semen inhibits HIV capture and transmission by dendritic cells**  
Juan Sabatte, National Reference Center for AIDS, Argentina
- 17:45 - 18:00      **Striking elevations in systemic and mucosal cytokine and chemokine levels in acute HIV-1 infection.**  
Andrea Stacey, Jenner Institute, University of Oxford, UK
- 18:00 - 18:15      **TLR-mediated pDC responses to HIV-1 ligands**  
J. Judy Chang, Ragon Institute of MGH, MIT and Harvard, USA
- 18:15 - 18:30      **HIV-1 Plasma RNA Risk of HIV-1 Transmission**  
Jairam Lingappa, University of Washington, USA

**17:00 - 18:30**

**Oral Abstract Session 2: Vaccine Design**

17:00 - 17:15

**Construction and characterization of replication competent attenuated NYVAC-based vectors as potential HIV vaccines**

Bert Jacobs, Arizona State University, USA

17:15 - 17:30

**Replicating measles-SHIV vaccine induces long term preservation of central memory CD4 cells in the gut of vaccinated macaques challenged with SHIV**

Frederic Tangy, Institut Pasteur, CNRS, France

17:30 - 17:45

**Design and Development of DNA vaccines for the Co-expression of micro-RNA and HIV-1 Env**

Adam Wheatley, University of Melbourne, Australia

17:45 - 18:00

**HIV-1 gp41 Envelope MPER Mutation Altered Epitope Conformation in Lipid and Increased Sensitivity to 2F5 and 4E10 Neutralizing Antibodies**

Xiaoying Shen, Duke University, USA

18:00 - 18:15

**Insertion of the HIV-1 gp41 Epitopes 2F5 and 4E10 into the Membrane-Proximal Region of the Vesicular Stomatitis Virus Glycoprotein**

Ivo Lorenz, International AIDS Vaccine Initiative, USA

18:15 - 18:30

**Recombinant modified Vaccinia Virus Ankara expressing HIV-1 genes activates NK subset capable of controlling HIV infection in vitro**

Jean-Saville Cummings, Institut Pasteur, France

**17:00 - 18:30**

**Oral Abstract Session 3: Modulation of the Immune Response to Infection**

17:00 - 17:15

**HIV-1 infection is characterized by early loss of CD161+ Th17 Cells and Gradual Decline in Regulatory T cells**

Andrew Prendergast, University of Oxford, UK

17:15 - 17:30

**Regulatory T cells inhibit CD8 T cell proliferation in HIV-1 infection through CD39/Adenosine pathway**

Yves Levy, AP-HP, Groupe Henri-Mondor Albert-Chenevier; Universite Paris 12, France

17:30 - 17:45

**Increased Regulatory T cell Frequency and HIV-1 Specific Suppression After Therapeutic Vaccination of HIV-Infected Patients on Antiretroviral Therapy**

Bernard Macatangay, University of Pittsburgh, USA

17:45 - 18:00

**Impairment of HIV-1-specific CD8+ T cell function by soluble epithelial adhesion molecules**

Hendrik Streeck, Ragon Institute of MGH, MIT and Harvard, USA

18:00 - 18:15

**HIV escape from natural killer cytotoxicity: Nef inhibits NKp44L expression on HIV-infected CD4+ T cells.**

Vincent Vieillard, INSERM UMR945, France

18:15 - 18:30

**Unique stimulatory properties of myeloid dendritic cells in individuals with "elite" HIV-1 control**

Mathias Lichterfeld, Massachusetts General Hospital, USA

**Wednesday, 21 October 2009**

**09:00 – 10:30 Plenary Session 2: In Vivo Response to Pathogens and Vaccines**

09:00 - 09:30 **In Vivo Dynamics of the Immune Response as Revealed by Multiphoton Imaging**  
Ron Germain, NIAID NIH, USA

09:30 - 10:00 **Efficacy of CMV/SIV Vectors**  
Louis Picker, Vaccine and Gene Therapy Institute, OHSU, USA

10:00 - 10:30 **TB Vaccine Development**  
Jerald Sadoff, AERAS Global TB Vaccine Foundation, USA

**11:00 - 12:15 Oral Abstract Session 4: Update on Clinical Trials**

11:00 - 11:15 **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, Hôpital Cochin, Université Paris Descartes, France

11:15 - 11:30 **Strong HIV-specific CD4 and CD8 T-lymphocyte proliferation in HIV-1 DNA prime/modified Vaccinia virus Ankara (MVA) heterologous boost vaccines**  
Charlotta Nilsson, Swedish Institute for Infectious Disease Control, Karolinska Institute, Sweden

11:30 - 11:45 **Characterization of cell-mediated immune responses generated by recombinant Modified Vaccinia Ankara (rMVA)-HIV-1 in a Phase I Vaccine Trial**  
Jeffrey Currie, Military HIV Research Program, USA

11:45 - 12:00 **Perceived parental willingness for their adolescents to participate in future HIV prevention trials: A survey conducted amongst adolescents in Soweto**  
Kennedy Ot wombe, Perinatal HIV Research Unit, South Africa

12:00 - 12:15 **Safety and Viral Load changes in HIV-1 Infected Subjects Treated with Autologous Dendritic Immune Therapy following ART discontinuation (CTN#239)**  
Jean-Pierre Routy, McGill University and INSERM Unit 743, Canada

**11:00 - 12:30 Oral Abstract Session 5: Novel Vaccinal Approaches**

11:00 - 11:15 **In Vivo Electroporation Enhances the Immunogenicity of ADVAX, a DNA-based HIV-1 Vaccine Candidate, in Healthy Volunteers**  
Sandhya Vasan, Aaron Diamond AIDS Research Center, Rockefeller University, USA

11:15 - 11:30 **Analysis of DNA compared to Ad5 vaccination, as single and mixed modalities, demonstrates robust induction of cellular immune responses in macaques**  
Lauren Hirao, University of Pennsylvania, USA

11:30 - 11:45 **Efficacy study of a T-cell-based DNA vaccine delivered by intradermal electrotransfer in macaques**  
Frédéric Martinon, CEA / Division of Immuno-Virology, France

- 11:45 - 12:00      **Gp96-Ig-SIV vaccines induce predominant immune responses at mucosal sites**  
Natasia Strbo, University of Miami Miller School of Medicine, USA
- 12:00 - 12:15      **Impact of in vivo CD4 binding during HIV-1 Env trimer immunizations of rhesus macaques**  
Iyadh Douagi, Karolinska Institutet, Sweden
- 12:15 - 12:30      **First-in-human phase 1 safety and immunogenicity of an Adenovirus Serotype 26 HIV-1 vaccine vector**  
Dan Barouch, Beth Israel Deaconess Medical Center, USA
- 11:00 - 12:30      Oral Abstract Session 6: Dynamics of HIV Infection and the Immune Response**
- 11:00 - 11:15      **Multiplicity of infection by HIV-1 in injection drug users, men who have sex with men and heterosexuals**  
Katharine Bar, University of Alabama at Birmingham, USA
- 11:15 - 11:30      **Monospecific Expansion of SIVmac251 During Acute Infection Masks Multiple Transmitted Virus Variants Revealed During the Chronic Phase**  
Barbara Felber, HRPS, VB, NCI-Frederick, USA
- 11:30 - 11:45      **Dynamics of CTL Epitope Escape and Reversion in an African Subtype C cohort**  
Malinda Schaefer, Emory University, USA
- 11:45 - 12:00      **The Role Of Early T-Cell Responses In Subjects With Acute HIV-1 Infection**  
Michael Liu, University of Oxford, UK
- 12:00 - 12:15      **Adaptation of HIV-1 to the Human Immune System at the Population Level is Driven by Protective HLA-B Alleles**  
Ingrid Schellens, University Medical Center Utrecht, Netherlands
- 12:15 - 12:30      **Evidence of vaccine-induced changes in breakthrough HIV-1 strains from the Step trial**  
James Mullins, University of Washington, USA
- 12:30 - 14:00      **Lunch + Poster Session 02**
- 14:00 - 16:00      Symposium 3: Immunological Memory and Protection**
- 14:00 - 14:25      **System Biology to Study Immunological Memory during HIV Infection**  
Elias Haddad, McGill University, Canada
- 14:25 - 14:50      **Correlates of protection to HIV**  
Alexandre Harari, Centre Hospitalier Universitaire Vaudois, Switzerland
- 14:50 - 15:15      **T Cell Clonotypic Correlates of Virus Control**  
Daniel Douek, Vaccine Research Center, NIH, USA
- 15:15 - 15:30      **Transitional and Central Memory CD4 T Cells are highly infected in Long Term Non Progressors and Elite Controllers**  
Benjamin Descours, Université Paris VI UPMC, INSERM UMRs945, France

- 15:30 - 15:45 **A Less Differentiated Memory Phenotype of Gag-Specific CD4+ T-cells during Primary HIV Infection Associates with Viral Control at 12 Months**  
Pholo Maenetje, National Institutes for Communicable Diseases, South Africa
- 15:45 - 16:00 **Rapid perforin upregulation by CD8 T cells in elite controllers as a correlate of immune-mediated control of HIV replication**  
Adam Hersperger, University of Pennsylvania, USA
- 14:00 - 16:00 Symposium 4: Antigen Presentation and T Cell Epitopes**
- 14:00 - 14:25 **Semen clusterin binds DC-SIGN and inhibits HIV-1 capture and transmission by dendritic cells**  
Sebastian Amigorena, Institut Curie, Paris, France
- 14:25 - 14:50 **Immune recognition of HIV-1 during acute infection**  
Marcus Altfeld, Ragon Institute of MGH, MIT and Harvard, USA
- 14:50 - 15:15 **Transcriptional control of crosspresentation programs in dendritic cells**  
Kenneth Murphy, Washington University School of Medicine, USA
- 15:15 - 15:30 **HIV-specific responses induced by anti-CD40 targeting antibodies**  
Nicolas Loof,INSERM U899-BIIR/INSERM/ANRS Center for Human Vaccines, USA
- 15:30 - 15:45 **The intracellular production of HIV antigenic peptides is guided by predictable motifs and can be altered: implications for immunogen design**  
Sylvie Le Gall,Harvard Medical School and Mass General Hospital, USA
- 15:45 - 16:00 **Polyvalent Gag-specific CD8 T-cells with enhanced functional properties are enriched in HIV-1 clade C infected individuals with lower viral loads**  
Boris Julg, Ragon Institute of MGH, MIT and Harvard, USA
- 16:00 - 17:00 **Coffee Break + Poster Viewing**
- 17:00 - 18:40 Symposium 5: Protection Against Mucosal Transmission and Viral Dissemination**
- 17:00 - 17:25 **Characterization of viral variants that initiate systemic infection after mucosal transmission**  
Eric Hunter, Emory Vaccine Center, USA
- 17:25 - 17:50 **Target Cell Availability and Prevention of Mucosal Transmission**  
Ashley Haase, University of Minnesota Medical School, USA
- 17:50 - 18:15 **Do Mucosal T-cell Responses Contribute Significantly to HIV Control?**  
Barbara Shacklett, UC Davis, USA
- 18:15 - 18:40 **Treatment as Prevention**  
Bernard Hirschel, University Hospital Geneva, Switzerland
- 17:00 - 18:40 Symposium 6: Refining Immunogen Design**
- 17:00 - 17:25 **Structural basis of broad neutralization of HIV-1**  
Ian Wilson, The Scripps Research Institute, USA

- 17:25 - 17:50      **Primary Immunization Influences the Magnitude, Quality and Breadth of Gag Specific T Cell Responses Following an rAd-5 Boost**  
Robert Seder, Vaccine Research Center, NIH, USA
- 17:50 - 18:15      **New Applications for Mosaic Antigen Designs**  
Bette Korber, Los Alamos National Laboratory, USA
- 18:15 - 18:40      **HIV-1 Mosaic Antigens Expand Cellular Immune Breadth and Depth in Rhesus Monkeys**  
Dan Barouch, Beth Israel Deaconess Medical Centre, Harvard Medical School, USA

**Thursday, 22 October 2009**

- 09:00 – 10:30      Plenary Session 3: B Cell Biology**
- 09:00 – 09:30      **Development of anti-HIV antibodies in humans with high titers of broadly neutralizing antibodies**  
Michel Nussenzweig, Howard Hughes Medical Institute, The Rockefeller University, USA
- 09:30 – 10:00      **From Antibody to Vaccine – a Tale of Structural Biology and Epitope Scaffolds**  
Peter Kwong, Vaccine Research Center, NIH, USA
- 10:00 - 10:30      **Induction and Function of the Mucosal Immune System**  
Per Brandtzaeg, University of Oslo, Norway
- 11:00 - 11:45      Oral Abstract Session 7: T Cell Responses to Vaccine**
- 11:00 - 11:15      **HIV-Specific CD8+ T-Cells of Vaccinees Exhibit Proliferative and Cytotoxic Capacities Comparable to Those of Progressors**  
Julia Rood, National Institute of Health, USA
- 11:15 - 11:30      **Adenovirus vectors induce expansion of memory CD4 T cells with a mucosal homing phenotype that are readily susceptible to HIV-1 infection.**  
Adel Benlahrech, Imperial College, UK
- 11:30 - 11:45      **Influence of Preexisting Vaccinia Immunity on a DNA/MVA SIV Vaccine, Decreased Cellular Immunity but Enhanced Control of a Pathogenic SIV Challenge**  
Rama Amara, Yerkes National Primate Center of Emory University, USA
- 11:45 - 12:35      Closing Session**
- 11:45 - 12:10      **HIV Vaccinology: What Does the Future Hold?**  
Anthony Fauci, NIAID, NIH, USA
- 12:10 - 12:35      **Are we targeting the right HIV determinants?**  
Françoise Barré-Sinoussi, Institut Pasteur, France
- 12:35 – 12:45      Closing Remarks and Handover**
- 12:35 - 12:40      Yves Levy, ANRS, France
- 12:40 - 12:45      Eric Hunter, Emory Vaccine Center, USA