

VIII PAN-AMERICAN DENGUE
RESEARCH NETWORK MEETING

April 21-24, 2025



MEDELLIN 2025
PANDENGUE NET
VIII MEETING

SCIENTIFIC PROGRAM

Sponsors

Platinum



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Bronze



Time

Monday April
21, 2025

Tuesday April 22, 2025

Wednesday April 23, 2025

Thursday April 24, 2025

08:30 a.m.

Registration

8:30 a.m. - 10:00 a.m. - early morning session (90 min)

Epidemiology and Genomics (Session 1)

Katie Anderson (SUNY Upstate Medical University): "How is Convergent Epidemics, Divergent Contexts: A Comparative Framework for Understanding Dengue in Asia and the Americas"

Iliaria Dorigatti (Imperial College London): "Modelling dengue transmission in Latin America: challenges and opportunities"

Paloma Carcamo (Yale, USA): "Long-term effectiveness of Wolbachia-based interventions in preventing dengue in Rio de Janeiro, Brazil: An observational study"

Maria Patricia Arbelaez (Universidad de Antioquia, Medellin, Colombia): "Long-term durability and public health impact of wMel Wolbachia deployments for Aedes-borne disease control in the Aburra Valley, Colombia"

James T. Earnest (University of Central Florida, USA): "Targeted Indoor Residual Spraying (TIRS) trial outcomes and immunological observations"

Virology (Session 1)

Stacy Horner (Duke University School of Medicine): "Regulation of flaviviral infection by UFMylation"

Richard Kuhn (Purdue University): "Structures of cell-surface molecules in complex with dengue virus that promote infection"

V. Lima Batista (Brazil): "Key Mechanisms of Dengue Virus-Induced Thrombocytopenia: Megakaryocyte Cell Death and Leukocyte-Platelet Interactions"

Jaime Cardona-Ospina (University of California; Berkeley): "Anti-NS1 plasma IgA driving neutrophil effector functions correlates with severe dengue disease after Zika virus infection"

Thiago Henrique Jiran Ferreira Leite (France/Brazil): "The role of hemocytes during arbovirus infection in Aedes aegypti mosquitoes"

Immunology (Session 1)

Leah Katzelnick (NIH, US): "Phase 1 trial to safely model primary, secondary, and tertiary dengue"

Ana Perez (IPK Cuba): "Cytotoxic immune response: findings supporting its role in the control and pathogenesis of dengue infection"

Tulika Singh (University of California, Berkeley, USA) "Differential antibody and B cell imprint of secondary dengue is based on prior dengue versus Zika virus exposure and explains epidemiological risk"

Kelsey E. Lowman (Laboratory of Infectious Diseases, NIAID, NIH): "Germinal center reactions in individuals with distinct immune histories after monovalent dengue vaccination"

Eva Chebishev (Icahn School of Medicine at Mount Sinai, New York, NY): "Interrogating the Serotype-Specific Immune Profiles Induced by Dengue Virus in Primary Human Tissues"

10:00 a.m.



10:00 a.m. - 10:25 a.m. - coffee break (25 min)



10:25 a.m.

10:25 a.m. - 12:00 p.m. - late morning session (95 min)

Epidemiology and Genomics (Session 2)

Jean Paul Carrera (Gorgas Memorial Institute of Health Studies, Panama): "Proactive One-Health surveillance reveals novel orthobunyaviruses and their potential vectors and reservoirs"

Josefrancisco Galue (Gorgas Memorial Institute of Health Studies, Panama): "Association of forest-related activities with seropositivity for Madariaga and Venezuelan Equine Encephalitis virus in the community of Aruza, Panama"

Matheus Arruda (Universidade Federal de Minas Gerais, Brazil): "Six years after the outbreak: tracking enzootic sylvatic yellow fever in Minas Gerais, Brazil, 2023/2024"

Laura Silvana Pérez-Restrepo (Universidad Nacional de Colombia): "Epidemiological Characterization of Undifferentiated Febrile Illness in High-Risk Areas of Colombia"

Miguel Plazaola Cuadra (Sustainable Sciences Institute, Managua, Nicaragua): "The changing epidemiology of Dengue in Nicaragua in the post-pandemic period"

Livia Sacchetto (Faculdade de Medicina de São José do Rio Preto): "Genomic epidemiology of a large-scale and persistent chikungunya virus epidemic in São Paulo, Brazil"

Virology/Pathogenesis (Session 2)

Anna Överby Wernstedt (UMEA University, Sweden): "Whole brain imaging reveals that both type I IFN system and the viral proteins shape tropism of Tick-borne encephalitis virus within the brain"

Rosa María Del Angel Nunez (Instituto Politécnico Nacional, México): "Nuclear-Cytoplasmic Transport Dysregulation in Dengue and Zika Virus Infections: Exploring Therapeutic Strategies"

James D. Brien (University of Kentucky, USA): "Replication kinetics and blood brain barrier drive Zika virus population diversity"

Carlos Daniel Cordero Rivera (CINVESTAV-IPN, México): "Analysis of the infectivity of small extracellular vesicles from DENV-infected C6/36 mosquito cells in adult mouse model AG129"

Tayna Galvao (Facultad de Medicina de São José do Rio Preto, Brazil): "In vitro evaluation of genetic diversity and adaptation dynamics of mayaro virus (mayv) in different hosts"

Immunology/Vaccines (Session 2)

Kimberly Dowd (NIH, US): "Pr-independent biogenesis of infectious mature Zika virus particles"

Esper Kallas, Butantan/Merk: Butantan-DV development and plan to market"

Maria Abad (University of North Carolina, Chapel Hill): "Dengue vaccine safety in naive children (Cebu, Philippines): Dissecting the properties of antibodies stimulated by a live dengue vaccine (Dengvaxia®) and their relationship to vaccine enhanced dengue disease"

Mauricio Nogueira (Faculdade de Medicina de São José do Rio Preto, Brazil): "Dengue virus genetic diversity in unvaccinated and vaccinated dengue-infected individuals from the Butantan-dengue vaccine (Butantan-DV) phase 3 trial in Brazil"

Sandra Lopez (Memorial Institute for Health Studies, Panama): "Venezuelian equine encephalitis and Madariaga viruses induces a balanced humoral and cell-mediated response in convalescent survivors"

Sarah Sérgio (Federal University of Minas Gerais Brazil) "NS1 mRNA vaccine elicits immune response and induces protection against DENV2 NGC intracranial challenge"

12:00 p.m.

12:00 p.m. - 1:30 p.m. - lunch (90 min)

12:15 p.m. - 1:30 p.m. YELLOW FEVER SESSION



12:00 p.m. - 1:30 p.m. - lunch (90 min)



Time

Monday April 21, 2025

Tuesday April 22, 2025

Wednesday April 23, 2025

Thursday April 24, 2025

1:30 p.m.

1:30 p.m. - 3:00 p.m. - early afternoon session (90 min)

Vector Ecology/Control (Session 1)

Kara Fikrig (USA - Peru): "Community-Based Aedes aegypti Control in Rural Amazonian Villages: Assessing the Impact of Larval Habitat Removal"

Elisabeth Nelson (Yale, USA): "EVITA Dengue: Preliminary findings on the effectiveness of releasing Wolbachia-infected Aedes aegypti in achieving sustained introgression in a complex urban setting"

Waldemar Baldoquín-Rodríguez (Institute of Tropical Medicine "Pedro Kouri", Cuba): "Entomological effect of sterile mosquito release in two localities of Havana, Cuba, 2023: controlled interrupted time series in a crossover setting"

Victor Hugo Peña-García (Stanford University, USA): "Non-household environments promote dengue transmission: human mobility and implications for vector control"

Azael Che-Mendoza (Universidad Autonoma de Yucatan, Mexico): "Three years of entomological findings in houses receiving targeted indoor residual spraying (tirs) against aedes aegypti in Mexico"

Pathogenesis/Antivirals (Session 3)

Diego Alvarez (Universidad de San Martin, Argentina): "The long and winding road of an antiviral drug development"

Joyce Jose (Pennsylvania State University): "Spatiotemporal Dynamics of Genomic RNA and Its Host Interactome Involved in Orthoflavivirus Assembly"

Hannah K. Jaeger (Oregon, USA): "Highly pathogenic O'nyong-nyong virus (ONNV0804) shows pathogenesis and immunity in rhesus macaques"

Irene Ferreiro (Universidad de la República, Uruguay): "Engineering the Mayaro virus genome for vaccine potential through CpG frequency modulation"

Eugenio D. Hottz (Federal University of Juiz de Fora, Brazil): "Platelets transfer dengue virus RNA to monocytes which restrict replication through RIG-I/MDA5"

Advances in Diagnostics and Prognostics (Session 2)

Pedro Vasconcelos (Evandro Chagas Institute IEC): "Oropouche fever virus: from febrile illness to congenital disease and microcephaly"

Lakshmanane Premkumar (University of North Carolina School of Medicine, USA): "Harmonizing Arbovirus Multiplex Immunoassays Across Sites in Sri Lanka, Ecuador, and Nicaragua"

Irene Bosch (Massachusetts Institute of Technology, USA): "New Methodology to Validate Dengue NS1 Antigen Tests Reveals Significant Detection Variability for Dengue 2 Genotypes"

Francesca Falconi-Agapito (Universidad Peruana Cayetano Heredia, Instituto de Medicina Tropical Alexander von Humboldt, Perú): "Nanopore-based metagenomics in patients with acute febrile syndrome during dengue outbreak in the Peruvian Amazon"

Thais A Costa (Universidade Federal de Minas Gerais, Brazil): "Detection of antibodies against arboviruses from liver homogenates: a complementary approach for surveillance of epizootics"

3:00 p.m.

3:00 p.m. - 3:30 p.m. - session break (30 min)

3:30 p.m.

3:30 p.m. - 5:00 p.m. - mid afternoon session (90 min)

Vector Biology (Session 2)

Humberto Lanz-Mendoza (Instituto Nacional de Salud Pública, Cuernavaca INSP): "The activation of adaptive immune response in Aedes aegypti interrupts dengue virus replication"

Gladys Bugallo Gutierrez (Johns Hopkins Bloomberg School of Public Health): "Preliminary insights into the role of Aedes aegypti's siRNA pathway in regulating arbovirus vertical transmission"

Lucie Souriac (University of Strasbourg, France): "Dissecting the connection between arbovirus transmission and mosquito salivation using an Aedes aegypti reporter line"

Carlos F. Estevez-Castro (UFMG, Brazil): "Loqs2 modulates spermatogenesis and oogenesis and offers new avenues for controlling virus transmission in Aedes mosquitoes"

Rafael Maciel de Freitas (Instituto Oswaldo Cruz, Brasil): "The Near Infrared as a Non-invasive, Reagent-free Tool to Improve Arboviruses and Malaria Surveillance"

Clinical Complexities in Arboviral Infections (Session 1)

Marcus Lacerda (Tropical Medicine Foundation (FMT-HVD) in Manaus, Brazil): "Clinical aspects of DENV and OROV infections in endemic areas"

Lisbeth Cantarero (Sustainable Sciences Institute, Nicaragua): "Multiple repeat symptomatic infections in a single transmission season: Rethinking dengue protective immunity"

Felipe Costa Trida Sene (Faculdade de Medicina de São José do Rio Preto, Brazil): "Neurological manifestations of chikungunya infection during the first epidemic of the virus in a dengue-endemic region"

Daniela Polanía (Universidad Surcolombiana. Hospital Universitario de Neiva, Colombia): "Clinical, virological, and serological response of subsequent dengue and chikungunya virus pediatric infections in southern Colombia"

Kiriam Escobar Lee (Gorgas Memorial Institute of Health Studies, USA): "Congenital dengue in Panama: a case report"

Human Behavior & Community Engagement

Eliana Flórez Naranjo (Fundación INFOVIDA, Bucaramanga, Colombia): "Strategy for early identification and evaluation of suspected dengue cases through a contact unit during the 2023-2024 epidemic in Bucaramanga, Colombia"

Juan P. Aguilar Ticona (Instituto de Saúde Coletiva Universidade Federal da Bahia, Brazil): "Acceptance and hesitancy towards dengue vaccination in Brazil: Survey of children and caregivers from urban informal settlements"

Tatiana Rivera Ramirez (University of Freiburg, Germany): "Collaborative public health practices for early warning, surveillance, and response to arboviral disease outbreaks"

Norma Pavia-Ruz (Universidad Autonoma de Yucatán, Mexico): "A cross-cultural approach to enhance social communication and community engagement for Wolbachia-based biocontrol of Ae. Aegypti"

5:00 p.m.



5:00 p.m. - 5:30 p.m. - coffee break (30 min)



5:00 p.m. - 5:30 p.m. - session break (30 min)

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Thursday April 24, 2025

5:30 p.m.

5:30 p.m. - 6:30 p.m - late afternoon session (60 min)

Round Table: ZIKV

Moderator: Albert Ko (Yale, US), Daniela Weiskopf (LJI/US)

Maurício Nogueira (Faculdade de Medicina de São José do Rio Preto, Brazil)

Eva Harris (Universidad de California, Berkeley)

Nathan Grubaugh (Yale School of Public Health)

Diana Rojas (World Health Organization)

Henrik Salje (Cambridge, UK)

Oropouche Special Session

Overview on Oropouche Infections: Jorge Osorio (U. Nacional de Colombia, Global Health Inst., WI, USA)

Felipe Naveca (Instituto Leônidas & Maria Deane, Fiocruz, Amazonas)

Marcus Lacerda (Tropical Medicine Foundation (FMT-HVD) in Manaus, Brazil)

Jairo Andres Mendez Rico (PAHO)

Diana Rojas (World Health Organization)

Vaccine Developers Session

Jose Alfredo De Sousa Moreira (Butantan/Merck)

Jose Alfredo De Sousa Moreira (Valneva)

Walid Kandeil (Global Medical Affairs Head, Takeda Vaccines)

Freya Rasschaert (Janssen Pharmaceutical)

6:00 p.m.

Opening

6:30 p.m.

Key Note: Dr. Eva Harris, UC Berkeley

8:00 p.m.

Welcoming Reception

6:30 p.m. - 8:00 p.m. - poster session A
Posters:

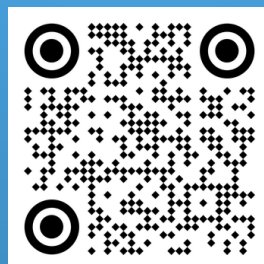
Diagnostics – Prognostics – Clinical
Epidemiology and Genomics
Immunology – Vaccines

6:30 p.m. - 8:00 p.m. - poster session B
Posters:

Human Behavior & Community Engagement
Vector Biology – Ecology – Control
Virology – Pathogenesis – Antivirals

Closing Remarks

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