

# Prevention, Detection and Management of Arboviral Diseases

5-day course

April 23 - April 27, 2012

**ISGlobal** Barcelona  
Institute for  
Global Health

In collaboration with:



Accredited by:



This five-day course, directed at professionals and students in medicine and other health sciences, focuses on the key elements of the epidemiologic and clinical characteristics of arboviral diseases.



In collaboration with the Centers for Disease Control and Prevention (CDC) and the Barcelona Centre for International Health Research (CRESIB)

Accredited by the TropEd Network for Education in International Health

## Faculty

Dr. Edward Hayes, Barcelona Institute for Global Health / Barcelona Center for International Health Research (Barcelona, Spain)

Dr. Miguel Martínez, Virology Section, Microbiology Laboratory, Hospital Clínic-University of Barcelona / Barcelona Center for International Health Research (Barcelona, Spain)

Dr. Lyle Peterson, Division of Vector-Borne Infectious Diseases, Centers for Disease Control and Prevention (Fort Collins, USA)

Dr. Paul Reiter, Unit of Insects and Infectious Diseases, Institut Pasteur (Paris, France)

Dr. Thomas Monath, Kleiner Perkins Caufield & Byers, Harvard School of Public Health (Boston, USA)

## Learning Objectives

Describe key elements of the epidemiologic and clinical characteristics of arboviral diseases including the following:

- The phylogenetic classification of arboviruses
- Distribution and transmission dynamics of the leading causes of arboviral disease
- Methods for accurate diagnosis of arboviral diseases
- Principles of clinical management of arboviral diseases
- Prevention of arboviral diseases, including the role of vector control and the use of human vaccines;

Design surveillance systems for arboviral diseases; and

Implement programs for prevention and control of arboviral diseases

## Format

The course is based on lectures by subject experts, in-class workshops and independent study and reading. The language of instruction is English.

## Requirements

Current enrollment in a health-related Masters or doctoral program OR national licensure in the practice of medicine, nursing, or clinical laboratory diagnostics OR professional experience in laboratory diagnostics, disease prevention, or epidemiology.

A solid prior understanding of principles of biology, determinants of human health, and pathophysiology of diseases in humans.

English proficiency.

Tuition: 750€ including all course materials.

Maximum enrollment: 30 students, accepted based on admissions requirements, in order of application

**Enrollment begins 15 December 2011**

To download the course application and for more information on this and other training and education programs from the Barcelona Institute for Global Health see [www.isglobal.org](http://www.isglobal.org)

# ISGlobal Short Course

## Prevention, Detection and Management of Arboviral Diseases\*

Monday	Tuesday	Wednesday	Thursday	Friday
9h-9,30h Welcome and Practical Issues E.Hayes	9h-10h Lecture: Introduction to Laboratory Diagnostics: methods for viral detection and for measuring serologic markers of infection M. Martinez	9h-10h Lab workshop: Interpretation of Serologic Results M. Martinez	9h-10h Lecture: Biology of Tick Vectors E. Hayes and P. Reiter	9h-10h Lecture: Surveillance Systems for Arboviral Disease Detection, Monitoring and Research L. Petersen
9,30h-10,30h Introductory Lecture: Pathogenic Arboviruses: evolution and classification E.Hayes	10h-11h Lecture: Immunopathogenesis of Flaviviruses T. Monath	10h-11h Lecture: Biology and Control of Aedes aegypti and Aedes albopictus P. Reiter	10h-11h Lecture: Tick-borne Encephalitis E. Hayes	10h-11,30h Group 1: Lab workshop M. Martinez
10,30h-11,30h Lecture: Ecology of Arboviral Diseases: transmission cycles, clinical patterns, strategies for prevention L. Petersen	11h-11,15h break	11h-11,15h break	11h-11,15h break	10h-11,30h Group 2: Surveillance workshop L. Petersen, E. Hayes, and P. Reiter
11,30h-11,45h break	11,15h-12,15h Lecture: Development of Dengue Vaccines T. Monath	11,15h-12,15h Lecture: Dengue L. Petersen	11,15h-12,15h Lecture: Biology of Culex Mosquito Vectors P. Reiter	11,30h-11,45h break
11,45h-12,45h Lecture: Arboviral Mosquito Vector Biology: behavior and habitats, life cycle and reproduction P. Reiter	12,15h-12,30h break	12,15h-13,15h Lecture: Chikungunya E. Hayes	12,15h-13,15h Lecture: West Nile Virus Disease L. Petersen	11,45h-13,15h Group 1: Surveillance workshop L. Petersen, E. Hayes, and P. Reiter
12,45h-13,45h Lecture: Transmission Dynamics: Vector competence, viral replication, intensity of transmission P. Reiter	13,30h-14,15h lunch break	13,30h-14,15h lunch break	13,30h-14,15h lunch break	11,45h-13,15h Group 2: Lab workshop M. Martinez
13,45h-14,45h lunch break	14,15h-15,45h Group 1: Lab workshop M. Martinez	14,15h-15,45h Group 1: Lab workshop M. Martinez	14,15h-15,45h Group 2: Entomology workshop P. Reiter	13,15h-14,15h lunch break
14,45h-15,45h Lecture: Yellow Fever: history and current concepts T. Monath	15,45h-16h break	15,45h-16h break	15,45h-16h break	14,15h-15,45h Examination
15,45h-16h break	16h-17,30h Group 1: Entomology workshop P. Reiter	16h-17,30h Group 1: Entomology workshop P. Reiter	16h-17,30h Group 2: Lab workshop M. Martinez	15,45h-16h break
16h-17,30h Lecture and discussion: The History of the PAHO Campaign to Eradicate Aedes aegypti L. Petersen with P.R., T.M, and E.H.	16h-17,30h Group 2: Lab workshop M. Martinez	16h-17,30h Group 1: Entomology workshop P. Reiter	16h-17,30h Group 2: Lab workshop M. Martinez	16h-17h Discussion and Conclusions

\*note: this schedule is subject to change