

## *Program*

# Vaccine Technology III

June 6 - 11, 2010

Vallarta Palace Hotel  
Nuevo Vallarta, Mexico

### Program Co-Chairs:

**John G. Auniš**, Ph.D., Merck, USA  
**Barry C. Buckland**, Ph.D, BiologicB, USA  
**Kathrin Jansen**, Ph.D, Pfizer, USA  
**Paula Marques Alves**, Ph.D., IBET, Portugal



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**John Lewis**, Crucell, USA  
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**Phil Minor**, NIBSC, UK  
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**Tarit Mukhopadhyay**, UCL, UK

**Keynote Talks:**

**Ataf Lal**

MSD Wellcome Trust Hilleman Laboratories, India

**David Salisbury**

Director of Immunization, UK Department of Health

**Adel Mahmoud**

Princeton University, USA

## **Sunday, June 6, 2010**

15:00 – 17:30	Conference check-in (Hospitality Desks 3 & 4)
17:30 – 18:00	<b><u>Welcoming Remarks and Opening of the Conference</u></b>
18:00 – 19:00	<b>Keynote</b> Introducing new vaccines <b>David Salisbury</b> Director of Immunization, UK Department of Health
19:00 – 20:00	Welcome Reception
20:00 – 22:00	Dinner

### **NOTES**

- Technical Sessions will be held in Ballroom Nayarit, sections 3-5.
- Poster Sessions will be held in Ballroom Nayarit, sections 1-2.
- Breakfasts and lunches will be in the Momo NoHana Restaurant and dinners will be in the Sunset Garden.
- The conference banquet on Thursday will be held in Ballroom Nayarit, sections 3-5.
- Audiotaping, videotaping and photography of presentations are prohibited.
- Speakers – Please leave at least 5 minutes for questions and discussion.
- Please do not smoke at any conference functions.
- Turn your cellular telephones to vibrate or off during technical sessions.
- Be sure to make any corrections to your name/contact information on the Master Participant List or confirm that the listing is correct. A corrected copy will be sent to all participants after the conference.

**Monday, June 7, 2010**

07:30 – 08:30

Breakfast

08:30 – 10:00

**Session I: Vaccine Target Identification & Validation**

Session Chairs:

David Weiner, University of Pennsylvania, USA

Paula Alves, IBET, Portugal

Antibodies for the prophylaxis and treatment of infection

**Peter Lachmann**, Cambridge University, UK

Defining human immune responses by quantitative, integrated single-cell analysis

**J. Christopher Love**, Massachusetts Institute of Technology, USA

10:00 – 10:30

Break

10:30 – 11:30

**Session I: Vaccine Target Identification & Validation (continued)**

Efficacy of a new generation of DNA vaccine encoding retrovirus-based virus-like particles to induce both cellular and humoral immune responses and its application to HCV

**David Klatzmann**, Hôpital Pitié-Salpêtrière; France

Universal Flu Vaccines: Now more than ever

**Annie De Groot**, EpiVax, Inc., USA

11:30 – 12:30

**Session II : Vaccinology**

Session Chairs:

Annie de Groot, EpiVax, USA

Kathrin Jansen, Pfizer, USA

Immunization to ameliorate atherosclerotic cardiovascular diseases

**Mark Carvlin**, CardioVax, USA

Potent, rapid and cost-effective Influenza vaccines made in *e.coli*

**Thomas Hofstaetter**, Vaxinnate, USA

12:30 – 13:30

Lunch

13:30 – 15:00

*Ad hoc* sessions, free time

15:00 – 17:00

**Session II: Vaccinology (continued)**

Iscomatrix™ adjuvant links and adaptive immune responses

**Debbie Drane**, CSL Limited, Australia

Glucan particles as a targeted antigen-adjuvant-sima delivery system

**Gary Ostroff**, University of Massachusetts Medical School, USA

Advances in conjugate vaccine design and development

**Robert Hepler**, Merck, USA

Enhanced DNA vaccines delivered by mid EP induce broadly reactive T cell and B cell responses in nonhuman primates and humans

**David Weiner**, University of Pennsylvania, USA

17:00 – 17:30

Break

**Monday, June 7, 2010 (continued)**

17:30 – 19:00

**Session III: Bioprocess Development in Early Stages**

Session Chairs:

Herve Pinton, Sanofi-Pasteur, France

Amine Kamen, National Research Council, Canada

A Microbial Platform for Low-cost VLP Vaccines

**Anton Middelberg**, University of Queensland, Australia

Rabies and rotavirus vaccines in Vero cells

**Neuza Maria Frazatti-Gallina**, Instituto Butantan, Brazil

Influence of host cell defense during influenza vaccine production in MDCK cells

**Timo Frensing**, Max-Planck-Institute, Germany

19:00 – 20:30

Dinner

20:30 – 22:30

Poster Reception

**Tuesday, June 8, 2010**

07:30 – 08:30

Breakfast

08:30 – 10:00

**Session III: Bioprocess Development in Early Stages (continued)**

Development of recombinant protein based chemical conjugate malaria vaccines targeting the pre-erythrocytic state, transmission blocking, or both  
**David Narum**, NIAID, NIH, USA

Development of inactivated polio vaccine from attenuated sabin strains for clinical studies and technology-transfer purposes  
**Yvonne Thomassen**, Netherlands Vaccine Institute, the Netherlands

Clinical development of formulated therapeutic and prophylactic DNA-based vaccines  
**Alain Rolland**, Vical Incorporated, USA

10:00 – 10:30

Break

10:30 – 12:30

**Session IV: Vaccines in Late Stage Development**

Session Chairs:

Manon Cox, Protein Sciences Corp., USA

Nathalie Garcon, GlaxoSmithKline, Belgium

Massively Parallel Sequencing: A new method for detecting adventitious Agents and a new tool in virus discovery  
**David Onions**, BioReliance Inc., UK

RTS,S/AS A Malaria vaccine candidate in PHASE III clinical development  
**Nathalie Garcon**, GlaxoSmithKline, Belgium

Purification process development for a second generation human papillomavirus vaccine: challenges new valencies can pose to a process platform  
**Michael Kosinski**, Merck, USA

Development and characterization of a new quadrivalent meningococcal conjugate vaccine that is immunogenic at all ages  
**Francesco Berti**, Novartis, Italy

12:30 – 13:30

Lunch

13:30 – 15:30

*Ad hoc* sessions, free time

15:30 – 16:00

**Session IV: Vaccines in Late Stage Development (continued)**

After the license approval: How analytics can keep you in the market  
**Robert Sitrin**, Merck, USA

16:00 – 17:15

**Session V: Recently Launched Vaccines**

Session Chairs:

George Siber, Genocea Biosciences Inc., USA

John Aunins, Merck, USA

An inactivated cell culture derived JEV Vaccine (IC51) towards worldwide licensure  
**Alex von Gabain**, Intercell AG, Austria

Development of a conjugated polysaccharide vaccine that affords expanded worldwide coverage against pneumococcal disease  
**Kathrin Jansen**, Pfizer, USA



**Tuesday, June 8, 2010 (continued)**

17:15 – 17:45 Break

17:45 – 19:00 **Session V: Recently Launched Vaccines (continued)**

Challenges in confronting pandemic influenza using novel adjuvanted vaccines  
**Louis Fries**, GlaxoSmithKline, USA

Building process understanding for vaccine manufacturing using data mining  
**Matthew Wiener**  
Merck, USA

19:00 – 20:30 Dinner

20:30 – 22:30 Poster Reception

**Wednesday, June 9, 2010**

07:30 – 08:30

Breakfast

08:30 – 10:00

**Session VI : Veterinary Vaccines**

Session Chair:

Jules Minke, Merial, USA

Nipah/Hendra: Understanding the links between human and veterinary emerging diseases

**Jules Minke**, Merial, USA

Enhancing the role of veterinary vaccines in reducing zoonotic disease of humans: Linking systems biology with vaccine delivery

**L. Garry Adams**, Texas A&M College of Veterinary Medicine, USA

The challenge of developing new generation vaccines for control and eradication of foot and mouth disease in South America

**Susana Levy**, Biogenesis-Bago S.A., Argentina

10:00 – 10:30

Break

10:30 – 11:00

Process Scale-up and Optimization for Production of High Efficacy Oral Rabies Vaccine

**Amine Kamen**, National Research Council, Canada

11:00 – 11:45

**Keynote Talk**

Immunogen Discovery: Past, Present, Future

**Adel Mahmoud**, Princeton University, USA

11:45 – 13:15

Posters/Buffer Lunch

13:15 – 15:30

**Session VII : New Technologies**

Session Chair:

Mike Hoare, University College London, UK

Progress toward a synthetic glycoconjugate vaccine for clinical malaria: Practical synthesis of the GPI carbohydrate antigen

**A. Stewart Campbell**, Ancora Pharmaceuticals, Inc., USA

CIM Monolith Technology: Enabling Economic Vaccines Production

**Matjaz Peterka**, BIA Separations, Slovenia

Sphereon® technology for lyophilized vaccines

**Edwin Kets**, Intervet International BV, Netherlands

Scale-up of an intensified process for rAD35 adenovirus production using the PER.C6® cell substrate

**Alfred Luitjens**, Crucell, Netherlands

Syncon™ DNA vaccines for emerging infectious diseases

**Niranjan Sardesai**, Inovio Biomedical Corporation, USA

Large virus vaccine platforms: development of innovative technology for aseptic chromatography

**Hans Blom**, GE Healthcare Life Sciences, Sweden

15:45 – 22:00

Outing/Dinner

**Thursday, June 10, 2010**

07:30 – 08 :30

Breakfast

08:30 – 11 :00

**Session VIII : Technology Challenges in Developing World Market**

Session Chairs:

Fiona MacLaughlin, Wellcome Trust, UK

Mahima Datla, Biological E. Limited, India

IVR's Priorities and Activities on Vaccine Research

**Ana Maria Henao-Restrepo**, World Health Organization, Switzerland

New vaccine technologies: Promising advances may save more lives

**John Boslego**, PATH, USA

The global manufacture of Polio vaccine in the endgame of eradication

**Phil Minor**, NIBSC, UK

A broadly applicable stabilization technology for vaccine and other complex biological molecules

**Jeff Drew**, Stabilitech Ltd., UK

Vaccine stabilization – research, commercialization, and impact

**Ray Cummings**, PATH, USA

11:00 – 11:30

Break

11:30 – 12:15

**Keynote**

Hilleman Laboratories: A new joint venture between Merck and Co., Inc. and Wellcome Trust

**Altat Lal**, MSD Wellcome Trust Hilleman Laboratories, India

12:30 – 13:30

Lunch

13:30 – 16:00

*Ad hoc* sessions, free time

16:00 – 18:30

**Session IX: Developing World: Progress in Key Regions**

Session Chairs:

Leda Castilho, Federal Univ. of Rio de Janeiro, Brazil

Laura Palomares, UNAM, Mexico

Barry Buckland, BiologicB, USA

Influenza A(H1N1): Public Health challenge, lessons learned in Mexico

**Pablo Kuri-Morales**, Sanofi-Aventis, Mexico

Safety, immunogenicity and efficacy of Quadrivalent Human Papillomavirus (types 6, 11, 16, 18) L1 virus-like particle vaccine in Latin American women. Monitoring HPV vaccination

**Luisa Lina Villa**, Ludwig Institute for Cancer Research, Brazil

Innovative therapeutic cancer vaccines in Cuba: an update

**Luis Enrique Fernandez**, Center of Molecular Immunology, Cuba

Manufacturing flu vaccine in Mexico: A major public health and technology transfer challenge

**Roger Vinas**, Sanofi Pasteur, Mexico

**Thursday, June 10, 2010 (continued)**

Establishing a platform for spray drying inhalable vaccines in South Africa  
**Willem A. Germishuizen**  
MEND Group, South Africa

19:30 – 23:30

Banquet & Closing

**Friday, June 11, 2010**

07:30 – 08:30

Breakfast & Departures

## List of Accepted Poster Presentations

- 1. Rabies virus glycoprotein (RVGP) expression in Drosophila S2 cells and by Semliki Forest Virus (SFV). Synthesis and protection studies**  
Carlos Augusto Pereira, Instituto Butantan-Laboratório de Imunologia Viral, Brazil
- 2. EpiMatrix: Tool for accelerated epitope selection and vaccine design**  
Matt Ardito, EpiVax, USA
- 3. Vaccine cell substrates and adventitious agent testing**  
Rebecca Sheets, National Institutes of Allergy & Infectious Diseases, USA
- 4. Development of a novel process to produce a human rabies vaccine using Vero cells grown on microcarriers**  
Héla Kallel, Institut Pasteur de Tunis, Tunisia
- 5. From Ascitisto Bioreactor: Anti-Idiotypic cancer vaccine as a case study**  
Yoan J. Machando Hernández, Center for Molecular Immunology, Cuba
- 6. Assessment of particle concentration and assembly efficiency during the production of rotavirus-like particles in insect cells**  
Maria Candida M. Mellado, ITQB-UNL/IBET, Portugal
- 7. Use of VERO suspension cultures for influenza H1N1 virus production**  
Marina Etcheverrigaray, Universidad Nacional del Litoral, Argentina
- 8. Ultra-scale down methodology for rapid prediction of the impact of P. pastoris high cell density cell broth quality on recovery performance of recombinant products in a pilot-scale centrifuge**  
A.G. Lopes, University College London, Department of Biochemical Engineering, UK
- 9. Production of serotype 6-derived recombinant adeno-associated virus in serum-free suspension cultures of HEK 293 cells**  
Érica A. Schulze, Federal University of Rio de Janeiro, Brazil
- 10. RNA based plasmid selection system for antibiotic-free plasmid DNA vector production**  
Aaron E. Carnes, Nature Technology Corporation, USA
- 11. Escherichia coli plasmid DNA fermentation: strain and process-specific effects on vector yield, quality, and transgene expression**  
Aaron E. Carnes, Nature Technology Corporation, USA
- 12. Assessing aggregation using transmission electron microscopy**  
Clinton S. Potter, Nanolmaging Services, Inc., USA
- 13. An alternative platform for rapid, high yield, low cost production of vaccine antigens**  
George Buchman, Ph.D., Chesapeake PERL, Inc., USA
- 14. Fabrication of influenza virus-like particles with M2 fusion proteins**  
Suh-Chin Wu, National Tsing Hua University, Taiwan
- 15. Recombinant influenza hemagglutinin production in insect cells**  
Linda Lua, The University of Queensland, Australia

- 16. Strategies for the production of a veterinary vaccine based on recombinant rotavirus VP6**  
Laura A. Palomares, Universidad Nacional Autónoma de Mexico, Mexico
- 17. M Cell targeted delivery for oral vaccination**  
Tarik Khan, The University of Texas at Austin, USA
- 18. Purification process development of protein subunit based vaccine candidates produced using recombinant e. coli expression system**  
Davinder Chawla, Sanofi Pasteur, Canada
- 19. Characterization of the N-glycosylation profile of recombinant influenza virus hemagglutinin produced in the insect-cell baculovirus expression system**  
Laura A. Palomares, Universidad Nacional Autónoma de Mexico, Mexico
- 20. HEK-293 cells is an efficient platform for large scale manufacturing of influenza vaccines**  
Amine Kamen, Biotechnology Research Institute-National Resrarch Council, Canada
- 21. Acceleration of process development using an HPLC method to monitor reovirus type 3 particles for manufacturing of Reolysin**  
Amine Kamen, Biotechnology Research Institute-National Research Council Canada, Canada
- 22. Accelerated process development for production of an adenovirus-vector vaccine against Ebola virus**  
Amine Kamen, National Research Council-Biotechnology Research Institute, Canada
- 23. Vaccine manufacturing in the new decade: update on application and validation approach of single-use technologies**  
Annelies Onraedt, PhD, Pall Life Sciences, Switzerland
- 24. Bringing systems biology to vaccine development: Modeling the self-assembly of Rotavirus-like particles**  
António Roldão, ITQB-UNL; IBET, Portugal
- 25. Characterization of vaccines using transmission electron microcopy**  
Bridget Carragher, Nanolmaging Services, Inc., USA
- 26. Removal of tolerogenic signals from a dendritic cell-targeting antibody**  
Constanze A. Weber, EpiVax, Inc, USA
- 27. Cell-based influenza vaccine process development and analysis**  
Hans Blom, GE Healthcare Bio-Sciences AB, Sweden
- 28. Process development and large scale manufacture of a multivalent HIV DNA vaccine.**  
Henry L Hebel, VGXI Inc, USA
- 29. Development of a simple and high-yielding fed-batch process for the production of influenza vaccines**  
Jamal Meghrous, Protein Sciences Corporation, USA
- 30. Bench scale production of influenza virus from suspension culture of MDCK-siat7e cells**  
Joseph Shiloach, NIDDK/NIH, USA
- 31. Prototype development and pre-clinical immunogenicity analysis of a novel minimally invasive electroporation device**  
Kate E. Broderick, Inovio Biomedical, USA

- 32. Development of protein capsular matrix vaccine (PCMV) technology**  
Kevin P Killeen, Matrivax Research & Development Corp., USA
- 33. De-Tolerization of ANTI-DEC-205 for HIV subunit vaccine delivery**  
Shannon Pelletier, EpiVax, USA
- 34. T-cell epitope vaccine provides complete protection against lethal vaccinia infection in HLA transgenic mouse model**  
William Martin, EpiVax, Inc, USA
- 35. Downstream processing of DNA vaccines: Achieving high productivity and purity**  
Matjaz Peterka, BIA Separations, Slovenia
- 36. Purification platform for influenza viruses**  
Matjaz Peterka, BIA Separations, Slovenia
- 37. A vaccine prototype using Baculovirus Expression System for the control of Avian influenza virus**  
Mauricio Realpe, Boehringer-Ingelheim Vetmedica, Mexico
- 38. Strategy for the consistent preparation of sufficient non-viral large vectors for biopharmaceutical applications**  
Sally Hassan, Department of Biochemical Engineering, University College London, UK
- 39. Genetic stability of Dengue-4 infectious clone viruses propagated in vero cells and MRC-5 cells: The implication for vaccine development**  
Suh-Chin Wu, National Tsing Hua University, Taiwan
- 40. Chimeric virus-like particles for vaccination against microbial infection**  
Tania Rivera-Hernández, The University of Queensland, Australia
- 41. Enhancing downstream processing of recombinant baculoviruses: The leverage from the fundamentals**  
Tiago Vicente, IBET/ITQB-UNL, Portugal
- 42. Personalizing immune responses to vaccines, autoantigens, and protein therapeutics: The iTEM (individualized T Cell Epitope Measure) tool**  
Tobias Cohen, EpiVax, Inc, USA
- 43. Removal of tolerogenic signals from a dendritic cell-targeting antibody**  
Shannon Pelletier, EpiVax, Inc, USA
- 44. E. coli high cell density cultivation using Glycerol as carbon source for PspA3 antigenic protein production**  
A.C.L. Horta, Universidade Federal de São Carlos, Brazil
- 45. Integration of scientific knowledge and the quality requirements**  
Daymara González Fuentes, Center of Molecular Immunology, Cuba
- 46. Understanding the mechanism of aluminum adjuvant-induced degradation of polysaccharide conjugate vaccines**  
William James Smith, BioProcess Research and Development, Merck Research Laboratories, USA
- 47. High cell-density processes in batch mode for plasmid DNA production by a metabolically engineered e. coli strain with minimized overflow metabolism**  
Alvaro R. Lara, Universidad Autónoma Metropolitana-Cuajimalpa, Mexico

- 48. *Elevated head space-pressure: A viable option to increase oxygen transfer and scale-up e. coli cultivations for plasmid DNA vaccine production***  
Alvaro R. Lara, Universidad Autónoma Metropolitana-Cuajimalpa, Mexico
- 49. *Poly-methyl vinyl ether-co-maleic anhydride nanoparticles as antigen delivery and activating systems***  
Carlos Gamazo, University of Navarra, Spain
- 50. *Design of experiment based Japanese encephalitis virus formaldehyde inactivation optimisation for a vero cell derived vaccine***  
Michael Hughson, University College London, UK
- 51. *Effects of IPTG and kanamycin concentrations on plasmid stability and expression of CLPP protein of Streptococcus Pneumoniae in Escherichia coli using experimental design***  
Ariane Leites Larentis, Bio-Manguinhos / Fiocruz, Brazil
- 52. *Human cells for prostate cancer vaccine therapy – The impact of centrifugation upon key product quality attributes***  
Michael Delahaye, University College London, UK
- 53. *Ultra-scale down studies of human cell bioprocessing for a prostate cancer vaccine therapy – The impact of capillary shear***  
Juan Pablo Acosta Martinez, University College London, UK
- 54. *Rapid development of a novel enveloped Chikungunya virus-like particle vaccine for phase I clinical production***  
Richard M. Schwartz, Vaccine Research Center / NIAID / NIH, USA
- 55. *Lipid removal strategies to enable chromatography in the purification of virus-like particles***  
Claire Burden, University College London, UK
- 56. *Application of animal-free recombinant bioactive protein supplements to improve the performance of cell-based viral vaccine production***  
Kenneth Bertram, Novozymes Biopharma AU, Australia
- 57. *Viral vaccine production at manufacturing scale (1000 M2 surface) into icellis disposable fixed-bed reactor***  
Jean-Christophe Drugmand, Artelis, Belgium
- 58. *Influence of glucose and glutamine metabolism in animal component-free media for the production of viruses in vero cells***  
Emma Petiot, Laboratoire Réactions et Génie des Procédés – CNRS, France
- 59. *Development of a multi-dose formulation for Prevnar 13™***  
Lakshmi Khandke, Pfizer, USA
- 60. *Development of a high throughput plate reduction neutralization test for the detection of mumps virus neutralizing antibodies***  
Damien Friel, GlaxoSmithKline Biologicals, Belgium
- 61. *Validation of a Multiplex Luminex ImmunoAssay (MLIA) for assessment of the immunogenicity of Bordetella pertussis vaccines***  
Damien Friel, GlaxoSmithKline Biologicals, Belgium