Tuesday, May 29th

7:30 AM  Registration

9:30 AM  Welcome  
*Polly Sager* - Assistant Director for International Research in Infectious Diseases, Division of Microbiology and Infectious Diseases NIAID, NIH, DHHS

10:00 AM  *Plenary: Robert Garry*
Recombinant Antigen Diagnostics for Lassa Fever

11:00 AM  *Plenary: Samuel Sia*
Microfluidics for Global Health Diagnostics

12:00 PM  *LUNCH*

**Session I: Immunology**

1:00 PM  *Edward T. Ryan*
Comparison of Immune Responses to the O-Specific Polysaccharide and Lipopolysaccharide of *Vibrio cholerae* O1 in Bangladeshi Adults with Cholera

1:15 PM  *Firdausi Qadri*
Feasibility Study of a Mass Immunization Program with the Oral Cholera Vaccine Shanchol, in a High Risk Urban Population in Dhaka City in Bangladesh

1:30 PM  *Mohammad Arifuzzaman*
Antigen-Specific Memory T Cell Responses After Vaccination with an Oral Killed Cholera Vaccine in Bangladeshi Children and Comparison with Natural Cholera

1:45 PM  *Farhana Khanam*
Humoral Immune Responses in Young Children with Typhoid Fever and Comparison with Older Children and Adults

2:00 PM  *Abel Laurent*
Identification of Genetic Variants Predisposing to Pulmonary Tuberculosis by Linkage Disequilibrium Mapping of the Chromosome 8q Region
Tuesday, May 29th (cont’d.)

Session I: Immunology cont’d.)

2:15 PM  
Eva Harris  
Dual Cohort of Dengue and Influenza in Nicaraguan Children  
Page 8

2:30 PM  
Deanna A. Hagge  
Phase II Clinical Trial of Two Skin Test Antigens for Leprosy Specific Detection in Nepal  
Page 9

2:45 PM  
Naveen Surendran  
Role for CD103 DCs in TLR Mediated Protection Against Respiratory Challenge of Brucella abortus in Murine Model  
Page 10

3:00 PM  
BREAK

3:30 PM  
Mitermayer Reis  
Role of Cytokine Response in Disease Progression and Severe Clinical Outcomes During Leptospirosis  
Page 11

3:45 PM  
Mahamadou A. Thera  
Seroreactivity Profiles as Immune Correlates of Naturally-acquired and Blood Stage Malaria Vaccine-Induced Protection  
Page 12

4:00 PM  
Fernanda Novais  
Distinct Roles for Monocyte Subsets During Leishmania braziliensis Infection  
Page 13

4:15 PM  
Lucas P. Carvalho  
Monocyte Subsets Differently Contribute to the Pathological Immune Response Observed in Patients with Cutaneous Leishmaniasis  
Page 14

4:30 PM  
Walderez O. Dutra  
Immune Response in Patients with Acute Chagas Disease: Evaluation of T-cell Activation and Cytokine Expression During Acute Phase and After a One-Year Follow Up  
Page 15

4:45 PM  
Kenneth J. Gollob  
Immune Response in Patients with Acute Chagas Disease: Evaluation of T-cell Activation and Cytokine Expression During Acute Phase and After a One-Year Follow Up  
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Wednesday, May 30th

Session II: Therapeutics and Diagnostics

8:30 AM  
**Plenary: Eugenio L. de Hostos**
Nonprofit Drug Development for Neglected Tropical Diseases

9:30 AM  
**Rudovick R. Kazwala**
Transmission Dynamics Of Mycobacterium Tuberculosis Complex Species Between Humans and Animals in Rural Populations in Tanzania

9:45 AM  
**Aldo A.M. Lima**
Long-Term Impact of Zinc, Retinol, Glutamine, and Arginine on Intestinal Barrier Function, Growth and Cognition in Undernourished Children in NE Brazil

10:00 AM  
**Gary J. Weil**
Use of Enhanced Surveillance Methods for Detecting Low-Level Persistence of Lymphatic Filariasis in Sri Lanka Five Years After Cessation of Mass Drug Administration (MDA)

10:15 AM  
**BREAK**

10:45 AM  
**Dilruba Ahmed**
Emerging Antibiotic Resistance in Typhoidal Salmonella: Emerging Therapeutic Problem in Bangladesh

11:00 AM  
**Deanna A. Hagge**
Phase II Clinical Trial of Two Skin Test Antigens for Leprosy Specific Detection in Nepal

11:15 AM  
**Carolina Lessa Aquino**
Development of a Protein Microarray Chip for the Study of the Humoral Immune Response Associated With Leptospirosis

11:30 AM  
**Medhavi Sundarshan**
Validation of Real Time PCR for Leishmania Parasite Detection and Quantification for Epidemiological Study in Endemic Region of Visceral Leishmaniasis, Muzaffarpur, Bihar
Wednesday, May 30th (cont’d.)

Session II: Therapeutics and Diagnostics (cont’d.)

11:45 AM  Barry Beaty
Epidemic Dengue and Dengue Hemorrhagic Fever in Mérida, México; Studies On the Epidemiology and Diagnosis of Dengue, and the Control of Aedes Aegypti and Dengue Virus Transmission

12:00 PM  LUNCH

Session III: Epidemiology

1:00 PM  Plenary: David S. Roos
Mining the 'Omics Data Deluge to Expedite Discovery Research

1:45 PM  Miriam Laufer
Malawi ICEMR Facility Based Malaria Surveillance for Detection of Malaria Disease Burden in Three Diverse Settings

2:00 PM  Yap Boum II
Research in Rural Area of Low Income Countries: Feedback from the Field

2:15 PM  Juliet Mwanga-Amumpaire
Childhood Severe Malaria in Mbarara Regional Referral Hospital: Trends in Presentation and Treatment Outcome After Introduction of Artemisinine Based Combination Therapy

2:30 PM  Rajiv Sarkar
Transmission of Cryptosporidiosis Among Children Residing in a Semi-Urban Slum of Southern India

2:45 PM  Wang Xiexiu
Measles Illness and Immunity: Moving Toward Elimination in China

3:00 PM  Alan L. Rothman
Fine Scale Spatiotemporal Clustering of Dengue Virus Transmission in Children and Aedes aegypti in Rural Thai Villages
Wednesday, May 30th (cont’d.)

Session III: Epidemiology (cont’d.)

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<td>Natural History of Urban Leptospirosis: Influence of Age and Gender on Development of Severe Disease After Infection</td>
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<td>José E Hagan</td>
<td>Role of Poor Environment and Social Status on Leptospira Transmission in the Urban Slum Setting: A Prospective Propensity Score-Matched Cohort Study</td>
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<td>Francisca Valdivieso</td>
<td>Andes Hantavirus Case-Cluster with Household and Nosocomial Transmission in Southern Chile</td>
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Thursday, May 31<sup>st</sup>

Session IV: Pathogenesis

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<td>Elsio A. Wunder Jr.</td>
<td>Novel <em>Leptospira</em> Protein Is Essential Factor in Determining the Pathogen’s Coiled Flagella Morphology, Translational Motility, and Virulence Phenotype</td>
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<td>Lisa Jones-Engel</td>
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<td>Gabriel Rinaldi</td>
<td>Germline Transgenesis and Insertional Mutagenesis in <em>Schistosoma mansoni</em> Mediated by Murine Leukemia Virus</td>
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<td>10:45 AM</td>
<td>Yasmin Ara Begum</td>
<td>Disease Burden Due to <em>Vibrio cholerae</em> and Enterotoxigenic <em>Escherichia coli</em> (ETEC) Isolates From Patients During One Year Period From 2010-2011 in Dhaka, Bangladesh</td>
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<td>Lawrence David</td>
<td>Reproducible Succession Dynamics of the Human Gut Microbiota Following <em>Vibrio cholerae</em> Infection</td>
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<td>Ester C. Sabino</td>
<td>Trypanosoma Cruzy Parasetemia Status Determined by a Sensitive and Quantitative PCR Assay Correlates with Clinical Manifestation of Chagas Heart Disease in a Cohort of Seropositive Blood Donors</td>
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<td>Nadira D. Karunaweera</td>
<td>Leishmaniasis in Sri Lanka</td>
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Thursday, May 31st (cont’d.)

Session IV: Pathogenesis (cont’d.)

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<tr>
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<td>Edgar M. Carvalho</td>
<td>Strategies to Identify Protective Immune Response in <em>L. braziliensis</em> Infection</td>
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<td>Jackson P. Mukemba</td>
<td>Accumulation of Oxidized Biopterin Correlate with Hyperphenylalaninemia in Cerebral Malaria</td>
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<td>12:15 PM</td>
<td>Florence Salvatory</td>
<td>Low Plasma Citrulline is Associated with Low Plasma Arginine, with Consequent Diminished Nitric Oxide Production in Children with Malaria</td>
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<td>Pushkar Sharma</td>
<td>Dissection of Calcium Signaling Events in Malaria Parasite</td>
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<td>Bo Shen</td>
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<td>Discovering and Characterizing Pyrethroid-Resistance Associated Genes in <em>Culex pipiens pallen</em></td>
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<td>Bo Shen, Yan Sun, Donghui Zhang, Lei Ma and Changliang Zhu</td>
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<td>Department of Pathogen Biology, Nanjing Medical University, Nanjing 210029, P.R. China</td>
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<td>Barry J. Beaty</td>
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<td>Insecticide Resistance in <em>Aedes aegypti</em> in Mexico: Implications for Dengue Control</td>
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<td>Adriana E. Flores¹, Gustavo Ponce-García¹, María Alba Loroño-Pino², Julián E. García-Rejón³, Carlos Machain-Williams³, Guadalupe del Carmen Reyes-Solís³, Saul Lozano-Fuentes³, Lars Eisen³, Barry J. Beaty³, and William C. Black IV³</td>
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<td>¹Universidad Autónoma de Nuevo Leon, Monterrey, México; ²Universidad Autónoma de Yucatán, Mérida, México; ³Colorado State University, Fort Collins, Colorado, USA</td>
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<td>Edgar M. Carvalho</td>
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<td>Proinflammatory Chemokines and Cytokines are Associated with Neurologic Disease Associated to HTLV-1</td>
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<td>Tania Luna, Silvane Santos, Davi Tanajura, André Muniz, Anselmo Souza, Edgar M. Carvalho</td>
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<td>Dilara Islam</td>
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<td>Seroprevalence of Hepatitis E Virus IgG Antibodies Among Young Males in Thailand</td>
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<td>Dilara Islam¹, Thippawan Chuenchitra², Jariyanart Gaywee³, Narongrit Sirisopana², Siriphan Gonwong¹, Patchariya Khantapura¹, Nattaya Ruamsap¹, Ladaporn Bodhidatta¹</td>
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<td>Department of Enteric Diseases¹ and Division of Research²; Armed Forces Research Institute of Medical Sciences (AFRIMS), Bangkok, Thailand</td>
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**Babu Muhamed**
The Molecular Epidemiology of *Streptococcus Pyogenes* Pharyngitis Among Children in the Vanguard Community (Bonteheuwel/Langa), Cape Town, South Africa
Babu Muhamed¹, Mark E Engel¹, Andrew Whitelaw², and Bongani M Mayosi¹

¹Department of Medicine and ²Division of Medical Microbiology/NHLS, Clinical and Laboratory Sciences, Faculty of Health Sciences, University of Cape Town

**Woradee Lurchachaiwong**
Determination of the Murine Lethal Dose (LD₅₀) of *Orientia tsutsugamushi* Obtained From Mice Fed Upon by Naturally Infected *Leptotrombidium chiragraiensis* From a Well Characterized Chigger Colony
Woradee Lurchachaiwong¹, Teik-Chan Chye², Allen L Richards², Patrick W McCardle¹, Anthony L Schuster¹

¹Department of Entomology, U.S. Army Medical Component, Armed Forces Research Institute of Medical Sciences, Bangkok, Thailand and ²Viral and Rickettsial Disease Department, Naval Medical Research Center, Silver Spring, Maryland

**Jihene Bettaieb**
Risk Factors Associated with Leishmanin-Skin Test Positivity in Cutaneous Leishmaniasis Transmission Area in Central Tunisia
Jihene Bettaieb¹, Amine Toumi¹, Sadok Chlif¹, Aicha Boukthir¹, Nabil Bel Haj Hmida¹, Afif Ben Salah¹

¹Laboratory of Transmission Control and Immunobiology of Infection, Pasteur Institute of Tunis, Tunisia

**Jihene Bettaieb**
Epidemiologic Aspects of Zoonotic Cutaneous Leishmaniasis in Emerging and Old Foci in Central Tunisia
Jihene Bettaieb¹, Amine Toumi¹, Sadok Chlif¹, Aicha Boukthir¹, Nabil Bel Haj Hmida¹, Afif Ben Salah¹

¹Laboratory of Transmission Control and Immunobiology of Infection, Pasteur Institute of Tunis, Tunisia
9  Dhafer Laouini

Leishmania Major Genetic Micro-Heterogeneity Revealed by MLMT as
Epidemic Emergence Marker of Zoonotic Cutaneous Leishmaniasis in Tunisia

H. Attia¹, R. M. Sghaier¹, T. Gelane², A. Bali¹, C. Schweynoch²,
F. Guerfali¹, A. Zaatour¹, R. Snoussi¹, S. Chabane¹, G. Mkannez¹, A. Ben-Salah¹,
K. Dellagi¹, G. Schönian², D. Laouini¹

¹Institut Pasteur de Tunis, Laboratory of Transmission, Control and
Immunobiology of Infections; WHO Collaborating Center on Leishmaniasis and
Tropical Medicine Research Center (DMID/NIAID/NIH). Tunis-Belvedere,
Tunisia; ²Charité Universitätsmedizin, Institut für Mikrobiologie und Hygiene.
Berlin, Germany

10  Pierre Buekens

Congenital Transmission of Trypanosoma cruzi in Argentina, Honduras, and
Mexico: An Ongoing Study

Pierre Buekens¹, Maria-Luisa Cafferata², Jackeline Alger³,
Fernando Althabe⁴, Jose Belizan¹, Yves Carlier⁵, Alvaro Ciganda²,
Eric Dumonteil⁶, Rubi Gamboa-Leon⁶, Elizabeth Howard¹,
Maria Luisa Matute², Sergio Sosa-Estani⁴,⁸, Carine Truyens⁵, Dawn Wesson¹
Concepcion Zuniga⁹

¹Tulane University, New Orleans, USA; ²UNICEM, Montevideo, Uruguay;
³Instituto Antonio Vidal, Tegucigalpa, Honduras; ⁴IECS, Buenos Aires, Argentina;
⁵Université Libre de Bruxelles (ULB), Brussels, Belgium; ⁶Universidad Autónoma
de Yucatán, Mérida, Mexico; ⁷National Laboratory, Ministry of Health,
Tegucigalpa, Honduras; ⁸Instituto Nacional de Parasitología “Dr. Mario Fatale
Chaben”-ANLIS, Buenos Aires, Argentina, ⁹National Chagas Program, Ministry of
Health, Tegucigalpa, Honduras
Yves Carlier
Evaluation of Benznidazole Treatment and Benznidazole Combined with Nifurtimox, Posaconazole or Ambisome® in Mice Infected with Trypanosoma cruzi Strains
Yves Carlier¹,², Sabrina Cencig¹, Nicolas Coltel¹, Carine Truyens¹

¹Laboratory of Parasitology, Faculty of Medicine, Université Libre de Bruxelles (ULB), Brussels, Belgium; ²Tropical Medicine Department, Tulane University, School of Public Health and Tropical Medicine, New Orleans, LA, USA

Carine Truyens
Trypanosoma cruzi Boosts IFN-γ Response of Cord Blood NK Cells to Sub-Optimal Doses of IL-15: the Synergy Involves IL-12 Production and Monocytes
C. Truyens, A. Guilmot and Y. Carlier

Laboratoire de Parasitologie, Faculté de Médecine, Université Libre de Bruxelles, Brussels, Belgium

Ester C. Sabino
Genome Wide Association Study (GWAS) to Identify Genetic Polymorphisms Associated with Development of Chagas Cardiomyopathy in T Cruzi Seropositive Subjects
Sabino EC¹, Deng, X², Cunha-Neto E¹, Busch MP², Seielstad M³ for the NHLBI Retrovirus Epidemiology Donor Study-II (REDS-II), International Component

¹University of Sao Paulo Medical School/Institute of Tropical Medicine, Sao Paulo/Brazil, ²Blood Systems research Institute San Francisco/USA, ³University of California at San Francisco/USA
Aldo A. M. Lima

Gut Function Markers and Enteroaggregative E. coli Infection in Children with Malnutrition and Diarrheal Diseases in a Case Control Study in Northeastern Brazil


Federal University of Ceará, Fortaleza, Brazil, University of Reading, UK; University of Virginia, VA - The MAL-ED NETWORK

Ana A. Weil

Frequency of Re-Exposure to Vibrio cholerae O1, Evaluated by Vibriocidal Titer Rise After One Episode of Severe Cholera in a Highly Endemic Area in Bangladesh

Ana A. Weil*, Fahima Chowdhury*, Ashraful I. Khan*, Yasmin Ara Begum*, Nirod Chandra Saha*, Daniel T. Leung1,3, Richelle C. Charles1,3, Regina C. LaRocque1,3, Jason B. Harris1,4,5, Edward T. Ryan1,3,6, Firdausi Qadri2**, and Stephen B. Calderwood1,3,7**

1Dept of Medicine, Harvard Medical School, Boston, USA; 2Centre for Vaccine Sciences, International Centre for Diarrhoeal Disease Research, Bangladesh (icddr,b), Dhaka, Bangladesh; 3Division of Infectious Diseases, Massachusetts General Hospital, Boston, USA; 4Division of Global Health, Massachusetts General Hospital for Children, Boston, USA; 5Dept of Pediatrics, Harvard Medical School, Boston, USA; 6Dept of Immunology and Infectious Diseases, Harvard School of Public Health, Boston, USA; 7Dept of Microbiology and Molecular Genetics, Harvard Medical School, Boston, USA
16  Lillian Tsai
Identification of In Vivo-Induced Bacterial Proteins During Human Infection with Salmonella enterica Serotype Paratyphi A
Alam M1*, Tsai L2*, Rollins SM2, Sheikh A1, Khanam F1, Charles RC2,3, Bufano M1, Yu Y1, Wu Y1, Kalsy A2, Sultana T1,2, LaRocque RC2,3, Harris JB2,4, Leung DT2,3, Brooks WA1, Calderwood SB2,5, Qadri F1†, Ryan ET2,3,6†

1International Centre for Diarrhoeal Disease Research, Bangladesh (icddr,b), Dhaka, Bangladesh; 2Division of Infectious Diseases, Massachusetts General Hospital, Boston, Massachusetts; 3Departments of Medicine and 4Pediatrics, Harvard Medical School, Boston, Massachusetts; 5Department of Microbiology and Immunobiology, Harvard Medical School, Boston, Massachusetts; 6Department of Immunology and Infectious Diseases, Harvard School of Public Health, Boston, Massachusetts (*co-first author; †co-senior author)

17  Orleancio Gomes de Azevedo
APOE4 Targeted Replacement and Apoe Knockout Weanling Mice Have Distinct Adaptations Following Cryptosporidium parvum Infection and Malnutrition

Center for Global Health, School of Medicine, University of Virginia, Charlottesville, Virginia; Laboratoy of the Biology of Tissue Healing, Ontogeny and Nutrition, Institute of the Brazilian Semi-arid, School of Medicine, Federal University of Ceara Fortaleza, Ceará, Brazil

18  Rajiv Sarkar
Risk Factors for Cryptosporidiosis Among Children in a Semi-Urban Slum in Southern India
Rajiv Sarkar1, Sitara Swarna Rao Ajjampur1, Jayaprakash Muliyil2, Vinohar Balraj2, Elena N. Naumova1,3, Honorine Ward1,4, Gagandeep Kang1

Department of Gastrointestinal Sciences and 2Community Health, Christian Medical College, Vellore, TN 632004, INDIA, 3Department of Civil and Environmental Engineering, Tufts University School of Engineering, Medford, MA, USA, 4Division of Geographic Medicine and Infectious Diseases, Tufts Medical Center, Tufts University School of Medicine, Boston, MA, USA
Rajiv Sarkar
Molecular Epidemiology of Cryptosporidiosis Among Children in a Semi-Urban Slum in Southern India
Sitara Swarna Rao Ajjampur¹, Ashok Daniel Prabakaran¹, Rajiv Sarkar¹, Jayaprakash Muliyil², Vinohar Balraj², Elena N. Naumova¹,³, Honorine Ward¹,⁴, Gagandeep Kang⁵

¹Department of Gastrointestinal Sciences and ²Community Health, Christian Medical College, Vellore, TN 632004, INDIA; ³Department of Civil & Environmental Engineering, Tufts University School of Engineering, Medford, MA, USA; ⁴Division of Geographic Medicine and Infectious Diseases, Tufts Medical Center, Tufts University School of Medicine, Boston, MA, USA

Maha Abdeladhim
Analysis of Salivary Gland Transcripts of the Tunisian Strain of Phlebotomus papatasi: On the Search for Vector-Based Vaccine Candidates and Markers of Exposure
Maha Abdeladhim¹, Ryan C. Jochim², Melika Ben Ahmed¹,³, Elyes Zhioua⁴, Ifhem Chelbi⁴, Saifedine Cherni⁴, Hechmi Louzir¹,³, José M.C. Ribeiro⁵ and Jesus G. Valenzuela²

¹Laboratory of Transmission, Control and Immunobiology of Infectious Diseases, Pasteur Institute of Tunis, Tunisia; ²Vector Molecular Biology Section, Laboratory of Malaria and Vector Research, National Institute of Allergy and Infectious Diseases, National Institutes of Health, Rockville, Maryland, USA; ³Faculty of Medicine of Tunis- University Tunis-El Manar; ⁴Laboratory of Vector Ecology, Pasteur Institute of Tunis, Tunisia; ⁵Vector Biology Section, Laboratory of Malaria and Vector Research, National Institute of Allergy and Infectious Diseases, National Institutes of Health, Rockville, Maryland, USA
M. Diallo
Community-Based Screening with Echocardiography for Rheumatic Heart Disease Among School-Aged Children and Adults in Bamako, Mali
Diallo M4, Tapia MD1, Scheel JN2, Sanogo KM3, Ouane O4, Sow SO4, Dale J5, Kotloff KL1

1Center for Vaccine Development, University of Maryland School of Medicine, Baltimore, MD; 2Division of Pediatric Cardiology, The Johns Hopkins Hospital, Baltimore, MD; 3Cardiology Service, Hôpital Gabriel Touré, Bamako, Mali; 4Centre pour le Développement des Vaccins – Mali, Bamako, Mali University of Tennessee Health Science Center, Memphis, TN, USA