AGENDA

DAY ONE: OCTOBER 11, 2010

8:00 am  Introduction
Lonnie King, D.V.M., M.S., M.A.
Chair, Committee on Lyme Disease and Other Tick-Borne Diseases
Dean, College of Veterinary Medicine
The Ohio State University

8:15 am  A Systems Approach in Understanding Tick-Borne Diseases: People, Animals, and the Ecosystem
Richard Ostfeld, Ph.D.
Disease Ecologist
Cary Institute of Ecosystem Studies

8:40 am  Discussion

SURVEILLANCE, SPECTRUM, AND BURDEN OF TICK-BORNE DISEASES

9:00 am  Moderator: Gordon Schutze, M.D.
Committee Member, Committee on Lyme Disease and Other Tick-Borne Diseases
Professor and Vice-Chairman for Educational Affairs
Department of Pediatrics
Vice President, Baylor International Pediatric AIDS Initiative
Baylor College of Medicine
Texas Children’s Hospital

9:05 am  Landscape of Lyme Disease: Current Knowledge, Gaps, and Research Needs
Gary P. Wormser, M.D.
Professor of Medicine
Chief, Division of Infectious Diseases
Vice-Chairman, Department of Medicine
New York Medical College
9:30 am  Spectrum of Lyme Disease: Approaches to Understanding Multi-factorial and Multidimensional Diseases
           Benjamin J. Luft, M.D.
           Edmund D. Pellegrino Professor
           Division of Infectious Diseases
           State University of New York at Stony Brook

9:50 am  Discussion

10:10 am Break

10:25 am Clinical Manifestations, Co-infection, and Research Needs of Human Babesiosis: The Increasing Health Burden
           Peter Krause, M.D.
           Senior Research Scientist
           Lecturer in Epidemiology, Microbial Diseases
           Yale School of Public Health

10:40 am  Insights into Ehrlichia & Anaplasma: Surveillance, Co-infection, and Research Needs
           J. Stephen Dumler, M.D.
           Professor, Department of Pathology
           Division of Medical Microbiology
           Johns Hopkins University School of Medicine

11:00 am  Rickettsia Diseases: Spectrum of Disease, Spatial Clustering, At-Risk Populations, and Research Needs
           Jennifer McQuiston, D.V.M, M.S.
           National Center for Preparedness, Detection, and Control of Infectious Diseases
           Centers for Disease Control and Prevention

11:20 am  Discussion

11:40 am Panel: Disease Surveillance & Co-infection
           Stephen Dumler, Peter Krause, Benjamin Luft, Jennifer McQuiston, and Gary Wormser

12:15 pm Summation: Unifying Knowledge Gaps and Needs
           Gordon Schutze

12:25 pm  LUNCH (45 minutes)

1:10 pm  Moderator: Lonnie King

1:15 pm Panel: Genetic and Acquired Determinants of Host Susceptibility and Vulnerable Populations
           David Weber, M.D.
           Professor of Medicine and Pediatrics, School of Medicine
           Professor of Epidemiology, School of Public Health
           University of North Carolina

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<th>AT-RISK POPULATIONS AND HUMAN FACE OF TICK-BORNE DISEASES</th>
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1:10 pm  Moderator: Lonnie King

1:15 pm Panel: Genetic and Acquired Determinants of Host Susceptibility and Vulnerable Populations
           David Weber, M.D.
           Professor of Medicine and Pediatrics, School of Medicine
           Professor of Epidemiology, School of Public Health
           University of North Carolina
Peter Krause, M.D.
Senior Research Scientist
Lecturer in Epidemiology Microbial Diseases
Yale School of Public Health

1:40 pm  Discussion

1:55 pm  The Human Face of Tick-Borne Disease Infections
Pamela Weintraub
Author, Cure Unknown
Editor, Discover Magazine

2:15 pm  Discussion

2:55 pm  Break

DIAGNOSTICS AND DIAGNOSIS

3:05 pm  Moderators: Lynn Gerber, M.D.
Committee Member, Committee on Lyme Disease and Other Tick-Borne Diseases
Director, Center for the Study of Chronic Illness and Disability
College of Health and Human Services
George Mason University

David H. Walker, M.D.
Committee Member, Committee on Lyme Disease and Other Tick-Borne Diseases
Professor and Chair
Department of Pathology
University of Texas Medical Branch at Galveston

3:10 pm  Diagnostics for Lyme Disease: Knowledge Gaps and Needs
Maria Aguero-Rosenfeld, M.D.
Professor of Pathology
Director of Clinical Pathology and Microbiology Laboratory
Bellevue Hospital Center

3:30 pm  Improved Diagnostics & Novel Approaches to Tick-Borne Disease Infections
Juan Olano, M.D.
Associate Professor, Department of Pathology
Director, Residency Training Program
University of Texas Medical Branch Center

3:50 pm  Potential Bio-Marker Applications for Lyme Disease: Aligning Multiple Symptoms with Biological Measures
Afton Hassett, Psy.D.
Associate Research Scientist, Department of Anesthesiology
Chronic Pain & Fatigue Research Center
University of Michigan Medical School
4:10 pm Discussion

4:40 pm Panel: Challenges for Clinicians in Diagnosis and Management of Chronic Illness Manifestations: Knowledge Gaps

*Sam T. Donta, M.D.*
Infectious Disease Specialist
Falmouth Hospital, Massachusetts

*Brian Fallon, M.D., M.P.H.*
Director of the Center for Neuroinflammatory Disorders and Biobehavioral Medicine
Director of the Lyme and Tick-Borne Diseases Research Center
Columbia University Medical Center

*Richard F. Jacobs, M.D., F.A.A.P.*
Robert H. Fiser, Jr., M.D. Endowed Chair in Pediatrics
Chairman, Department of Pediatrics
University of Arkansas for Medical Sciences
President, Arkansas Children’s Hospital Research Institute

*Matthew Liang, M.D., M.P.H.*
Professor, Department of Health Policy and Management
Harvard School of Public Health

5:20 pm Discussion

5:45 pm Summation

*Lynn Gerber and David Walker*

6:00 pm Adjourn
CRITICAL NEEDS AND GAPS IN UNDERSTANDING PREVENTION, AMELIORATION, AND RESOLUTION OF LYME AND OTHER TICK-BORNE DISEASES: THE SHORT-TERM AND LONG-TERM OUTCOMES

AGENDA

DAY TWO: OCTOBER 12, 2010

8:00 am  Introduction  
  Lonnie King

EMERGING INFECTIONS, TICK BIOLOGY, AND HOST-VESCTOR INTERACTIONS

Moderator: Lonnie King

8:05 am  Emerging and Re-Emerging Tick-Borne Infections  
  Ulrike Munderloh, D.V.M, Ph.D.  
  Associate Professor, Department of Entomology  
  University of Minnesota

8:25 am  Natural History of Ticks: Evolution, Adaptation and Biology  
  Tom G. Schwan, Ph.D., M.S.  
  Chief, Laboratory of Zoonotic Pathogens  
  Chief, Medical Entomology Section  
  National Institute of Allergy and Infectious Diseases

8:45 am  Wildlife and Domestic Hosts: Their Roles in Maintaining, Amplifying Pathogens, and their Changing Dynamics  
  Howard Ginsberg, Ph.D.  
  Research Ecologist  
  United States Geological Survey  
  Professor in Residence, Department of Plant Science  
  University of Rhode Island

9:05 am  Discussion

9:20 am  Comparative Medical Importance of a One Health Approach to Emerging Tick-borne Diseases  
  Edward Breitschwerdt, D.V.M.  
  Professor of Internal Medicine  
  College of Veterinary Medicine  
  North Carolina State University  
  Adjunct Professor of Medicine  
  Duke University Medical Center

9:40 am  Variation of Borrelia Subspecies: Implications for Human Disease  
  James H. Oliver, Jr., Ph.D.  
  Director, Institute of Arthropodology and Parasitology  
  Callaway Professor of Biology  
  Georgia Southern University
10:00 am  Discussion

10:20 am  Break

**PATHOGENESIS**

10:30 am  Moderator: *Guy Palmer, D.V.M., Ph.D.*
           Committee Member, Committee on Lyme Disease and Other Tick-Borne Diseases
           Regents Professor of Pathology and Infectious Diseases
           The Creighton Chair and Director, School for Global Animal Health
           Washington State University

10:35 am  Pathogenesis of *Borrelia burgdorferi* Infection and Disease
           **Janis Weis, Ph.D.**
           Professor of Pathology, Department of Pathology
           University of Utah

10:55 am  Duration of Spirochete Infection Following Antibiotic Treatment in Animals
           **Linda Bockenstedt, M.D.**
           Harold W. Jockers Professor of Medicine
           Department of Rheumatology
           Yale School of Medicine

11:15 am  Discussion

11:30 am  Antigenic Variation as a Mechanism for Persistent *Borrelia* Infection
           **Steven Norris, Ph.D.**
           Greer Professor
           Vice Chair for Research
           Pathology & Laboratory Medicine
           University of Texas, Houston

11:50 am  Sequestration as a Mechanism for Persistent *Borrelia* Infection
           **Stephen Barthold, D.V.M., Ph.D.**
           Distinguished Professor
           Department of Pathology, Microbiology and Immunology
           Center of Comparative Medicine
           School of Veterinary Medicine
           University of California, Davis

12:10 pm  Discussion

12:30 pm  **LUNCH (45 minutes)**

1:15 pm  Pathogenesis of *Ehrlichia* and *Anaplasma* Infection and Disease
           **Nahed Ismail, M.D., M.Sc., Ph.D., S.M. (ASCP), D. (ABMM)**
           Associate Professor, Department of Pathology
           Meharry Medical College
1:35 pm Pathogenesis of *Rickettsia* Infection and Disease

*Gustavo Valbuena, M.D.*
Instructor, Department of Pathology
University of Texas Medical Branch

1:55 pm Discussion

2:15 pm Summation

*Guy Palmer*

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**SCIENCE, SOCIETY, AND DISEASE**

2:20 pm Moderator: *Lynn Gerber*

2:25 pm The Social Construction of Lyme Disease

*Robert Aronowitz, M.D.*
Professor, Department of History and Sociology of Science
University of Pennsylvania

2:45 pm Discussion

2:55 pm Break

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**PREVENTION**

3:05 pm Moderator: *Stephen M. Ostroff, M.D.*
Committee Member, Committee on Lyme Disease and Other Tick-Borne Diseases
Director, Bureau of Epidemiology
Pennsylvania Department of Health

3:10 pm Current Vaccines for Tick-Borne Disease Infections and Vaccine Development

*Jere McBride, Ph.D., M.S.*
Associate Professor, Department of Pathology
University of Texas Medical Branch

3:30 pm Developing Opportunities for Future Vaccines

*Wendy Brown, Ph.D., M.P.H.*
Regents Professor, Department of Veterinary Microbiology and Pathology
Washington State University

3:50 pm Discussion

4:10 pm Education, Behavior Change, and Other Non-Pharmaceutical Measures Against Lyme and Other Tick-Borne Diseases

*Paul Mead, M.D., M.P.H.*
Medical Epidemiologist, Division of Vector-Borne Infectious Diseases
National Center for Infectious Diseases
Center for Disease Control and Prevention
Vector- and Host-Targeted Strategies for Prevention of Tick-Borne Diseases  
*José M.C. Ribeiro, M.D., Ph.D.*  
Chief, Vector Biology Section  
Laboratory of Malaria and Vector Research  
National Institute of Allergy and Infectious Diseases  

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<td>4:30 pm</td>
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<td><em>José M.C. Ribeiro, M.D., Ph.D.</em></td>
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| 5:25 pm| Panel: State of Science, General Research Gaps and Opportunities in Tick-Borne Diseases  
|        | *John Aucott, M.D.*  
|        | Founder, Lyme Disease Research Foundation of Maryland  
|        | Physician, Park Medical Associates  
|        | *Linda Bockenstedt, M.D.*  
|        | Harold W. Jockers Professor of Medicine  
|        | Department of Rheumatology  
|        | Yale School of Medicine  
|        | *J. Stephen Dumler, M.D.*  
|        | Professor, Department of Pathology  
|        | Division of Medical Microbiology  
|        | Johns Hopkins University School of Medicine  
|        | *Susan O’Connell, M.D.*  
|        | Consultant Microbiologist  
|        | Head of the Lyme Borreliosis Unit  
|        | Southampton General Hospital  
|        | *Gregg P. Skall, J.D.*  
|        | Counsel, National Capital Lyme and Tick-borne Disease Association  
|        | Member, Womble Carlyle Sandridge & Rice, PLLC  
| 5:55 pm| Discussion                                                                   |
| 6:25 pm| Final Summation and Closing Remarks                                           |
|        | *Lonnie King*                                                                |
| 6:35 pm| Adjourn                                                                      |