Program

Vaccine Technology III

June 6 - 11, 2010

Vallarta Palace Hotel
Nuevo Vallarta, Mexico

Program Co-Chairs:

John G. Auniņš, 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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**Keynote Talks:**

**Altaf 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   Welcoming Remarks and Opening of the Conference
18:00 – 19:00   Keynote
Introducing new vaccines
David Salisbury
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/Buffet Lunch

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
Altaf 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-Idiotype 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, NanolImaging 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, NanolImaging 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