16TH ANNUAL CONFERENCE ON VACCINE RESEARCH
APRIL 22-24, 2013
BALTIMORE, MD

SUNDAY, APRIL 21, 2013
4:00–6:30 pm  Registration  Constellation Ballroom Foyer

MONDAY, APRIL 22, 2013
7:30 am–5:00 pm  Registration  Constellation Ballroom Foyer
7:30 am  Poster Set–Up  Atrium
7:45 am  Continental Breakfast  Atrium
8:15 am  Welcome and Introductions  Constellation Foyer
Susan J. Rehm, MD
National Foundation for Infectious Diseases
Bethesda, MD

8:30 am  Keynote I: Mary Lou Clements-Mann  Memorial Lecture in Vaccine Sciences  Constellation Ballroom, Salon A & B
Moderator:  Bruce G. Weniger, MD
Chiang Mai University
Atlanta, GA

1  Eradication of Disease through Vaccination: The 35th Anniversary of the Last Case of Smallpox
D.A. Henderson, MD, MPH
Johns Hopkins Bloomberg School of Public Health
Center for Biosecurity of University of Pittsburgh Medical Center
Baltimore, MD

9:15 am  Questions and Answers
9:30 am  Coffee Break

Symposium 1:  Challenges for Future Disease  Constellation Ballroom, Salon A & B
Eradication by Vaccination
Moderator:  Gregory A. Poland, MD
Mayo Clinic and Foundation
Rochester, MN

9:45 am  2  Measles and Rubella–Will They Ever be Eradicated?
Walter A. Orenstein, MD
Emory Vaccine Center
Emory University
Atlanta, GA
10:20 am  3  **Polio Eradication**  
Philip D. Minor, MD, PhD  
National Institute for Biological Standards and Control  
Hertfordshire, UK

10:55 am  4  **Development of Vaccines Toward the Global Control and Eradication of Foot-and-Mouth Disease**  
Cyril G. Gay, DVM, PhD  
Agricultural Research Service  
US Department of Agriculture  
Beltsville, MD

11:30 am  **Panel Discussion on Disease Eradication**

12:00 pm  **Lunch (on your own)**

**Symposium 2: Malaria Vaccines - Current and Future**  
*Constellation Ballroom, Salon A & B*

Moderator:  **Myron M. Levine, MD, DTPH**  
Center for Vaccine Development  
University of Maryland School of Medicine  
Baltimore, MD

1:00 pm  5  **RTS,S**  
Pedro L. Alonso, PhD  
Barcelona Centre for International Health Research (CRESIB)  
Barcelona, Spain

1:30 pm  6  **Vaccines that Interfere with Transmission**  
David C. Kaslow, MD  
Malaria Vaccine Initiative  
Washington, DC

2:00 pm  7  **The Whole Organism, *P. falciparum* Sporozoite, Vaccine Approach**  
Kirsten E. Lyke, MD  
Center for Vaccine Development  
University of Maryland  
Baltimore, MD

2:30 pm  **Questions and Answers**

3:00 pm  **Coffee Break**
Submitted
Presentations 1A: Immunologic Science and Immune Response  
Constellation Ballroom, Salon A

(Concurrent Sessions) Moderator: Cristina G. Cassetti, PhD
National Institute of Allergy and Infectious Diseases
National Institutes of Health
Bethesda, MD

3:30 pm S1  
Vaccine-Associated Enhanced Respiratory Disease following Heterologous Influenza Vaccination is Associated with Cross-Reactive Anti-HA2 Antibodies with Virus Fusion Enhancing Activity  
S. Khurana¹, C. L. Loving², A. L. Vincent², H. Golding¹  
¹FDA, Bethesda, MD, ²USDA, Ames, IA

3:45 pm S2  
IL18R1 and IL18 Gene Polymorphisms are Associated with Immune Responses to Smallpox Vaccine  
I. G. Ovsyannikova, I. H. Haralambieva, R. B. Kennedy, M. M. O’Byrne, V. S. Pankratz, G. A. Poland  
Mayo Clinic Vaccine Research Group, Mayo Clinic and Foundation, Rochester, MN

4:00 pm S3  
Influence of Maternal Murine Immunization with Neisseria meningitidis Outer Membrane Antigens on the Immune Response in Offspring  
E. N. De Gaspari  
Immunology, Adolfo Lutz, São Paulo, Brazil

4:15 pm S4  
Vaccination with Human Hookworm Vaccine “Necator americanus Aspartic Protease-1 M74” Generates Neutralizing Antibodies and a Potent Immune Response in BALB/c Mice  
A. R. Jariwala¹, X. Chen¹, M. S. Pearson², B. Keegan³, J. B. Brelsford¹, J. L. Plieskat¹, A. Loukas², B. Zhan³, P. J. Hotez³, J. M. Bethony¹  
¹The Department of Microbiology, Immunology, and Tropical Medicine, The George Washington University, Washington, DC, ²Center for Bio-discovery and Molecular Development of Therapeutics, James Cook University, Cairns, Australia, ³Department of Pediatrics and Molecular Virology and Microbiology, National School of Tropical Medicine, Baylor College of Medicine, Houston, TX

4:30 pm S5  
Design of Vaccine Adjuvants through Regulated Induction of Programmed Necrosis  
L. S. Jacobson, M. Goldberg, H. Lima, F. Diaz-Griffero, K. Chandran, J. Brojatsch  
Microbiology and Immunology, Albert Einstein College of Medicine, Bronx, NY

4:45 pm S6  
Comparison of the Live Attenuated Yellow Fever Vaccine 17D-204 to its Virulent Parental Strain Asibi by Deep Sequencing  
A. Beck¹, R. Tesh¹, T. Wood², S. Widen², K. Ryman³, A. D. Barrett⁴  
¹Pathology, University of Texas Medical Branch, Galveston, TX, ²Molecular Genomics Core Facility, University of Texas Medical Branch, Galveston, TX, ³Center for Vaccine Research, University of Pittsburgh, Pittsburgh, PA, ⁴Sealy Center for Vaccine Development, University of Texas Medical Branch, Galveston, TX
Submitted
Presentations 1B: Vaccine Safety (Concurrent Sessions) Moderator: CAPT Rebecca Sheets, PhD National Institute of Allergy and Infectious Diseases National Institutes of Health Bethesda, MD

3:30 pm S7 Outcome-Based Vaccine Safety Surveillance
R. Baxter, E. Lewis, B. Fireman, J. McDonald, N. Klein
Kaiser Permanente Vaccine Study Center, Oakland, CA

3:45 pm S8 Guillain-Barré Syndrome and Pneumonia and Influenza Hospitalizations: An Ecologic Overview
S. Iqbal, R. Li, C. Vellozzi
OID/NCEZID/DHQ/ISO, Centers for Disease Control and Prevention, Atlanta, GA

4:00 pm S9 Adverse Events after Fluzone Intradermal® Vaccine Reported to the Vaccine Adverse Event Reporting System, 2011-13
P. L. Moro¹, T. Harrington¹, T. Shimabukuro¹, M. Cano¹, O. I. Museru¹, D. Menschik², K. Broder¹
¹Immunization Safety Office, Centers for Disease Control and Prevention, Atlanta, GA, ²Center for Biologics Evaluation and Research, Food and Drug Administration, Rockville, MD

4:15 pm S10 Use of Live-Attenuated Influenza Vaccine in Children and Adolescents with Cystic Fibrosis
C. Quach¹, M. A. Lefebvre¹, L. C. Lands², F. D. Boucher³, B. Tapiero⁴, E. Toth⁵, P. Daignault⁶, J. E. Marcotte⁷, G. De Serres⁸
¹Paediatrics Infectious Diseases, McGill University The Montreal Children's Hospital, Montreal, QC, Canada, ²Paediatric Respiratory Medicine, McGill University - The Montreal Children's Hospital, Montreal, QC, Canada, ³Paediatric Infectious Diseases, Chul, Quebec, QC, Canada, ⁴Paediatric Infectious Diseases, Chu Sainte-Justine, Montreal, QC, Canada, ⁵Quebec Ministry of Health, Montreal, QC, Canada, ⁶Pediatric Respiratory Medicine, Chul, Quebec, QC, Canada, ⁷Pediatric Respiratory Medicine, Chu Sainte-Justine, Montreal, QC, Canada, ⁸Institut National de Santé Publique du Quebec, Quebec, QC, Canada

4:30 pm S11 Birth Outcomes Following H1N1 Immunization
A. Eaton, N. Lewis, B. Fireman, J. Hansen, R. Baxter, N. Klein
Vaccine Study Center, Kaiser Permanente, Oakland, CA

4:45 pm S12 Chance Associations are Lopsided in Unbalanced Studies of Infrequent Events in Vaccine Safety
R. Baxter, B. Fireman, N. Klein
Kaiser Permanente Vaccine Study Center, Oakland, CA

5:00–6:00 pm Welcome Reception & Poster Presentations Atrium
TUESDAY, APRIL 23, 2013

7:00 am–5:00 pm  Registration  Constellation Ballroom Foyer

7:00–7:45 am  Dr. Richard J. Duma  Constellation Ballroom, Salon F
Meet the Experts Breakfast Session

The New WHO Recommendations for the Global Use of Influenza Vaccines
Jon S. Abramson, MD
Wake Forest University School of Medicine
Winston-Salem, NC

Immunization of Pregnant Women: Two for One Protection
Carol J. Baker, MD
Baylor College of Medicine
Houston, TX

Advisory Committee on Immunization Practices Update
Ruth A. Karron, MD
Johns Hopkins Bloomberg School of Public Health
Baltimore, MD

Universal Influenza Virus Vaccine and Durability of Vaccines
Peter Palese, MD
Mount Sinai School of Medicine
New York, NY

7:30–8:30 am  Continental Breakfast/Poster Presentations  Atrium

8:30 am  Keynote II  Constellation Ballroom, Salon A & B
Moderator:  Alison C. Mawle, PhD
Centers for Disease Control and Prevention
Atlanta, GA

8  Decade of Vaccines
Jon S. Abramson, MD
Wake Forest University School of Medicine
Winston-Salem, NC

9:15 am  Questions and Answers

9:30 am  Coffee Break
Symposium 3:  Prevention of Infant Infections and Maternal Immunization  
Constellation Ballroom, Salon A & B

Moderator:  Georges Peter, MD  
Warren Alpert Medical School of Brown University  
Providence, RI

9:45 am  
9  
Maternal Immunizations: An Overview  
Carol J. Baker, MD  
Baylor College of Medicine  
Houston, TX

10:10 am  
10  
Pertussis Strategies  
Mark H. Sawyer, MD  
University of California San Diego  
San Diego, CA

10:35 am  
11  
Prenatal Influenza Immunization: A Global Strategy  
Mark C. Steinhoff, MD  
Cincinnati Children’s Hospital and Medical Center  
Cincinnati, OH

11:00 am  
12  
Group B Streptococcal Vaccine Developments  
Morven S. Edwards, MD  
Baylor College of Medicine  
Houston, TX

11:30 am  
Questions and Answers

12:00 pm  
NFID Luncheon  
Constellation Ballroom, Salon C-F

Robert Austrian Memorial Lecture by Richard Malley, MD  
Associate Professor of Pediatrics, Children’s Hospital Boston, Boston, MA

Charles Mérieux Award Presentation to Robert G. Webster, PhD  
Rose Marie Thomas Chair, Division of Virology, Department of Infectious Diseases,  
St. Jude Children’s Research Hospital, Memphis, TN

Maurice R. Hilleman Early–Stage Career Investigator Award Presentation

Symposium 4:  New and Emerging Vaccines for Respiratory Infections  
Constellation Ballroom, Salon A & B

Moderator:  Gregory A. Poland, MD  
Mayo Clinic and Foundation  
Rochester, MN

1:30 pm  
13  
LAIV Provides Protection from Heterologous Influenza A Virus Infection without Inducing Vaccine Associated Enhanced Respiratory Disease  
Amy L. Vincent, DVM, PhD  
Agricultural Research Service  
US Department of Agriculture  
Ames, IA
1:50 pm 14 Vaccines for Respiratory Syncytial Virus
Ruth A. Karron, MD
Johns Hopkins Bloomberg School of Public Health
Baltimore, MD

2:10 pm 15 Adenovirus: Lessons Learned from the Department of Defense
Ret. COL Charles H. Hoke, Jr., MD
US Army Medical Materiel Development Activity (USAMMDA)
Ft. Detrick, MD

2:30 pm 16 Novel Influenza Vaccines
Peter Palese, PhD
Mount Sinai School of Medicine
New York, NY

3:00 pm Questions and Answers

3:30 pm Coffee Break

Submitted Presentations 2A: Epidemiology and Burden of Disease
(Concurrent Sessions) Moderator: Cyril G. Gay, DVM, PhD
Agricultural Research Service
US Department of Agriculture
Beltsville, MD

4:00 pm S13 Logistical Implications of Implementing a Universal Rotavirus Program in Canada
1School of Nursing, Dalhousie University, Halifax, NS, Canada, 2Canadian Center for Vaccinology, St. Francis Xavier University, Antigonish, NS, Canada, 3Health and Wellness, Charlottetown, PE, Canada, 4Health and Wellness, Halifax, NS, Canada, 5Canadian Center for Vaccinology, Halifax, NS, Canada, 6Pediadrics, Dalhousie University, Halifax, NS, Canada, 7Capital District Health Authority, Halifax, NS, Canada, 8Dalhousie University, Pediatrics, Halifax, NS, Canada

4:15 pm S14 Trends in RSV-Associated Hospitalizations among Children and Adults in the United States, 2005-10
C. Archer, P. Kilgore, E. Martin, T. Taylor
Wayne State University, Detroit, MI

4:30 pm S15 Epidemiology of Herpes Zoster in Ontario, Canada, 1992-2011
A. E. Wormsbecker1, J. Wang2, L. C. Rosella3, J. C. Kwong4, C. Seo1, S. L. Deeks1
1Immunization and Vaccine Preventable Diseases, Public Health Ontario, Toronto, ON, Canada, 2Analytical Services, Public Health Ontario, Toronto, ON, Canada, 3Public Health Sciences, Public Health Ontario, Toronto, ON, Canada, 4Institute for Clinical Evaluative Sciences, Toronto, ON, Canada
4:45 pm        S16 Invasive Pneumococcal Disease in Adults during the age of Prevnar®
R. Baxter, A. Yee, T. Ray
Kaiser Permanente Vaccine Study Center, Oakland, CA

Submitted
Presentations 2B: Antigen Design and Development  
(Concurrent Sessions) Moderator: Hana Golding, PhD
Constellation Ballroom, Salon B
Center for Biologics Evaluation and Research
US Food and Drug Administration
Bethesda, MD

4:00 pm        S17 A Universal Influenza Virus Vaccine Based on the Stalk Domain of the Hemagglutinin
F. Krammer, I. Margine, N. Pica, R. Hai, P. Palese
Department of Microbiology, Mount Sinai School of Medicine, New York, NY

4:15 pm        S18 CD4+ T-Cell Responses to Cross-Reactive Influenza H1N1 T-Cell Epitopes Identified by Immunoinformatic Methods
L. Moise, C. Boyle, M. Ardito, F. Terry, H. Latimer, R. Tassone, M. Cote, W. Martin,
A. S. De Groot
EpiVax, Inc., Providence, RI

4:30 pm        S19 Phylogenetic Considerations in Designing a Broadly Protective Multimeric L2 Vaccine
S. Jagu1, K. Kwak1, J. T. Schiller2, D. R. Lowy2, H. Kleanthous3, K. Kalnin3, H. Wang4,
L. T. Chow4, W. K. Huh5, K. S. Jaganathan6, S. V. Chivukula6, R. B. Roden1
1Pathology, Johns Hopkins University, Baltimore, MD, 2NCI, NIH, Bethesda, MD,
3Sanofi Pasteur, Boston, MA, 4Departments of Biochemistry and Molecular Genetics, University of Alabama at Birmingham, Birmingham, AL, 5Departments of Gynecologic Oncology, University of Alabama at Birmingham, Birmingham, AL, 6Shantha Biotechnics Limited, Hyderabad, India

4:45 pm        S20 Norovirus Consensus GII.4 Virus-like Particles in Monovalent and Bivalent Vaccine Formulations Provide Broad Immunogenicity and Cross-Reactivity
G. I. Parra1, K. Bok1, R. Taylor2, J. R. Haynes2, R. F. Bargatze2, S. V. Sosnovtsev1,
C. Richardson2, K. Y. Green1
1Calicivirus Section, LID, NIAID, NIH, Bethesda, MD, 2LigoCyte/Takeda Pharmaceutical, Bozeman, MT

5:00 pm        S21 Immunogenicity and Protective Efficacy of a Multi-epitope Vaccine Composed of Ebola Virus and Venezuelan Equine Encephalitis Virus HLA Class II T-Cell Epitopes in HLA Transgenic Mice
L. C. Dupuy1, D. Mitchell1, M. J. Richards1, C. Bounds1, M. Ardito2, E. McClaine2,
L. Moise2, W. Martin2, A. S. De Groot2, C. S. Schmaljohn1
1USAMRIID, Fort Detrick, MD, 2EpiVax, Inc., Providence, RI
WEDNESDAY, APRIL 24, 2013

7:00 am–12:00 pm  Registration  Constellation Ballroom Foyer

7:00–7:45 am  Dr. Richard J. Duma  Constellation Ballroom, Salon F

Meet the Experts Breakfast Session

Polio Eradication: Is it in the Future?
Walter A. Orenstein, MD
Emory Vaccine Center
Emory University
Atlanta, GA

Pertussis Strategies
Mark H. Sawyer, MD
University of California San Diego
San Diego, CA

One Health Approaches from a Veterinary Perspective
W. Ray Waters, DVM, PhD
Agricultural Research Service
US Department of Agriculture
Ames, IA

Synthetic Genomic Vaccine Technologies
David E. Wentworth, PhD
The J. Craig Venter Institute
Rockville, MD

7:30 am  Continental Breakfast  Atrium

Submitted Presentations 3A
Immunization Programs and Vaccine Delivery  Constellation Ballroom, Salon A
(Concurrent Sessions)  Moderator: Susan J. Rehm, MD
National Foundation for Infectious Diseases
Bethesda, MD

8:00 am  S22  Evaluation of Canadian Workplace Policies Used to Promote Influenza Vaccination among Healthcare Personnel
D. M. MacDougall¹, B. Halperin², L. Crowe³, P. Lam⁴, H. Ramsey⁵, A. McCarthy⁵
¹Canadian Center for Vaccinology, St. Francis Xavier University, Antigonish, NS, Canada, ²Canadian Center for Vaccinology, Dalhousie University, Halifax, NS, Canada, ³Bruyere Research Institute, Ottawa, ON, Canada, ⁴University of Toronto, Toronto, ON, Canada, ⁵Ottawa Hospital Research Institute, Bruyere Research Institute, Ottawa, ON, Canada

8:15 am  S23  2011/2012 Immunization Coverage from Ontario, Canada: Uptake and Exemptions
S. Wilson, G. H. Lim, J. Fediurek, M. A. McIntyre, S. L. Deeks
Immunization and VPD, Public Health Ontario, Toronto, ON, Canada
8:30 am  S24  Building HPV Vaccine Acceptance: A Case Study of Social Media Potential
C. Zhang¹, M. Gotsis², M. Jordan-Marsh³
¹Mork Family Department of Chemical Engineering and Materials Science, University of Southern California, Los Angeles, CA, ²Creative Media & Behavioral Health Center, Interactive Media Division, University of Southern California, Los Angeles, CA, ³School of Social Work, University of Southern California, Los Angeles, CA

8:45 am  S25  The Use of a Massively Open Online Course for Global Vaccine Trial Education
K. R. Charron¹, A. B. Cox², A. J. Feller², I. E. Gooding³
¹International Health and Center for Teaching and Learning, Johns Hopkins Bloomberg School of Public Health, Baltimore, MD, ²International Health, Johns Hopkins Bloomberg School of Public Health, Baltimore, MD, ³Center for Teaching and Learning, Johns Hopkins Bloomberg School of Public Health, Baltimore, MD

9:00 am  S26  Jet Injection for Influenza: A Randomized Controlled Clinical Trial to Demonstrate Non-Inferiority of Jet Injection vs. Needle and Syringe for Administration of TIV Influenza Vaccine (Afluria® Season 2012-13)
L. McAllister¹, K. Copeland¹, K. Werth¹, D. Plant², N. Le Cam Bouveret², D. K. Cobb³
¹PharmaJet, Inc, Golden, CO, ²CSL Biotherapies, Parkville, Victoria, Australia, ³Medical Center of the Rockies, Loveland, CO

9:15 am  S27  A Novel Vaccine Presentation to Address the Challenges of Vaccine Delivery in Low-Resource Settings
D. Chen, M. Lal
Vaccine Technologies, PATH, Seattle, WA

Submitted Presentations 3B: Vaccine Candidates: Preclinical and Clinical Studies  Constellation Ballroom, Salon B

Moderator: Kathleen M. Neuzil, MD, MPH
Program for Appropriate Technology in Health (PATH)
Seattle, WA

8:00 am  S28  A Novel Intramuscular W80SEC Nanoemulsion Adjuvanted Respiratory Syncytial Virus Vaccine Protects Cotton Rats against RSV Challenge
T. Hamouda¹, V. Bitko¹, J. K. Simmon¹, P. E. Makidon², D. M. Smith², A. Fattom¹, J. R. Baker, Jr.¹
¹NanoBio Corp, Ann Arbor, MI, ²University of Michigan, Ann Arbor, MI

8:15 am  S29  Development of a Multi-Valent Chimeric OspA Vaccine to Prevent Lyme Disease
P. N. Barrett¹, B. Luft², A. Loew-Baselli³, N. Wressnigg³, E. M. Poellabauer³, S. Fritsch³, B. A. Crowe¹, I. Livey¹, B. Schmitt³, M. Zeitlinger³, M. Mueller³, H. Kollaritsch³, P. G. Kremsner³, M. Esen³, H. J. Ehrlich³, G. Aichinger³
¹Vaccine R&D, Baxter Bioscience, Orth/Donau, Austria, ²Stony Brook University Medical Center, New York, NY, ³Vaccine R&D, Baxter Bioscience, Vienna, Austria, ⁴Global R&D, Baxter Bioscience, Vienna, Austria, ⁵Health Center Mainz, Mainz, Germany, ⁶Medical University of Vienna, Vienna, Austria, ⁷University of Tuebingen, Tuebingen, Germany
8:30 am  S30  Reduced Effectiveness of Pertussis Vaccine without an 18 Month Booster  
R. Menzies, H. Quinn, P. McIntyre  
National Centre for Immunisation Research and Surveillance, Sydney, NSW, Australia  

8:45 am  S31  Immunogenicity of Heterologous H5N1 Influenza Booster Vaccination 6 or 18 Months after Primary Vaccination in Adults  
J. M. Langley¹, L. Frenette², R. Jeanfreau³, S. A. Halperin⁴, M. Kyle⁵, L. Chu⁶, S. McNeil⁷, M. Dramé⁸, S. Phay Tran⁹, T. Ollinger¹⁰, K. X. Walravens¹⁰, L. Fries¹¹, D. Vaughn⁸  
¹Pediatrics and Community Health and Epidemiology, Canadian Center for Vaccinology, Dalhousie University, Halifax, NS, Canada, ²QT Research, Sherbrooke, QC, Canada, ³Benchmark Research Metairie, Metairie, LA, Canada, ⁴Pediatrics, Canadian Center for Vaccinology, Dalhousie University, Halifax, NS, Canada, ⁵Benchmark Research, Austin, TX, ⁶Radiant Research, Chicago, IL, ⁷Canadian Center for Vaccinology, Dalhousie University, IWK Health Centre and Capital Health District, Halifax University, Halifax, NS, Canada, ⁸GlaxoSmithKline Biologicals, King of Prussia, PA, ⁹GSK Vaccines, Canada, Laval, QC, Canada, ¹⁰GlaxoSmithKline Biologicals, Rixensart, Belgium, ¹¹Novavax, Rockville, MD  

9:00 am  S32  Sabin-IPV Clinical Studies and Continued Process Optimization for Cost-Price Reduction and Technology Transfer Purposes  
W. A. Bakker, Y. E. Thomassen, A. G. van 't Oever, J. Westdijk, A. Hamidi, M. G. van Oijen, P. Verdijk, L. A. van der Pol  
Institute for Translational Vaccinology, Bilthoven, Netherlands  

9:15 am  S33  Randomized Trial of Human Papillomavirus Vaccination Schedules among College Age Males  
R. Zimmerman  
Family Medicine & Clinical Epidemiology, University of Pittsburgh, Pittsburgh, PA  

9:30 am  Coffee Break  

Symposium 5:  Prospects for New Tuberculosis Vaccines  
Constellation Ballroom, Salon A & B  

Moderator:  Bruce G. Weniger, MD  
Vaccine  
Chiang Mai University  
Atlanta, GA  

10:00 am  17  Progress Towards Live Vaccines for Tuberculosis  
Stefan H.E. Kaufmann, PhD  
Max Planck Institute for Infection Biology  
Berlin, Germany  

10:30 am  18  Prospects for Subunit Vaccines Targeting Tuberculosis Latency  
Peter L. Andersen, DVM, DMS  
Statens Serum Institut  
Copenhagen, Denmark
11:00 am  19  Biomarkers for Assessing Immunity to Tuberculosis
Willem Hanekom, MBChB, DCH
South African Tuberculosis Initiative
University of Cape Town
Cape Town, South Africa

11:30 am  20  One Health/Veterinary Links Associated with Tuberculosis Vaccines
W. Ray Waters, PhD
Agricultural Research Service
US Department of Agriculture
Ames, IA

12:00 pm  Questions and Answers

12:30 pm  Lunch (on your own)

Symposium 6:  Vaccine Discovery and New Technologies  
Constellation Ballroom, Salon A & B

Moderator:  Cyril G. Gay, DVM, PhD
Agricultural Research Service
US Department of Agriculture
Beltsville, MD

1:30 pm  21  Induction of Vaginal Intraepithelial CD8+ T-Cells by HPV Vector Vaccination
John T. Schiller, PhD
National Cancer Institute
National Institutes of Health
Bethesda, MD

1:55 pm  22  Gender-Based Differences in Vaccine Response
Sabra L. Klein, PhD
Johns Hopkins Bloomberg School of Public Health
Baltimore, MD

2:20 pm  23  Synthetic Genomics Vaccines for Human Health
John I. Glass, PhD
The J. Craig Venter Institute
Rockville, MD

2:45 pm  24  Using Synthetic Genomics to Create Influenza Vaccine
David E. Wentworth, PhD
The J. Craig Venter Institute
Rockville, MD

3:10 pm  Questions and Answers

3:30 pm  Adjourn