
NIAID – Dengue Vaccine Initiative Consultation on Dengue Vaccines

JUNE 26 – 28, 2013

Fishers Lane Conference Center, Rockville, MD

Organizers:

Cristina Cassetti
NIAID, Bethesda, MD

Scott Halstead
Dengue Vaccine Initiative – International Vaccine Institute

Aravinda de Silva
University of North Carolina School of Medicine, Chapel Hill, NC

Ted Pierson
NIAID, Bethesda, MD

Eva Harris
University of California, Berkeley, Berkeley, CA

Steve Whitehead
NIAID, Bethesda, MD

Helen Quill
NIAID, Bethesda, MD

Liane Agulto
NIAID, Bethesda, MD

This meeting is sponsored by:



The views expressed in written conference materials or publications and by speakers and moderators at HHS-sponsored conferences do not necessarily reflect the official policies of the Department of Health and Human Services (HHS), nor does mention of trade names, commercial practices, or organizations imply endorsement by the U.S. Government.

Note: NO FEDERAL FUNDS are being used for provision of food. Conference attendees and/or presenters are responsible for meals and/or light refreshments on their own and at their own cost.

Wednesday, June 26, 2013

8:00 am **Registration**

8:25 am Carole Heilman
National Institutes of Health, Bethesda, MD
NIAID Welcoming Remarks

8:35 am Georges Thiry
International Vaccine Institute, Seoul, Korea
DVI Welcoming Remarks

TOPIC: Lessons learned from vaccine developers relevant to protective immunity

CHAIR: Georges Thiry

8:45 am Jorge Osorio
Takeda, Madison, WI
Takeda: Update on tetravalent DENVax

9:05 am Alex Schmidt
GSK Vaccines, Rixensart, Belgium
GSK: Progress report: killed dengue vaccine

9:25 am Beth-Ann Coller
Merck and Co., North Wales, PA
Merck: Sub-unit vaccine

9:45 am Steve Whitehead
National Institutes of Health, Bethesda, MD
NIH: Live-attenuated tetravalent dengue vaccine

10:15 am **B R E A K**

10:30 am Jean Lang
Sanofi Pasteur, Lyon, France
Sanofi: CY dengue tetravalent vaccine

11:00 am Bruno Guy
Sanofi Pasteur, Marcy l'Étoile, France
Immune profiling of dengue tetravalent vaccine phase III stage candidate

11:30 am Discussion

12:00 pm **L U N C H**

TOPIC: Lessons learned from dengue and related flavivirus vaccines: Generation of the immune response

CHAIR: Rafi Ahmed

1:00 pm Bali Pulendran
Yerkes Institute, Emory Vaccine Center, Emory University, Atlanta, GA
Studies in humans on immune responses to 17D yellow fever vaccine

1:30 pm Stephen Popper
Stanford University, Stanford, CA
Innate immunity as a correlate of protection of live-attenuated dengue vaccines

2:00 pm Jens Wrammert
Emory University, Atlanta, GA
Human B cell responses during dengue infection

2:30 pm Mark Slifka
Oregon Health and Science University, Beaverton, OR
Impact of infection or vaccination on pre-existing serological memory

3:00 pm **B R E A K**

TOPIC: Human antibody and T cell responses to dengue infection/vaccination

CHAIR: Rafi Ahmed

3:15 pm Aravinda de Silva
University of North Carolina School of Medicine, Chapel Hill, NC
Studies on polyclonal dengue neutralizing antibody responses to primary dengue infection

3:45 pm James Crowe
Vanderbilt University, Nashville, TN
Molecular and genetic basis for human B cell responses to dengue virus infection or vaccination

4:15 pm Ted Pierson
National Institutes of Health, Bethesda, MD
Studies on neutralizing virion epitopes raised following administration of the NIH DENV 1 vaccine

4:45 pm Gavin Screaton
Imperial College, London, UK
A complex interplay between T and B cell responses in dengue

Thursday, June 27, 2013

TOPIC: Human antibody and T cell responses to dengue infection, lessons from cohort studies

CHAIR: Alex Sette

- 8:00 am Eva Harris
University of California, Berkeley, Berkeley, CA
Immune responses in Nicaragua pediatric cohort study
- 8:30 am Tim Endy
SUNY Upstate Medical University, Syracuse, NY
Thailand cohort studies
- 9:00 am Tom Scott
University of California, Davis, Davis, CA
Iquitos cohort: epidemiological and serological evidence of heterotypic and multitypic protection against dengue disease
- 9:30 am Wei-Kung Wang
John A. Burns School of Medicine, University of Hawaii at Manoa, Honolulu, HI
Immune status of the host and quality of cross-reactive antibodies generated
- 10:00 am Alex Sette
La Jolla Institute for Allergy and Immunology, La Jolla, CA
Human T cell responses to dengue infection
- 10:30 am **B R E A K**
- 10:45 am Daniela Weiskopf
La Jolla Institute for Allergy and Immunology, La Jolla, CA
CD8⁺ T cell responses in NIH vaccinees compared with persons convalescent from wild-type dengue infections
- 11:00 am Discussion

TOPIC: Basic virological studies relevant to vaccine evaluation

CHAIR: Alex Sette

- 11:15 am Ralph Baric
University of North Carolina School of Medicine, Chapel Hill, NC
Use of recombinant dengue viruses to map antibody responses and transplant epitopes

11:45 am Leah Katzelnick
University of Cambridge, Cambridge, UK
Dengue antigenic cartography

12:00 pm **LUNCH**

CHAIR: Cristina Cassetti

1:00 pm Shee-mei Lok
Duke – NUS, Singapore
Quarternary structure dependent epitope recognized by potent human antibodies

1:30 pm Kim Dowd
National Institutes of Health, Bethesda, MD
Viral structural dynamics contributing to neutralization

1:50 pm Richard Kuhn
University of California, Berkeley, Berkeley, CA
New lessons in dengue virus structure and composition and their influence on vaccine strategies

TOPIC: Dissecting immune responses in animal models

CHAIR: Cristina Cassetti

2:20 pm Michael Diamond
Washington University School of Medicine, St. Louis, MO
Mice lacking type I IFN signaling and the development of shock syndrome. Is it really dengue?

2:50 pm **BREAK**

3:10 pm Sujan Shresta
La Jolla Institute for Allergy and Immunology, La Jolla, CA
Immunological mechanisms of protection mediated by a dengue vaccine candidate

3:40 pm Eva Harris
University of California, Berkeley, Berkeley, CA
Mice: mechanisms of protection in heterotypic/multitypic dengue infections

4:10 pm Raphael Zellweger
La Jolla Institute for Allergy and Immunology, La Jolla, CA
Cellular immunity to dengue reinfection

4:40 pm Rukie de Alwis
University of North Carolina Chapel Hill, Chapel Hill, NC
Protection by polyclonal human dengue antibodies in AG129 mice

5:10 pm Laura White
Global Vaccines Inc., Triangle Research Park, NC
Alphavirus-based vectored and adjuvanted dengue vaccines in NHP

Friday, June 28, 2013

TOPIC: Protection measured by live virus challenge

CHAIR: Scott Halstead

8:30 am Scott Halstead
Dengue Vaccine Initiative, International Vaccine Institute, Bethesda, MD
In vitro and in vivo observations on heterotypic and multitypic dengue immunity

9:00 am Anna Durbin
Johns Hopkins Bloomberg School of Public Health, Baltimore, MD
NIH vaccines: live virus challenge of monotypic and multitypic immunes

9:30 am Stephen Thomas
Walter Reed Army Institute of Research, Silver Spring, MD
Review and status of WRAIR dengue challenge model

TOPIC: Protective immunity: concurrent challenges

CHAIR: Scott Halstead

10:00 am Cameron Simmons
Oxford University Clinical Research Unit, Ho Chi Minh City, Vietnam
Human to mosquito transmission studies and implications for vaccines

10:20 am Robert Beatty
University of California, Berkeley, Berkeley, CA
NS1 toxicity: do we understand the pathogenesis of the dengue vascular permeability syndrome?

10:40 am Discussion: Dengue vaccines – where to go from here

12:00 pm **D E P A R T U R E**