Aedes aegypti and Aedes albopictus geographical expansion preceded dengue emergence due to the impact of increasing urbanization of the human population and climatic, social and environmental changes. These conditions not only favored dengue expansion but also the emergence of chikungunya and Zika, as well as the re-emergence of yellow fever. The co-circulation of these arboviruses poses new challenges to global public health.

The PAHO/WHO Collaborating Center for the Study of Dengue and its Control of the Institute of Tropical Medicine “Pedro Kouri”/MINSAP, the Cuban Society of Microbiology and Parasitology, the Cuban Ministry of Public Health and PAHO/WHO announce the 16th International Course on Dengue, Zika and Other Emergent Arboviruses to be held on 12 – 23 August 2019. This activity is organized in the framework of the 500th Anniversary of the “Villa San Cristobal de la Habana”.

During the two-week course, the regional and global epidemiological situation of important arboviruses will be updated. A prestigious faculty of professors from across the globe will present sessions and discussions on clinical management; vector control; scientific advances in pathogenesis, vaccines and antiviral development; new vector control tools; the influence of host genetics as well as the genetics of the vector and the viruses; emergency
control; new international initiatives for arbovirus control and prevention; among other interesting and important topics.

**OBJECTIVE**

That medical doctors, virologists, immunologists, social scientists, epidemiologists and entomologists, among others, receive the latest scientific information and have an opportunity to discuss relevant topics on dengue, Zika, chikungunya, and the situation of arboviruses in general.

**Topics**

The following topics will be covered through lectures, roundtable discussions, seminars, topic-specific symposia, and practical activities:

- Global situation: Dengue, Zika, Chikungunya and Yellow fever
- Situation in the Region of the Americas: Dengue, Zika, Chikungunya and Yellow fever – Where are we today?
- Current and future challenges: International initiatives
- Integrated Management Strategy for Arboviral Diseases
- Integrated surveillance
- Integrated Vector Management
- Genome and viral structure. Replication and viral evolution (flavivirus, alphavirus)
- Zika in pregnant woman
- Zika sexual transmission
- Neurological disorders associated with dengue, Zika and chikungunya
- Chronic chikungunya: What do we know?
- Serological and molecular diagnostics. Challenges of laboratory surveillance for arboviruses
- Immune response
- Host genetic factors and dengue and Zika severity
- Pathogenesis. Role of immune-enhancement in dengue and Zika
- Flavivirus NS1 protein
- Vaccine and antiviral advances
- *Aedes aegypti* ecology. Vector competence
- Vector dynamics in arbovirus transmission
- Chemical and biological methods for vector control
- New tools and strategies for vector control
- Sterile insect technique: Experiences in the Region of the Americas
- Mechanisms of insecticide resistance
- Virus-mosquito interaction
- Social and community aspects of arbovirus transmission and control
- Mathematical models for transmission of dengue and other arboviruses study. Prediction models
- Ecobiosocial approach for arbovirus control and prevention
- Role of the community in vector control
• Health economics and control of *Aedes aegypti* transmitted diseases
• Planning for emergency situations
• Climate change and transmission of arboviruses
• Research priorities

**CONFIRMED PROFESSORS**

Kevin Arien, Institute of Tropical Medicine, Belgium  
Mathieu Bangert, NTDP, WHO  
Mabel Carabali, McGill University, Canada  
Lee Ching, NEA, Singapur  
Giovanini Coelho, PAHO/WHO  
Alex Cook, NUS, Singapur  
Delia Enria, Argentina  
Ana Durbin, Johns Hopkins Bloomberg School of Public Health, USA  
Manuel Espinosa, Fundación Mundo Sano  
Florence Fouquet, TDR-WHO  
Leticia Franco, PAHO/OMS  
Scott Halstead, DVI  
Eva Harris, Universidad de California en Berkeley, EUA  
Nildimar Honorio, Instituto FioCruz, Brazil  
Olaff Horstick, Heidelberg University, Germany  
Thomas Jaenish, Heidelberg University, Germany  
Xavier de Lamballerie, Aix-Marseille University, France  
Linda Lloyd, USA  
Felipe Lorenzato, Takeda  
Kleber Luz, Universidad Federal Rio Grande Du Norte, Brasil  
Jairo Méndez, PAHO/WHO  
Jorge L. Muñoz-Jordán, CDC, Puerto Rico  
Jorge Osorio, Universidad Wisconsin, USA  
Christopher Oxenford, WHO  
Carlos Pardo, Johns Hopkins University School of Medicine, USA  
Ernesto Pleites, Hospital Bloom, El Salvador  
Amadou Alpha SALL, Instituto Pasteur, Senegal  
Aravinda de Silva, University of North Carolina, USA  
Fabrice Simon, Laveran Military Teaching Hospital, Francia  
Jiaren Sun, UTMB, EUA  
Patrick Van der Stuyft, Gent University, Belgium  
Veerle Vanlerbergue, Institute of Tropical Medicine, Belgium  
Xaveer Van Ostade, University of Antwerp, Bélgica  
Wim Vanden Berghe, University of Antwerp, Bélgica  
Nikos Vasilakis, UTMB, USA  
Gonzalo M. Vazquez-Prokopec, Emory University, USA  
Anubis Vega, Instituto Pasteur, Guadalupe  
Raman Velayudhan, NTDP, OMS  
Scott Weaver, UTMB, USA  
Annelies Wilder-Smith, Umeå University, Suecia
CONFIRMED CUBAN PROFESSORS

María G. Guzmán, Eric Martínez, María E. Toledo, Juan Bisset, Susana Vázquez, Virginia Capó, Mayling Alvarez, Ana B. Pérez, Beatriz Sierra, Pedro Ariel Martínez, Rosa Ramírez, Didye Ruiz, Daniel González, Omar Fuentes, Magdalena Rodríguez, Alberto Baly, María del C. Marquetti, Dennis Pérez, Martha Castro, Osvaldo Castro, José L Pelegrino, Pedro Más, Domingo Montada, Francisco Duran, Carilda Peña, Maritza Pupo, Lázaro Gil, Alicia Reyes, among other prestigious professors and collaborators from IPK, the Center for Genetic Engineering and Biotechnology (CIGB), the University of Havana and the Ministry of Public Health.

ORGANIZATION OF THE COURSE

The Course is structured in a theoretical section (Week 1, 12 – 16 August) and a practical section (Week 2, 19 – 23 August).

The theoretical section includes general lectures, roundtable discussions and topic-specific symposia.

During the practical section, participants will select one of five groups according to their interests: clinical care, entomology and vector control, virology/immunology, epidemiology, and community participation.

Poster session: Participants will have the opportunity to present their projects in a poster session during Week 1. Poster characteristics: 94cm wide X 140cm high (vertical position). Deadline for abstract submission: July 1, 2019. For further information contact Dr. Martha Castro, martac@ipk.sld.cu

Concurrent sessions:
Within the framework of the 16th International Course of Dengue, Zika and Emerging Arbovirus, between August 19 and 21, the 5th Annual Meeting of the Dentarget Network (Effectiveness of targeted, risk assessment based, dengue control, for its acronym in English) will be held at the Institute of Tropical Medicine “Pedro Kouri”, Havana, Cuba. Researchers from Brazil, Mexico, EU, Colombia, Belgium and Cuba will participate in that meeting with the explicit objective of continuing cooperation among different countries in Latin America and Europe, with as subject the development of research on evaluating alternative strategies for the prevention and control of arbovirosis based on risk assessment. The results of joint projects, which are conducted since its establishment in 2014, will be presented and discussed in this direction.

Other concurrent meetings will be announce in due time.

OFFICIAL LANGUAGES
The official languages of the Course: Spanish and English. Translation in both languages will be available during the theoretical section (Week 1).

**REGISTRATION:** Theoretical and Practical Sections = 800.00 CUC  
- Includes registration for both the theoretical and practical sections (Weeks 1 and 2), course materials, welcome cocktail and farewell dinner.  
- Participants may attend either the theoretical or the practical section, or both sections.  
- Registration fee for the theoretical section only (Week 1): 12 – 16 August 2019 = 500.00CUC  
  Registration fee for the practical section only (Week 2): 19 – 23 August 2019 = 400.00 CUC  
- Those interested should submit the registration form to lupe@ipk.sld.cu

Registration deadline: 20 July 2019

Download Registration form

Hotel booking information

Fees payment information

For further information please contact:

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