Multidisciplinary Malaria Research in the Era of Eradication Workshop

*Students accepted into the course are pre-registered for the workshop*

Sunday, November 16, 2014

18:00-19:30  Opening Session
Marcia Castro, Ricardo Gazzinelli, Carla Fernandes, and Matthias Marti

18:30-19:30  Opening Lecture
*Genetic Studies of Plasmodium Parasites*
Thomas Wellems, Chief, Laboratory of Malaria and Vector Research (LMVR) and Chief, Malaria Genetics Section, LMVR, National Institute of Allergy and Infectious Diseases

19:30-21:30  Group Dinner

Monday, November 17, 2014  

Session Chair – Matthias Marti

9:00-10:00  Innate immunity in mosquitos
*Innate Immune Defenses in Model Insects and Vectors*
Neal Silverman, Professor of Medicine in the Division of Infectious Diseases, University of Massachusetts Medical School

*Anopheles aquasalis Immune Response to P. vivax*
Yara Traub-Cseko, Senior Investigator, Instituto Oswaldo Cruz

10:00-10:30  Coffee Break

10:30-12:00  Parasite Biology
*Erythrocyte Invasion by Plasmodium Parasites*
Manoj Duraisingh, John LaPorte Given Professor of Immunology and Infectious Diseases, Harvard School of Public Health

*Protein Export in P. falciparum*
Kasturi Haldar, Rev. Julius Nieuwland, C.S.C. Professor of Biological Sciences and James C. Parsons and Carrie Ann Quinn Director of the Center for Rare and Neglected Diseases, University of Notre Dame

*Biology of Malaria Transmission*
Matthias Marti, Associate Professor of Immunology and Infectious Diseases, Harvard School of Public Health

12:00-14:00  Lunch

Session Chair – Kasturi Haldar
14:00-15:00  Innate immunity in malaria patients
Innate Sensors for Plasmodium DNA
Doug Golenbock, Professor of Medicine and Infectious Diseases, University of Massachusetts Medical School

Monocyte Subsets in P. vivax Malaria
Lis Antonelli, Associate Investigator, Fundação Oswaldo Cruz

15:00-15:30  Coffee Break

15:30-17:00  Pathogenesis
Severe Cases of P. vivax Malaria
Marcus Lacerda, Professor of Infectious Diseases, University of the Amazonas State

Cytoadherence of P. vivax Infected Reticulocytes
Fabio Costa, Associate Professor, Universidade de Campinas

Bacterial Super-infection in Malaria
Ricardo Gazzinelli, Senior Investigator, Centro de Pesquisas René Rachou, Fundação Oswaldo Cruz

Tuesday, November 18, 2014  Session Chair – Marcia Castro

9:00-13:00  Chemotherapy and Vaccine Approaches
Natural Products as Anti-malarial Drugs
Antoniana Krettli, Senior Investigator, Fundação Oswaldo Cruz

Cofactor Metabolism as a Drug Target in Malaria
Carsten Wrenger, Associate Professor, Universidade de São Paulo

Malaria Vaccine: Types and Current Candidates
Sócrates Herrera, Director, Latin American Center for Malaria Research and Control, Caucaseco Scientific Research Center

10:30-11:00  Coffee Break

10:30-11:30  Ecology and Vector Control
Mating and Reproduction in Malaria Vector
Flaminia Catteruccia, Associate Professor of Immunology and Infectious Diseases, Harvard School of Public Health

Control of Vector Borne Diseases
Ricardo Lourenço-de-Oliveira, Senior Investigator, Instituto Oswaldo Cruz

11:30-13:45  Lunch

Session Chair - Ricardo Gazzinelli
13:45-14:45  Keynote Address  
*Epidemiology and Control of Malaria in the Amazon*  
Luiz Hildebrando Pereira da Silva, Scientific Director, Instituto de Pesquisa em Patologias Tropicais

14:45-16:15  Ecology, Epidemiology and Malaria Control  
*Malaria Control in Brazil: Perspectives of Eliminating P. Falciparum*  
Pedro Luiz Tauil, Professor in the Graduate Program on Tropical Medicine of the Medical School, Universidade Federal de Brasília

*Malaria and its Control in Diverse Ecosystems: Case Studies in the Brazilian Amazon and Urban Tanzania*  
Marcia Castro, Associate Professor of Demography, Harvard School of Public Health

16:15-16:45  Coffee Break

16:45-17:45  Closing Lecture  
*Genetic Diversity of P. vivax and Malaria in Brazil*  
Marcelo Urbano, Professor of Parasitology and Chair of the Department of Parasitology, Universidade de São Paulo

18:00  Adjourn

**Malaria Control: From the Bench to the Field Course**  
Field/Lab Activities and Oriented Discussions

**Wednesday, November 19, 2014**

8:30-10:00  Lecture and discussion on malaria transmission  
Flaminia Catteruccia, Matthias Marti, Neal Silverman, and Alexandre Almeida e Silva.

10:00-13:00  Visit to the transmission areas at the river shore (riverine communities)

15:00-18:00  Lab work: Capture mosquitos in the field and perform DNA extraction and Real-time PCR for *P. vivax*.

**Thursday, November 20, 2014**

8:30-10:00  Lecture and discussion on clinical immunology of malaria  
Caroline Junqueira, Dhelio Pereira, Lis Antonelli, Douglas Golenbock, and Ricardo Gazzinelli

10:00-11:30  Visit to the hospital

13:00-18:00  Lab work: Collect blood from patients, isolate peripheral blood mononuclear cells and perform FACS analysis.

**Friday, November 21, 2014**

8:30-10:00  Lecture and discussion on epidemiology and malaria control  
Marcelo Urbano, Tony Katsuragawa, and Marcia Castro

10:00-14:00  Field visit: areas of transmission around the construction area of Santo Antônio dam

15:00-17:00  Discussion
Faculty Organizers

Marcia Castro, Ricardo Gazzinelli, and Matthias Marti
Harvard School of Public Health and Oswaldo Cruz Foundation

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