
Arbovirology and Medical Entomology Pre-meeting Course:

**Know Thine Enemy: Methods to Identify Mosquitoes and the Viruses They Carry**

November 13, 2016; 7:30 a.m. – 3:45 p.m.

Atlanta Marriott Marquis, Atlanta, GA USA

In the wake of major outbreaks of arthropod-borne viruses in the Americas, the course organizers have joined forces and gathered expertise from the American Committee of Medical Entomology and the American Committee on Arthropod-borne Viruses to speak to the challenges of identifying the culprit vector and virus in a mosquito-borne disease epidemic. The course will review the process of vector incrimination whereby the mosquito vector and viral etiologic agent are revealed. From the vector perspective, speakers will discuss methods for knowing thine enemy via arthropod identification, vector competence studies, targeted trapping informed by an understanding of vector biology and biogeography. From the virus perspective, faculty will discuss approaches to cast a broad net in order to identify and isolate a variety of arboviruses using classical and state-of-the art culture and sequencing approaches, along with field-applicable rapid diagnostics for particular virus species of interest. During the course, participants will have the opportunity to see live mosquito specimens and receive basic training in mosquito identification. Select participants will have an additional opportunity to visit the CDC and MR4 laboratories to see how mosquito colonies are maintained and mosquitoes are manipulated for vector competence studies.

**Course Organizers:**

*Lyric C. Bartholomay, PhD, Associate Professor, Department of Pathobiological Sciences, University of Wisconsin-Madison, Madison, Wisconsin, USA*

*Kathryn Hanley, PhD, Associate Professor, Department of Biology, New Mexico State University, Las Cruces, New Mexico, USA*

**AGENDA**

7:30 a.m. Light Continental Breakfast

8 a.m. **Course Introduction – Overview of the Course**
*Lyric C. Bartholomay, PhD, Associate Professor, Department of Pathobiological Sciences, University of Wisconsin-Madison, Madison, Wisconsin, USA*
*Kathryn Hanley, PhD, Associate Professor, Department of Biology, New Mexico State University, Las Cruces, New Mexico, USA*

8:15 a.m. **Mosquito Identification**
*Richard Wilkerson, PhD, Research Entomologist, Department of Entomology, National Museum of Natural History, Suitland, Maryland, USA*

8:45 a.m. **Mapping and Tracking Mosquito Bionomics**
*Yvonne-Marie Linton, PhD, Research Entomologist*, *Walter Reed Biosystematics Unit, Silver Spring, Maryland, USA*

9:15 a.m. **Mosquito Ecology**
*Gonzalo Vazquez-Prokopec, PhD, Assistant Professor, Emory University, Atlanta, Georgia, USA*

9:45 a.m. Coffee Break

10 a.m. **Targeted Trapping**
*Scott Ritchie, PhD, Professor, James Cook University, Cairns, Australia*

10:45 a.m. ***Vector Competence***
*Laura Kramer, PhD, FASTMH, Director of Arbovirus Lab and Professor, Wadsworth Institute, Slingerlands, New York, USA*

11:30 p.m. Lunch (On your own)

12:45 p.m. **Classical Approaches for Identification and Isolation of Viruses from Mosquito Samples**
*Robert Tesh, MD, Professor, Departments of Pathology, Microbiology and Immunology, Preventive Medicine and Community Health, University of Texas Medical Branch, Galveston, Texas, USA*

1:15 p.m. **Rapid Tests for Identification of Viruses from Mosquito Samples**
*Kirti Dave, PhD, President, VecTOR Test Systems, Thousand Oaks, California, USA*

1:45 p.m. **Nucleic Acid Detection for Identification of Viruses in Mosquito Samples**
*Lark Coffey, PhD, Assistant Professor, University of California-Davis School of Veterinary Medicine, Davis, California, USA*

2:15 p.m. Break

2:30 p.m. **Next-Gen Sequencing for Identification of Viruses in Mosquito Samples**
*Mark Stenglein, PhD, Assistant Professor, Microbiology, Immunology and Pathology Department*, *Colorado State University, Fort Collins, Colorado, USA*

3:15 p.m. **Panel Discussion: We Have Met the Enemy, and They are Zika Virus**

3:45 p.m. Course Adjourns