

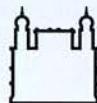
VIRUS

Reviews & Research

**First Pan American Dengue
Research Network Meeting**

Recife, Brazil, 22-25 July 2008

**VOLUME 13
SUPPLEMENT 1**



Ministério da Saúde

FIOCRUZ
Fundação Oswaldo Cruz



Pediatric DENGUE
VACCINE INITIATIVE



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First Pan-American Dengue Research Network Meeting: 22-25 July 2008 in Recife, Brazil

"Epidemic Dengue in the Americas: Research challenges" will be held in Recife, Brazil on July 22nd-25th 2008 at the Recife Palace Hotel. This meeting will be analogous to the The 1st and 2nd Asian Regional Dengue Research Network Meetings in Bangkok and Singapore which had about 250 participants and the 3rd Meeting in Taipei, Taiwan, which had around 400 participants. We expect this meeting may reach a similar number of interested scientists from the Western Hemisphere.

The purpose of the Network Meeting is to bring together scientists to foster collaborative work and stimulate high quality translational research in dengue virus infection. The meeting will focus on research areas of interest to co-sponsors: Viral genomics, structure and assembly, virus-vector interactions, human cell entry, cell receptors, host response, animal models, viral neutralization and ADE, clinical pathophysiology, treatment pathogenesis, epidemiology and diagnostics. In addition to participants from the Americas, outstanding experts from Asia, Australia, Europe and the United States will be invited to present findings in important areas of dengue research. Research scientists from all of the Americas will be invited to submit abstracts and a substantial number of them from outside the United States will be offered travel fellowships. Moreover the Abstracts book will be edited and published at the *Virus Reviews Research*, Journal of the Brazilian Virology Society.

Scott Halstead & Ernesto T. A. Marques

Primeiro Encontro Regional Pan-Americana da Rede de Pesquisa em Dengue

O "Primeiro Encontro Regional Pan-Americana da Rede de Pesquisa em Dengue: Epidemia de Dengue nas Americas: Desafios para a pesquisa" será realizada em Recife – PE, Brasil, de 22-25 de julho 2008 no hotel Recife Palace Hotel.

Este encontro sera similar aos "Encontros Regionais realizados pela Rede Asiática de Pesquisa em Dengue", ocorridos em Bangcoque, Singapura e Taipei, os quais tiverão a participacao de 250 pesquisadores nos dois primeiros encontros e cerca de 400 no encontro em Taipei. Neste encontro esperamos contar com a presença de cerca de 400 cientistas do hemisfério occidental interessados em pesquisa envolvendo dengue.

A finalidade deste Encontro é de reunir cientistas com interesses comuns e consequentemente promover colaborações e estimular a pesquisa de alta qualidade, bem como a troca de conhecimentos, voltados a

infecção causada pelo vírus da dengue.

O Encontro focará as seguintes áreas da pesquisa: genômica e estrutura viral, interação vírus-vetor, mecanismos de infecção em células humanas, receptores celulares, resposta do hospedeiro à infecção, modelos animais, neutralização viral e o fenômeno da ADE, pato-fisiologia clínica, patogênese do tratamento, epidemiologia e diagnóstico.

Contaremos ainda com a presença de pesquisadores que vêm se destacando na pesquisa em dengue provenientes dos Estados Unidos, Ásia, Austrália e Europa. Momento em que será possível ter contato com suas mais recentes descobertas nas diversas áreas da pesquisa envolvendo dengue.

Pesquisadores de toda a América estão convidados a submeter os resumos de seus projetos de pesquisa envolvendo dengue e bolsas para auxílio das despesas serão concedidas aos pesquisadores cujos resumos venham a ser selecionados.

El "Primer Encuentro de la Red de Investigación del Dengue"

El "Primer Encuentro de la Red de Investigación del Dengue" se realizará en Recife, PE, Brasil del 22 al 25 de Julio del 2008 en el Hotel Recife Palace. Este encuentro será similar al primer y segundo encuentro de la Red de Investigación del Dengue asiática en Bangkok y Singapur, que contó con 250 participantes; y el tercer encuentro en Taipei, Taiwán que contó con 400 participantes. Esperamos que este encuentro pueda convocar a un numero similar de científicos occidentales.

El objetivo de dicha Red es el de acercar a los científicos para estimular la investigación sobre la infección del virus del Dengue, promoviendo colaboraciones y fomentando la investigación aplicada de alta calidad. El encuentro estará centrado en áreas de investigación de interés para los patrocinadores: Geonómica viral, estructura y ensamblado, interacciones virus-vetor, infección de la célula humana, receptores celulares, respuesta del huésped, modelos animales, neutralización viral y ADE, pato fisiología clínica, patogénesis del tratamiento, epidemiología y diagnóstico.

Además de los participantes de América del Sur, se invitara a destacados expertos procedentes de Asia, Australia, Europa y los Estados Unidos para presentar sus descubrimientos en áreas importantes de investigación sobre el virus del dengue. Se invitara a los científicos panamericanos a presentar resúmenes. Se ofrecerá un numero sustancial de becas de viaje para los participantes panamericanos que no se encuentren en los Estados Unidos. A su vez, se editara y publicara el libro de resúmenes en el *Virus Reviews Research*, Sociedad de Virología del Brasil.

FIRST PAN AMERICAN DENGUE RESEARCH NETWORK MEETING

HOSTS

- FIOCRUZ
- Ministério da Saúde
- Pan American Health Organization
- Pediatric Dengue Vaccine Initiative (PDVI)
- Sociedade Brasileira de Virologia

DATE & VENUE

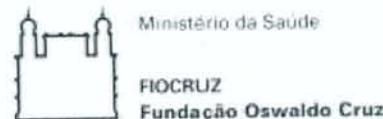
- 22-25 july, 2008 | Recife - Brazil

THEME

- Epidemic Dengue in the Americas: Research challenges
- Epidemia de Dengue nas Americas: Desafios para a pesquisa

TOPICS

- Viral Genomics
- Structure and Assembly
- Viral into Cell Entry
- Cell Receptors
- Host Response
- Viral Neutralization and ADE
- Animal Models
- Clinical Pathophysiology & Treatment
- Epidemiology and Diagnostics
- Virus-Vector Interactions
- Vaccine Development & Trials



SCIENTIFIC PROGRAM

First Pan American Dengue Research Network Meeting 22-25 july, 2008 - Recife - Brazil

TUESDAY JULY 22, 2008

7:00-10:00 pm **Recife Palace Hotel** Welcome Reception | Opening Ceremony | Banquet Dinner.

WEDNESDAY JULY 23, 2008

Chair: Harold S. Margolis | Co-Chair: Ernesto Marques

8:30 – 9:00 am **Room Boa Viagem** **OPENING REMARKS:**
Drs. Ernesto Marques, Scott Halstead, Harold Margolis

9:00 – 9:30 am **Special Lecture 1**

Hermann G. Schatzmayr.
Dengue situation in Brazil.

9:30 – 10:00 am **Special Lecture 2:**

Scott B. Halstead
Dengue vaccines are coming: are we prepared?

10:00 – 10:15 am **COFFEE BREAK**

10:15 – 12:05 am **SESSION 1: Host Response**

Chair: Maria G. Guzman | Co-Chair: Peter Mason

10:15 – 10:45 am Aravinda de Silva
Natural strain variation and neutralization of dengue 3 viruses.

10:45 – 11:05 am Claire Fernandes Kubelka
Innate Immune Response during Dengue Fever: Cytokine, Monocyte and NK cell profiles in Brazilian patients.

11:05 – 11:25 am Ulisses Braga-Netto
Gene expression profiling during acute stage of dengue infection can predict patient outcome.

11:25 – 11:45 am Ana B. Perez
Role of IL-10 in dengue infection.

11:45 – 12:00 am Irene Bosch
TRAIL is a novel antiviral protein against dengue virus.

12:00 – 1:20 pm **LUNCH**

SCIENTIFIC PROGRAM

1:20 – 5:30 pm

SESSION 2: Host Response

Chair: Hermann Schatzmayr | Co-Chair: Eva Harris

Room Boa Viagem

1:00 – 1:30 pm

Xia Jin

Primary human blood monocytes and spleen macrophages, not T or B cells, are the principal dengue target cells and mediators of antibody-dependent enhancement of infection in vitro

1:30 – 1:50 pm

Juthathip Mongkolsapaya

An interplay between Dendritic cells, T cells and dengue virus.

1:50 – 2:10 pm

A.L.V. Gomes

Differential expression of genes involved on innate immune pathways between patients with dengue and hemorrhagic fever.

2:10 – 2:40 pm

Aniuska Becera

Levels of TRAIL, MCP-2 and IL-10 are elevated in dengue virus infections in vivo. Role of TRAIL in the down regulation of chemokines and cytokines induced by DENV.

2:40 – 3:00 pm

Freddy A Medina

Variability of blocking of interferon signaling among DENV-2 strains.

3:00 – 3:20 pm

COFFEE BREAK

3:20 – 3:50 pm

Michael S. Diamond

New insights into the molecular basis of neutralization and enhancement by anti-dengue virus antibodies.

3:50 – 4:10 pm

Eduardo J. M. Nascimento

Analysis of complement system reveals that increased alternative pathway activation is correlated with disease severity.

4:10 – 4:30 pm

Beatriz Sierra

Role of serotype cross-reactive memory B cell immunity against dengue infection.

4:30 – 4:50 pm

Elzinandes L. Azeredo

Toll-like receptor-2, Tissue Factor and cytokine detection in human monocytes from patients and after dengue virus in vitro infection.

4:50 – 5:10 pm

Daniel Limonta.

Apoptosis in tissues from dengue hemorrhagic fever fatalities.

5:10 – 5:30 pm

I. Assuncao-Miranda

MIF release is associated with inflammatory response of dengue virus infection in macrophage and hepatocytes and it is increased in the plasma of patients with hemorrhagic form.

THURSDAY JULY 24, 2008

8:30 – 12:00 am

SESSION 3: Structure | Cell entry; Genomes

Chair: Claudia Nunes Duarte dos Santos | Co-Chair: Paul Reiter

Room Boa Viagem

8:30 – 9:00 am

Richard Kuhn

Probing flavivirus antibody- mediated neutralization and particle dynamics using structural approaches.

9:00 – 9:20 am

James M. Colborn

Serotype-specific enhancement of viral replication by exogenously produced NS1.

9:20 – 9:40 am

Sousa Jr, I. P.

The role of cholesterol and membrane fluidity for dengue entry.

9:40 – 10:00 am

L. Arruda

Mechanism of human B cell activation and antibody secretion induced by dengue virus.

10:00 – 10:15 am

COFFEE BREAK

10:15 – 10:45 am

Andrea Gamarnik

Role of RNA Regulatory Elements in Dengue Virus Replication.

10:45 – 11:05 am

Angel Balmaseda

Increased dengue disease severity in Nicaragua is associated with a clade replacement in dengue virus 2.

11:05 – 11:25 am

Kate L. McElroy

Molecular evolution of dengue virus type 2 in Puerto Rico, 1986-2007.

11:25 – 11:45 am

Rosmari Rodrigues-Roche

Viral evolution during a severe dengue epidemic in Cuba. Possible role of the NS1 protein in viral virulence.

11:25 – 11:45 am

Marcio Roberto Teixeira Nunes

Molecular epidemiology of dengue virus in northern Brazil.

SCIENTIFIC PROGRAM

12:05 – 4:00 pm

LUNCH

Poster colloquium # 1 **Room Candeias**

4:00 – 5:30 pm

SESSION 4: Animal models I pathogenesis

Chair: Claire F. Kulbelka | Co-Chair: Michael Diamond

Room Boa Viagem

4:00 – 4:30 pm

Eva Harris

Dengue Pathogenesis: From Mice to Humans.

4:30 – 4:50 pm

M.V. Paes

*Development of a mouse model for dengue virus studies
The liver injury in BALB/C mice infected by the
intravenous route with DENV-2*

4:50 – 5:10 pm

Carlos A. Sariol

*Patterns of gene expression in blood from monkeys and
humans infected with dengue virus highlight difference
in disease outcome and host responses.*

5:10 – 5:30 pm

Claudia Nunes

*Dengue neurovirulence in mice: identification of molecular
signatures in the E and NS3 helicase domains.*

FRIDAY JULY 25, 2008

8:30 – 12:00 am

SESSION 5: Epidemiology I Diagnosis; Entomology I Dengue Control

Chair: Andrea Gamarnik | Co-Chair: Richard Kuhn

Room Boa Viagem

8:30 – 9:00 am

Maria G. Guzman

*Dengue and dengue hemorrhagic fever Host, virus and
epidemiological situation. The Cuban experience.*

9:00 – 9:20 am

Joao B. Siqueira Jr

*Spatial point analysis based on dengue surveys at household
level in Central Brazil.*

9:20 – 9:40 am

Floresneide R. Barreto

*Spatial diffusion patterns of the first dengue epidemic
Salvador, Bahia, Brazil*

9:40 – 10:00 am

Alvaro H. Ramirez

*Molecular epidemiology of dengue viruses circulating
Venezuela.*

10:00 – 10:15 am

COFFEE BREAK

10:00 – 10:30 am	Paul Reiter <i>Dengue control: a dream or a nightmare?</i>
10:30 – 10:50 am	Amy Morrison <i>Longitudinal studies and dengue prevention programs in Iquitos, Peru.</i>
10:50 – 11:10 am	Marcelo Jacobs Lorena <i>Molecular studies of mosquito-pathogen interactions.</i>
11:10 – 11:30 am	Joao B Siqueira Jr <i>Cost of a dengue episode in Central Brazil.</i>
11:30 – 11:50 am	Benedito Fonseca <i>Evaluation of drugs and strategies to reduce the viral load in dengue patients.</i>
11:50 – 12:10 am	M.R.Q. Lima <i>Evaluation of the NS1 antigen-capture ELISA for early diagnosis of dengue infections in Brazil.</i>

12:10 – 4:00 pm

LUNCH

Poster Colloquium # 2 **Room Candeias**

4:00 – 5:30 pm

SESSION 6: Vaccine Development

Chair: Aravinda de Silva | Co-Chair: Irene Bosch

Room Boa Viagem

4:00 – 4:30 pm

Peter W. Mason

Engineering third-generation flavivirus vaccines.

4:30 – 4:50 pm

Myrna Bonaldo

Development of 17D yellow fever virus as an expression vector of foreign antigens.

4:50 – 5:10 pm

Asif M. Khan

Conservation and variability of dengue virus proteins. Implications for vaccine design.