



THIRD RESEARCH NETWORK MEETING

PLACE: Airlie Center, Warrenton, Virginia

DATE: 1 – 4, June 2006

AGENDA

Thursday, June 1

6:30-8:00 PM RECEPTION AND DINNER: The Pavilion

Friday, June 2

Location: **Federal Room, Airlie House**

PROGRAM: Presentations: 8:30am – NOON and 1:00pm – 5:30pm; Small Group Discussions: 8:00pm – 10 pm; Lunch: NOON - 1:00pm; Dinner: 6:00pm – 7:30pm.

Chair: Harold Margolis

8:30-8:45 AM Welcome and Introduction Scott Halstead
Harold Margolis

I. Dengue Vaccine Development: Updates

Chair: Scott Halstead

8:45-9:05 AM Update on the Development of the WRAIR/GSK Live Attenuated
Tetravalent Dengue Vaccine Julia Lynch (WRAIR/GSK)

9:05-9:25 AM Update on the Sanofi/Pasteur Tetravalent Dengue Vaccine
Jean Lang (Sanofi Pasteur)

9:25-9:45 AM Update on the Preclinical Development of a Recombinant Subunit
Dengue Vaccine Beth-Ann Coller (Hawaii Biotech)

9:45-10:05 AM Live Attenuated Dengue Vaccine Progress at the NIH Laboratory of
Infectious Diseases Steve Whitehead (NIH)

10:05-10:20 AM BREAK

- 3:30-4:00 PM Neutralization Resistance of West Nile Virus is Modulated by Energy Coupling Among Residues in the Domain III of Viral Envelope Protein (Barrett Group) Rodrigo Maillard
- 4:00-4:30 PM Mechanistic Correlates of Antibody-Mediated Protection against Flavivirus Infection Daved Fremont
- 4:30-5:00 PM Towards Understanding the Stoichiometry of Neutralization and Enhancement of Flavivirus Infection Ted Pierson
- 5:00-5:30 PM DISCUSSION
- 6:00-7:30 PM COCKTAILS : Meadow Room, Airlie House
DINNER: Airlie Dining Room, Airlie House

SAG III Dinner Meeting: Airlie Dining Room, Airlie House
- 8:00-10:00 PM Small Group Discussion: Meadow Room, Airlie House

Grant Administration: PDVI Program Administration Manual for Grantees
Discussion Leaders: Susie Kliks/Sherrie Prasad/Nam Hee Kim

Optimizing Animal Models:
Discussion Leader: Scott Halstead

Saturday, June 3

Location: Jefferson Room, Airlie House

Program: Presentations: 8:30am – Noon and 1:00pm – 5:30pm; Lunch: NOON – 1:00pm; Group Discussions: 8:00pm – 10:00pm; Dinner: 6:00pm – 7:30 pm.

III. Reports from the Supportive R & D Program (cont.)

Chair: John Roehrig

Viral Attachment and Entry/Neutralization targets

- 8:30-9:00 AM Host Cell Factors in Hepatitis C Virus Cell Entry
Thomas von Hahn
- 9:00-9:30 AM Class II Virus-Membrane Fusion Proteins: Mechanisms and Inhibition
Margaret Kielian
- 9:30-10:00 AM Role of Antibodies in Controlling the Cell Entry of Dengue Virus
Jolanda Smit

10:00-10:30 AM DISCUSSION
10:30-10:45 AM BREAK
10:45-11:15 AM Genetic Approaches to Early Events in Dengue Virus Infection
(Blair Group) Claire Huang

Memory B Cells and Dengue Monoclonal Antibodies

Chair: Siamon Gordon

11:15-11:45 AM Smallpox or Smallpox Vaccination and the Question of Long Term
Immunity Mark Slifka
11:45-NOON DISCUSSION
NOON-1:00 PM LUNCH: Airlie Dining Room, Airlie House

Memory B Cells and Dengue Monoclonal Antibodies (cont.)

1:00-1:30 PM Isolation and Characterization of Human Monoclonal Antibodies against
Dengue Viruses Cameron Simmons/
Federica Sallusto
1:30-2:00 PM Towards a Molecular Understanding of Protective Antibody Responses
against Dengue and West Nile Viruses Mike Diamond

Target Cells/Receptors

2:00-2:30 PM Investigation of Antibody Dependent Enhancement in Dendritic Cells
Mary Marovich
2:30-3:00 PM Different Subsets of Primary Human Cells have Divergent Susceptibility
to Dengue Virus Infection and Capacity to Mediate Antibody Dependent
Enhancement (ADE) Xia Jin
3:00-3:15 PM BREAK
3:15-3:45 PM Receptors for Dengue Virus on Human Mononuclear Phagocytes
(Gordon Group) Joanna Miller
3:45-4:15 PM Enhancement of Dengue Immune Complex Infectivity Mediated by
Signaling Competent and Signaling Incompetent Human Fc γ RIA (CD 64)
or Fc γ RIIA (CD 32) Jacob Schlesinger

- 4:15-4:45 PM Detection of Dengue Viral Antigens within Platelets Suggests the Susceptibility of Platelets to Infection Dengue Virus Infection
Guey Chuen Perng
- 4:45-5:30 PM DISCUSSION
- 6:00-7:30 PM COCKTAILS: Meadow Room, Airlie House
DINNER: Airlie Dining Room, Airlie House
- SAG II Dinner Meeting: Airlie Center Dining Room, Airlie House
- 8:00-10:00 PM Small Group Discussion: Meadow Room, Airlie House
- Dengue monoclonal antibodies.* What is available? What monoclonal antibodies are needed? Status of dengue human monoclonal antibodies and immediate plan.
Discussion leaders – John Roehrig/Mike Diamond

Sunday, June 4

Location: Jefferson Room, Airlie House

Program: Presentations: 8:30am – 1:00pm and 1:00pm – 4:30 pm; Lunch: NOON – 1:00pm;
Departure after 4:30 pm.

III. Reports from the Supportive R & D Program (cont.)

Chair: Scott Halstead

Animal Models

- 8:30-9:00 AM Dengue Viral Infection and Immune Response in Humanized Rag2^{-/-} γc^{-/-} mice.
Ramesh Akkina
- 9:00-9:30 AM A Critical Role for Antibody in Atypical Measles Pathogenesis.
Fernando Polack
- 9:30-10:00 AM A Mouse Model for Dengue Infection and Disease
Eva Harris
- 10:00-10:30 AM The Rhesus Macaque as a Model of Dengue Fever and Dengue Hemorrhagic Fever/Shock Syndrome Anna Durbin
- 10:30-10:45 AM BREAK

10:45-11:00 AM DISCUSSION

IV. Product Development:

Improving and Standardizing Diagnostic Tests

11:00-11:30 AM Summary of WHO/PDVI meeting: Technical Consultation on Measuring Immunity to Dengue (May 15, 2006, WHO, Geneva)
John Roehrig

11:30-NOON Development of a Laboratory Network for the Evaluation of Commercial Dengue IgM Serological Tests
Harvey Artsob

NOON-1:00 PM LUNCH: Airlie Dining Room, Airlie House

Chair: Scott Halstead

1:00-1:30 PM Development of new tools for Dengue Vaccine Immunogenicity Assessment/Sanofi Pasteur
Veronique Barban

1:30-2:00 PM Dissection of Dengue Virus Antibody Interactions using a DC-SIGN – Expressing Human Monocytic Cell Line or Vero cells (de Silva group)
Annette Kraus

2:00-2:30 PM Measurement of Dengue Neutralizing Antibodies
Robert Putnak

2:30-3:00 PM Studying Cross Neutralization of Dengue Virus with a Panel of Dengue Immune-Sera from Travelers
Aravinda de Silva

3:00-3:15 PM BREAK

ADE and Neutralization Test Improvement.

Chair: Susie Kliks

3:15-4:30 PM A test that correlates to risk due to ADE or protection *in vivo*
A standard *in vitro* test and validation
Second generation test(s) and validation
Research materials needed
Next Steps
Assignment of lead responsibilities

DEPARTURE