

PROGRAMME

15th International Dengue Course

**Challenges of Zika and Chikungunya transmission
7-18th August 2017, Havana, Cuba**

30 Anniversary of the first edition

Instituto de Medicina Tropical, Pedro Kouri, IPK, La Habana

Ministerio de Salud Pública de la República de Cuba (MINSAP)

Sociedad Cubana de Microbiología y Parasitología (SCMP)

Organización Panamericana de la Salud (OPS)/Organización Mundial de la Salud (OMS)

Neglected Tropical Disease Program, NTDP, OMS

ZIKAPLAN

ZIKALLIANCE

Fundación Mundo Sano

Sociedad Americana de Medicina Tropical, ASTMH

TDR

Dengue Vaccine Initiative, DVI

Instituto de Medicina Tropical, Bélgica

Academia de Ciencias de Cuba, ACC

American Association for the Advancement of Science (AAAS)

Johns Hopkins Malaria Research Institute



15TH DENGUE INTERNATIONAL COURSE, ZIKA AND CHIK

TEORETHICAL COURSE /CONFERENCES/ SYMPOSIA/ROUND TABLES			
Monday 7			
Hour	Topic	Place	Professor
8:30	Registration	Lobby	
9:45	Opening session	Theater	
10:00	Conference: The Cuban Health System	Theater	Ministry of Health
10:30	COFFEE		
11:00	Conference: Global response to dengue and other aedes borne diseases	Theater	Mathieu Bangert, WHO
11:30	Conference: Current dengue situation. technical advances in EGI-dengue in the Americas	Theater	Giovanini Coelho, PAHO
12:00	Conference: Arbovirus emergencies	Theater	Andrea Vikari, PAHO
12:30	Discussion	Theater	
12:45	LUNCH		
14:00	Conference: Flavivirus diagnostic challenges.	Theater	María G. Guzmán, IPK, Cuba
14:30	Conference: Bio-ecology of the dengue vector	Theater	Omar Fuentes, IPK, Cuba
15:00	Conference: The Global Vector Control Response	Theater	Mathieu Bangert, WHO
15:30	Discussion	Theater	
15:45	COFFEE		
16:15	Round Table: Social determinants of diseases transmitted by <i>Aedes aegypti</i> .	Theater	Marta Castro , IPK, María del Carmen Zabala, Flacso, Cuba, Adolfo Álvarez, INHEM, Cuba
17:30	Discussion	Theater	
19:00	WELCOME COCTEL		
Tuesday 8			
8:30	Round table: The clinic of dengue, zika and chikungunya	Theater	Daniel González , IPK, Cuba, Kleber Lutz, federal University RGN, Brazil, Fabrice Simon, Hospital Militar, Marseille
9:30	Round table: Severe dengue	Theater	Oswaldo Castro , IPK, Cuba, Luis Angel Villar, Santander University, Colombia, Ernesto Pleites, INS, El Salvador
10:30	Discussion	Theater	
10:45	COFFEE		
11:00	Conference: Dengue physiopathology	Theater	Eric Martínez, IPK, Cuba

11:30	Conference: Mechanisms of Protective Immunity in Dengue.	Theater	Scott B Halstead, DVI
12:00	Conference: The molecular specificity of the human antibody response to flaviviruses: implications for vaccines and diagnostics.	Theater	Aravinda da Silva, UCN, USA
12:30	Discussion	Theater	
12:45	LUNCH		
13:45	Conference. Immune response to dengue and zika.	Theater	Eva Harris, University of California, Berkeley, USA
14:15	Conference: Different clinical outcome in dengue: Natural Selection?	Theater	Beatriz Sierra, IPK, Cuba
14:45	Conference: PAHO response to diagnostic of current epidemics in the American region : DENV, CHIKV, ZIKV and YFV	Theater	Jairo Mendez, PAHO
15:15	Discussion	Theater	
15:30	COFFEE		
15:45	Round table: Re-emergence of Yellow fever.	Theater	Duane Gubler, Universidad Duke, Singapore, Livia C Martins, Institute Evandro Chagas, Brazil, Kleber Lutz, Federal University RGN, Brazil
17:00	Discussion	Theater	
17:15	Conference: Health system preparation for arbovirus emergency.	Theater	Pedro Mas, IPK, Cuba
17:35	Conference: Human capacity building for dengue and other arboviral diseases	Theater	Nereyda Cantelar, IPK, Cuba
8:30	Symposium: Vector control facing arbovirus emergencies	Room 7	Chairs: Domingo Montada, IPK Cuba, Olaf Horstick, Heidelberg University, Germany
8:30 -9:00	Capacity building for the implementation of IVM in the Americas, advances and challenges		Giovanini Coelho, PAHO
9:00-10:00	Control of <i>Aedes aegypti</i> , success stories in Costa Rica and Brazil		Jose Madrigal, Leandro Pelogia, Bayer
10:00-10:30	Household based vector control		Olaf Horstick, Heidelberg University, Germany
10:30-10:45	Discussion		

10:45-11:00	COFFEE		
11:00-11:30	Transgenic mosquitoes a tool for the integrated management of vectors in the control of <i>Aedes aegypti</i>		Rodrigo Marin, Ministry of Health, Costa Rica
11:30 -12:00	Mosquito vector competence studies with Zika		Laura Kramer, New York State University, USA
12:00-12:30	Wolbachia Project -Singapore.		Lee Ching NG, NEA Singapore
12:30-12:45	Discussion		
12:45	ALMUERZO		
14:00 -14:30	Interdisciplinary vision (how to integrate epidemiology, entomology and social factors for the control of <i>Aedes</i>		Florence Fouquet, TDR
14:30-15:00	Monitoring and control of <i>Aedes aegypti</i> in the North of Argentina		Manuel Espinosa, Fundación Mundo Sano
15:00-15:30	AEDESTRUCCIÓN - Combat the mosquito with the help of mobile phone		Fabio Castelo, Astral Saúde Ambiental, Brazil
15:30-15:45	Discussion		
Wednesday 9			
8:30	Symposium: Advances in Dengue and Zika Vaccine development	Theater	Chairs: Andrea Vicari, PAHO, Maria G Guzmán, IPK, Cuba
8:30-8:45	Dengue vaccination challenges in the context of other arboviruses circulation		Andrea Vicari, PAHO
8:45-9:15	Dengue and Zika controlled human infection models		Ana Durbin, University of John Hopkins, USA
9:15-9:45	Development of live attenuated vaccines for dengue and Zika virus		Steve Whitehead, NIH-NIAID, USA
9:45-10:15	Advances in the Takeda Vaccine candidate		Felipe Lorenzato, Takeda
10:15-10:30	Discussion		
10:30	COFFEE		
10:45-11:15	Phase 2-3 trials, Butantan studies		Ricardo Palacios, Instituto Butantan, Brazil
11:15-11:45	CYD-TDV. Update information		Gabriel Carrasquilla, Fundación Santa Fe, Colombia
11:45-12:45	Dengue vaccine in the framework of EGI		Marcelo Aguilar, Central University, Ecuador
12:45-13:00	Discussion		
13:00	LUNCH		
14:00	Round Table: EGI for the prevention	Theater	<u>Andrea Vicari,</u>

	and control of dengue in the context of other arboviruses		Giovanini Coelho, Jairo Méndez, PAHO, Eric Martínez, IPK, Cuba
15:30	Discussion	Theater	
15:45	COFFEE		
16:00	Round table: Emergence of CHIK	Theater	Scott Weaver, UTMB, USA, Fabrice Simon, Hosp. Militar, Marseille, Lee Ching, NEA Singapore, Karen Polson, CARPHA
Thursday 10			
8:30	Symposium: Changing the paradigm of <i>Aedes</i> control in arbovirus co-circulation environments.	Theater	Chair: Patrick Van der Stuyft, IMT, Belgium
	I. Lack of effectiveness or lack of evidence on vector control strategies.? Discussion based of systematic review.		Pablo Manrique, UADY, Mexico
	II. IRS treatment added to vector control programme • Evidence of effectiveness in a randomized community trial.		María Eugenia Toledo, IPK, Cuba
	Cost estimation of insecticide residual spraying . New elements for making decision.		Alberto Baly, IPK, Cuba
10:30	COFFEE		
	Acceptability of ITC and IRS in Santiago de Cuba. A qualitative approach		Dennis Pérez, IPK, Cuba
	Risk stratification for preventive strategies •Changing the paradigm of <i>Aedes</i> control based on hotspot identification of dengue transmission.		Veerle Vanlerberghe, IMT, Belgium
	III. Identification of hotspot dengue transmission. Influence of variables and scales		Mayelin Mirabal, Cuba

	Validation of methodologies for identification of hotspot of arbovirus transmission		Gonzalo Vázquez Prokopec, Emory University, USA
	. From “spray em and slay ‘em” to “rear and release”: changing paradigms of Aedes control		Scott Ritchie, James Cook University, Australia
8:30	Symposium: Pathogenesis and Vaccines	Room 7	Chairs: Beatriz Sierra, IPK, Cuba, Aravinda UNC, USA
8:30-9:00	Role of flavivirus NS1 in disease pathogenesis		Eva Harris, University of California, Berkeley, USA
9:00-9:30	Cellular immune response patterns against dengue infection		Ana B. Pérez, IPK, Cuba
9:30- 10:00	Zika infection of neotropical primates		Scott Weaver, UTMB, USA
10:00-10:15	COFFEE		
10:15-10:45	A frame work for evaluating dengue vaccines”		Aravinda da Silva, UNC, USA
10:45-11:15	Predictive value of the Non-Human Primate model for evaluating dengue vaccine efficacy in humans.		Laura White, UNC, EUA
11:15-11.45	An update on the development and characterization of Cuban Dengue Vaccine Candidate		Lazaro Gil, CIGB, Cuba
11:45-12:15	Modeling results on dengue vaccine implementation		Maira Aguiar, University of Lisbon, Portugal
12:15-12:30	Discussion		
12:45	LUNCH		
14:00	Symposium: Advances and challenges in emergent arbovirus diagnostic	Theater	Chairs: Mayling Alvarez, IPK, Cuba y Delia Enria, INEVH J Maiztegui, Argentina
14:00-14:20	Arbovirus diagnostic. Strength and weakness		Delia Enria, INEVH J Maiztegui, Argentina
14:20-14:40	Diagnostic scenario for other less prevalent Arboviruses		Leticia Franco, PAHO
14:40-15:00	Arbovirus serology: Differential diagnosis		Jean Claude Manuguerra, Institute Pasteur, France
15:00-15:20	“Zika virus: Improved assay through use of IgG/IgM and nonstructural proteins”		Laura Kramer, New York State University, USA
15:20-15:30	Discussion		
15:30-16:00	COFFEE		
16:00-16:20	Arbovirus diagnostic in Cuba, 2015-2017”		Mayling Álvarez, IPK, Cuba

16:20-16.40	Real time PCR kit solutions for Zika, Dengue, Chikungunya and Malaria		Karin Rottengatter, Altona
16:40-17:00	Workflow development for the molecular detection of Zika Virus		Leonardo Iñiguez, Roche
17:00-17:20	Experience in verifying the dengue genotype kit for the detection of 4 dengue serotypes.		Maria Aneth Atencio, Centro Conmemorativo Gorgas, Panama
17:20-17:40	"Performance of the new recomLine Tropical Fever IgG, IgM Assay with DENV, CHIKV and ZIKV samples from endemic areas and travelers"		Leonardo Padilla, Quindio University, Colombia
17:40-18:00	Discussion		
Friday 11			
8:30	Round table: Challenges in the control of <i>Aedes</i> mosquito. New tools What works and what not in <i>Aedes</i> control? Controlling <i>Aedes aegypti</i> pest populations through the application of the Oxitec male mosquito. <i>Wolbachia</i> , new control opportunity for Arbovirus transmitted by <i>Aedes</i> .		Olaff Horstick , University of Germany, Rodrigo Marin, Ministry of Health, Costa Rica, Jorge Osorio, Wisconsin University, USA
9:30	Discussion		
9:45	COFFEE		
10:00	Symposium: Epidemiology and diagnostic of zika. Organized by ZIKAPLAN and IPK Coordinators: Annelies Wilder-Smith, Umea University, Sweden and Maria G Guzman, IPK	Theater	Chairs: Annelies Wilder-Smith, Zikaplan y Ariel Martinez, IPK, Cuba
10.00-10.20	Geographic spread of Zika		Annelies Wilder-Smith, UMEA University, Sweden
10.20-10.40	Seroprevalence studies		Xavier de Lamballerie, Marseille University, France
10.40-11.00	Predicting the future of Zika spread		Eduardo Massad, Sao Paulo University, Brazil
11.00-11.20	Climate change and Aedes-transmitted diseases		Joacim Rocklöv, UMEA University, Sweden
11.20-11.40	Phylogenetic studies for African and Latin American Zika virus isolates		Amadou Sall, Institute Pasteur, Senegal
11:40-11:50	Discussion		
11.50-12.10	Development of Zika antivirals		Suzanne Kaptein, Leuven University, Belgium

12.10-12.30	ZIKV-vector Interactions		Louis Lambrechts, Institute Pasteur, France
12.30-12.50	Zika diagnostics and the future of arbovirus diagnostic		Rosanna Peeling, London School of Tropical Medicine and Hygiene, UK
12:50	LUNCH		
14.00-14.20	Persistence of Zika virus in bodily fluids		Tyler Sharp, CDC Puerto Rico
14.20-14.40	Pregnant women cohort studies(overview of currently ongoing studies including WHO ZIKV-IPD consortium)		Thomas Jaenisch, University of Heidelberg, Germany
14.40-15.00	Attack rates of congenital Zika syndrome		Thalia Araújo, University of Pernambuco, Brazil
15.00-15.20	Congenital Zika Syndrome: spectrum of clinical manifestations		Democrito de Filho, University of Pernambuco, Brazil
15.20-15.30	Discussion		
15:30	COFFEE		
16.00	Round table. Cuban experience in the struggle against zika		Francisco Duran, Carilda Peña, Roberto Fumero, MINSAP
Closing theoretical course			
Poster presentation on Wednesday 9 and Thursday 10 at the 2d floor of the main building (poster area).			

**PRACTICAL SESSIONS
GROUP 1. VIROLOGY/IMMUNOLOGY.**

Monday 14

Hour	Topic	Place	Professor
8:30	Conferencia: Molecular diagnostic of arboviruses. Current protocols, challenges	Virology	Pedro Ariel Martínez, IPK, Cuba
	Molecular diagnostic of DENV/CHIK/Zika. Use of Trioplex and singleplex.		Gilberto A. Santiago (CDC/OID/NCEZID), Pedro Ariel Martínez , Alicia Aguilar , Giselle Díaz , Esther María Mesa, Emidalys Santana, Dailin Mederos, IPK, Cuba
12:30	LUNCH		
14:00	Molecular diagnostic of DENV/CHIK/Zika.	Virology	Karin Rottengatter and Hans Kuhn, ALTONA, Pedro Ariel Martínez, Alicia Aguilar , Giselle Díaz, Esther María Mesa, Emidalys Santana, Dailin Mederos, IPK, Cuba

Tuesday 15

8:30	Molecular Diagnostic of CHIK using CHIKV RT-LAMP	Virology	Hirofumi Sawa and Yasuko Oba, Hokkaido, University Japan, Pedro A. Martínez, Alicia Aguilar, Giselle Díaz , Esther María Mesa, Emidalys Santana, Dailin Mederos, IPK, Cuba
12:30	LUNCH		
14:00	Lecture: Gene cloning, applications and advanced technologies.	Virology	Rosa Ramírez, IPK, Cuba
	Lecture: Nucleic acid sequencing. Applications. Phylogenetic analysis.		Giselle Díaz, IPK, Cuba

Wednesday 16

8:30	Lecture: Arbovirus viral isolation. Cuban experience.	Virology	Mayling Alvarez, IPK, Cuba
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	<p>Lecture: "New ways to assess the quality of the induced antibody responses such as depletion of antibodies and blockade of binding assays"</p> <p>Lecture: serological and virological markers for arbovirus diagnostic</p> <p>Serological diagnostic of DENV/CHIK/Zika</p>		<p>Laura White, UNC,EUA</p> <p>Didye Ruiz, IPK, Cuba</p> <p>Vivian Barrera , MIKROGEN, Didye Ruiz , Susana Vázquez, Carlos Manuel Ortiz, Nilvia Herrada, Naifi Calzada, Lianna García, IPK, Cuba</p>
12:30	LUNCH		
14:00	Serological diagnosis of DENV/CHIK/Zika.	Virology	<p>Vivian Barrera , MIKROGEN, Didye Ruiz, Susana Vázquez, Naifi Calzada, Carlos Manuel Ortiz, Nilvia Herrada, Lianna García, IPK, Cuba</p>
Thursday 17			
8:30	<p>Rapid diagnostic of dengue (NS1, IgG, IgM, IgA)</p> <p>Lecture: Immune response gene expression in samples of dengue and zika patients.</p> <p>Practice: expression of chemokine genes in CMSP and tissues.</p>	Virology	<p>Mauricio Perea, BIOLAB, Didye Ruiz, Susana Vázquez, Naifi Calzada, Carlos Manuel Ortiz, Nilvia Herrada, Naifi Calzada, Lianna García, IPK, Cuba</p> <p>Beatriz Sierra, Ana B Pérez, IPK, Cuba</p> <p>Beatriz Sierra, Ana B Pérez, Eglys Aguirre, Jessica Baldriche, IPK, Cuba</p>
12:30	LUNCH		
14:00	Cont.	Virology	
Farewell dinner			
Friday 18			
8:30	<p>Arbovirus laboratory surveillance. Country experiences.</p> <p>Final considerations. research priorities</p>	Virology	MG Guzmán, professors and participants.
12:00	CLOSING SESSION		

**PRACTICAL SESSIONS
GROUP 2. CLINIC/PATHOLOGY**

Monday 14

Hour	Topic	Place	Professor
8:30	Clinical-practical workshop: Neurology in times of zika. Neurological complications associated with arboviral infections <i>Organized by ZIKAPLAN and IPK</i>	Theater	Coordinators: Carlos A. Pardo , University Johns Hopkins, USA, Eric Martínez and Osvaldo Castro, IPK, Cuba
8:30	Welcoming		Manuel Romero, Director IPK María G Guzmán, Carlos A Pardo Eric Martinez, Osvaldo Castro
8:45-9:05	Arboviral infections and Neurological Complications Around the World		Tom Solomon, Liverpool School of Public Health, UK
9:05-9:25	Arboviruses outbreaks in the Americas: From dengue to zika		Eric Martinez, IPK, Cuba
9:25-9:45	Guillain-Barre Syndrome: 100 years later		B.C. Jacobs, Erasmus MC, Netherlands
9:45-10:05	The impact of Zika outbreaks on the epidemiology of neurological disease		James Sejvar, Centers for Disease Control and Prevention, CDC, USA
10:05-10:20	BREAK		
10:20-10:40	CNS complications of Arboviral Infections		Carlos A Pardo, NEAS Colombia & Johns Hopkins University, USA
10:40-11:00	Case presentation & discussion: Zika related complications		Amilton Antunes Barreira, University of Sao Paulo, Brazil
11:00-11:20	Case presentation & discussion:		Edmundo Rivero, ICU, Ameijeiras

	Dengue-related GBS case		Hospital, Cuba
11:20-11:40	Case presentation & discussion		Recife Group, Brazil
11:40-12:00	Case presentation & discussion		Carlos A. Luciano, University of Puerto Rico
12:00-12:20	Case presentation & Discussion		Rio de Janeiro Group, Brazil
12:20	LUNCH		
13:20-13:40	The immunology of GBS: the challenge of arboviral infections	Theater	H. Willison, University of Glasgow, UK
13:40-14:00	Arboviral disease and Neuropathogenesis		Susan Barnett, University of Glasgow, UK
14:00-14:20	Diagnostic Laboratory approach in neurological disease: Blood, CSF and Urine		Beatriz Parra, University del Valle, Colombia
14:20-14:40	Practical neurophysiology: what we need to know and do!		TBA
14:40-15:00	Management of the critical patient in Arboviral neurological disease		Nelson Gomez, Head of Neurology Department, Ameijeiras Hospital, Cuba
15:00-15:15	BREAK		
15:15-15:35	Neuroinflammatory processes in Arboviral Diseases: Case series.		Alberto Dorta, LABCEL- Medical University of Havana, Cuba
15:35-15:55	Clinical Case: Dengue-related encephalitis		Lilia María Ortega, ICU, IPK, Cuba
15:55-16:25	Neurological Complications of Chikungunya		Fabrice Simon, Marseille, France
	INTERACTIVE DISCUSSIONS		
16:25-16:55	Interactive discussion: Clinical challenges in neurological disease and		BC Jacobs, Erasmus Medical Center, The

	Arboviral infection		Netherlands, Lance Turtle, Liverpool University, UK, others
16:55-17:25	Interactive discussion: Bedside to bench		Hugh Willison, Susan Barnett, University of Glasgow, UK, others
17:25-17:40	Interactive discussion: The diagnostic challenge		Patricia Sequeira, FIOCRUZ, Brazil, Beatriz Parra, University del Valle, Colombia, Raquel Medialdea-Carrera (Brazil/UK), others
17:40-18:00	Closing remarks: What we need to do next!		Carlos Pardo, Johns Hopkins University, USA, Maria G Guzman, IPK, Cuba
Tuesday 15			
8:30	Implications of Zika infection during pregnancy.	Room 7	Patricia Brazil, FIOCRUZ, Brazil, Eric Martínez, IPK, Cuba
	Clinical syndrome in dengue. Implementation of the 2009 PAHO-WHO dengue clinical classification.		Osvaldo Castro, IPK, Cuba, Carmen Soria, Instituto Izquieta Pérez, Ecuador
12:30	LUNCH		
14:00	Warning signs for shock for dengue. Usefulness for case management Case discussion.	Room 7	Daniel González, IPK, Francisco Zamora, Araiza Consuegra, MINSAP, Cuba
	Persisting rheumatic post CHIK disorders		Fabrice Simon, Marseille, France
Wednesday 16			
8:30	Dengue differential diagnostic.	Room 7	Francisco Zamora, MINSAP, Eric Martínez, IPK, Cuba
	Case discussion		Francisco Zamora, MINSAP, Osvaldo Castro, IPK, Cuba
12:30	LUNCH		
14:00	Co-morbidity and co-infections. Two aspects associated to dengue severity.	Room 7	Daniel González, IPK, Cuba

	Case discussion.		Daniel González, Osvaldo Castro IPK, Cuba
	Anatomo-pathologic findings in dengue		Jenny Peraza, Eric. Martínez, IPK, Cuba
Thursday 17			
8:30	Dengue clinical management in children and adults.	Room 7	JF Sabatier, Hosp. Aballi, Eric Martínez, IPK, Cuba
	Diagnostic and clinical management of the main dengue complications. Case discussion		Osvaldo Castro, Daniel González, IPK, Cuba
12:30	LUNCH		
14:00	Dengue and pregnancy. Case discussion.	Room 7	Reinaldo L. Barroso, Hops JB Zayas, Cuba, Eric Martínez, IPK, Cuba
FAREWELL DINNER			
Friday 18			
8:30	Health system organization and other sectors during emergency. Final considerations.	Room 7	Osvaldo Castro, Eric Martínez, IPK, Sonia González, MINSAP, Cuba
12:00	CLOSING SESSION		

PRACTICAL SESSIONS GROUP 3. VECTOR CONTROL			
Monday14			
Hour	Topic	Place	Professor
8:30	National Program for Vector Control	Room 5	Carilda Peña, MINSAP
	Insecticide resistance surveillance to <i>Ae. aegypti</i>		María Magdalena Rodríguez, IPK, Cuba
	Control of Aedes : What does work?		Olaff Horstick, Heidelberg Univ, Germany
	Communication of the prevention and control programs for arbovirus infections. Advances and challenges		Yisel Hernández, IPK, Cuba
	Vertical transmission of dengue viruses in <i>Ae aegypti</i> : Implications for surveillance and control.		Gladys Gutierrez, IPK, Cuba
12:30	LUNCH		
14:00	Vector competence of <i>Aedes sp.</i> Practice: vector competence	Room 5	Anubis Vega, Institute Pasteur, Guadalupe Gladys Gutierrez, IPK, Cuba, Anubis Vega, Institute Pasteur Guadalupe
Tuesday 15			
8:30	Symposium: New Advances in our knowledge of the <i>Aedes aegypti</i> biology and its control Organized by AAAS, JHMRI, ACC and IPK	Room 5	Chairs: Peter Agre, University Johns Hopkins, USA, Juan Bisset, IPK, Cuba
9:00-9:30	Wellcome, IPK, AAAS, ACC, MINSAP		IPK, AAAS, JHMRI, ACC, MINSAP
9:30- 9:50	U.S. - Cuban Scientific Collaborations since Yellow Fever		Peter Agre, University Johns Hopkins, USA
9:50-10:10	Challenges in the control of <i>Aedes aegypti</i>		Juan Bisset, IPK, Cuba
10:10 10:30	Mosquito surveillance - understanding transmission and informing control.		Douglas Norris, University Johns Hopkins, USA
10:30-10:45	Discussion		
10:45-11:00	COFFEE		
11:00-11:20	Attacking <i>Ae. aegypti</i> and <i>Ae. albopictus</i> with Autocidal Approaches:		Stephen Dobson, University of

	Sharing Experiences from the USA.		Kentucky
11:20-11:40	New technologies for the control of <i>Aedes aegypti</i> . Use of <i>Wolbachia</i>		Luis A Piedra, IPK, Cuba
11:40-12:00	Anopheles mating biology provides opportunities for malaria control.		Flaminia Catteruccia, Harvard University
12:00-12:20	Genetic control of <i>Ae. aegypti</i> . Rene Gato		Rene Gato, IPK, Cuba
12:20-12:40	Discussion		
12:30	LUNCH		
14:00-14:20	Cuban experience in the vector control during the yellow fever epidemic of Angola		Maria del Carmen Marquetti, IPK, Cuba
14:20-14:40	Lessons learned from dengue prevention programs: Interventions evaluated in Iquitos.		Amy Morrison, California Davis University, USA
14:40-15:00	Discovery of natural and synthetic small molecules for developing mosquitocides with novel mechanisms of action.		Peter Piermarini, Ohio State University
15:00-15:20	Discussion		
15:20-15:40	COFFEE		
15:40-16:00	Paratransgenesis: engineering mosquito symbionts to fight disease.		Marcelo Jacobs-Lorena. University Johns Hopkins, USA
16:00-16:20	Novel approaches for arbovirus transmission-blocking		George Dimopoulos, University Johns Hopkins, USA
16:20-16:40	Genetic engineering for the masses: Low-tech, low-cost CRISPR/Cas9 gene editing in <i>Aedes</i> mosquitoes.		Jason Rasgon, Pennsylvania State University
16:40-17:00	Discussion		
17:00-17:10	Final remarks		
17:20-18:30	Meeting/discussion among speakers: What can we do together?		
Wednesday 16			
8:30	Cuban program of <i>A. aegypti</i> control. Field activity.	Room 5	Gilberto Zamora, MINSAP, Domingo Montada, Mayda Castex, Maureen Leyva, IPK, Cuba
12:30	LUNCH		
14:00	Microorganisms for <i>Aedes aegypti</i> control	Room 5	Aileen González, IPK, Cuba
	Laboratory practice: Identification of entomopathogen bacteria		Aileen González, Ariamis Companioni , IPK, Cuba
Thursday 17			
8:30	Detinova technique application. Theoretical-practical activity	Room 5	Omar Fuentes, Yanisley Martínez, Yanet Martínez, IPK,

			Cuba
12:30	LUNCH		
14:00	Effectivity of chemical insecticide formulations for <i>Aedes aegypti</i> control.	Room 5	Domingo Montada, IPK, Cuba
	Evaluation of plants with insecticide activity against mosquitoes. Cuban experience.		Maureen Leyva, IPK, Cuba
	Economic costs of <i>Ae aegypti</i> vector control .		Ramiro Paucar, FARMEX, SA
	Use of nematodes for control.		Zulema Menéndez, Israel García, IPK, Cuba.
	Analysis of <i>Aedes</i> sp habitat in a municipality in Havana		Natividad Hernández, Jorge Anaya, IPK, Cuba
FAREWELL DINNER			
Friday 18			
8:30	Round table: Integrated vector control. ¿Why we don't control <i>Ae. aegypti</i> ? Final considerations.	Room 5	Carilda Peña, Gilberto Zamora , MINSAP, Juan Bisset, Rene Gato, Omar Fuentes, Yisel Hernández , María C. Marquetti , IPK, Cuba, Lorenzo Cáceres , Instituto Conmemorativo Gorgas, Panama
12:00	CLOSING SESSION		

PRACTICAL SESSIONS GROUP 4. EPIDEMIOLOGY			
Monday 14			
Hour	Topic	Place	Professor
8:30	Methodology for identification of hot spots in dengue transmission. Geospatial analysis and influence of population motility.	Room 6	Mayelin Mirabal, Cuba, Felipe Dzul, UADY, Mexico
12:30	LUNCH		
14:00	Cont.	Room 6	
Tuesday 15			
8:30	Evaluation of effectivity of vector control methods. Evidences and limitations of results	Room 6	Pablo Manrique, UADY, Mexico, María E. Toledo, IPK, Cuba
12:30	LUNCH		
14:00	Cont.	Room 6	
Wednesday 16			
8:30	Design and implementation of impact evaluation studies. Myths and realities in the cluster studies	Room 6	Nibaldo Linares, IFV, Cuba, Veerle Vanlerberghe, IMT, Belgium
12:30	LUNCH		
14:00	Cont.	Room 6	
Thursday 17			
8:30	Disease cost evaluation studies	Room 6	Alberto Baly, Alicia Reyes, IPK, Cuba
12:30	LUNCH		
14:00	Cont.	Room 6	
Farewell dinner			
Friday 18			
8:30	Integrated strategies for control. The environmental and population density in the strategy.	Room 6	Eduardo San MarfulOrbis CEDEM, Rene Alejandro González Rego Havana University, Ana M Ibarra INHEM, Cuba Facilitadores: Angel German y Deborah Betancourt (IPK)
12:00	CLOSING SESSION		

PRACTICAL SESSIONS			
GROUP 5. SOCIAL DETERMINANTS AND COMMUNITY PARTICIPATION			
Monday14			
Hour	Topic	Place	Professor
	Workshop: Social determinants and community participation in arbovirus diseases <i>Organized by Mc Gill and Montreal Universities and IPK</i>	Room 9	Coordinators: Mabel Carabali, Mc Gil University, Canada, Dennis Pérez y Marta Castro, IPK, Cuba
8:30	Welcome. Introduction. Objectives of the course. Previous experiences of the participants on social determinants Approaching poverty, social inequalities and public policies from a qualitative perspective.		Marta Castro, Dennis Pérez, IPK, Cuba, María del Carmen Zabala, Flacso, Cuba, Jay Kaufman, Mabel Carabali, McGill University, Canada, Valery Ridde, Samiratou Ouédraogo, Montreal University, Canada, Linda Lloyd, USA, Adolfo Álvarez, INHEM, Cuba
12:30	LUNCH		
14:00	Introduction to quantitative assessment of social determinants and health inequalities	Room 9	Jay Kaufman, Mabel Carabali, McGill University, Canada
Tuesday 15			
8:30	Estimation of Summary measures of Health Inequalities.	Room 9	Jay Kaufman, Mabel Carabali, McGill University, Canada
12:30	LUNCH		
14:00	Methodological Tools to Analyze Health Inequalities.	Room 9	Jay Kaufman, Mabel Carabali, McGill University, Canada
Wednesday 16			
8:30	Participatory tools and communication strategies for targeting social determinants/inequalities: Strengthening communication capacity to address community needs in vector control: PAHO's Regional efforts .	Room 9	Linda Lloyd, EUA
	Participatory tools and communication strategies for targeting social determinants/inequalities: Community-based intervention for dengue prevention in Burkina Faso. A case study		Valery Ridde, Samiratou Ouédraogo, Montreal University, Canada

12:30	LUNCH		
14:00	Participatory tools and communication strategies for targeting social determinants/inequalities: Reflex-Iss.	Room 9	Valery Ridde, Samiratou Ouédraogo, Montreal University, Canada
Thursday 17			
8:30	Participatory tools and communication strategies for targeting social determinants/inequalities: Building a causal model.	Room 9	Marta Castro, Dennis Pérez, IPK, Cuba, Linda Lloyd, USA
12:30	LUNCH		
14:00	Participatory tools and communication strategies for targeting social determinants/inequalities: Building a causal model.	Room 9	Marta Castro, Dennis Pérez, IPK, Cuba, Linda Lloyd, USA
Farewell dinner			
Friday 18			
8:30	Social determination of health: studies conducted in Cuba. Final considerations.	Room 9	Adolfo Álvarez Marta Castro, Dennis Pérez, Maria C Zabala, Jay Kaufman, Mabel Carabali, Valery Ridde, Samiratou Ouédraogo, Linda Lloyd
12:00	CLOSING SESSION		

Collaborators

Altona

Bayer

BDC Internacional S.A.

Bio Lab Internacional

Mikrogen

Roche

Sanofi Pasteur

