



the  
collaboration  
for AIDS vaccine discovery

# Comprehensive Antibody – Vaccine Immune Monitoring Consortium (CA-VIMC)

28 co-investigators, 19 institutions worldwide

BILL & MELINDA  
GATES *foundation*



# Primary Objectives and Goals

- Establish valid laboratory criteria to judge candidate vaccine immunogens based on antibody responses in preclinical and clinical stages of development
- Speed the development of an effective vaccine by contributing key reference reagents, validated assays, shared SOPs, new assay technologies, increased laboratory capacity and quality assurance oversight.
- Adhere to GCLP requirements for human clinical trials to facilitate the licensure and timely access of approved products.
- Engage scientists from developing countries with the goal of facilitating international vaccine trials and enabling new scientific initiatives that will lead to more rapid vaccine discovery (Africa, India, China, Thailand, S. America).

# Components

- Immune Monitoring Services – Core and Regional Laboratories
- Standard Virus Panel Consortium (SVPC)
- Neutralization Serotype Discovery Program (NSDP)
- Acute Infection Specimen Acquisition Laboratory (AISAL)
- Central Reference Laboratory (CRL)
- Quality Assurance Unit (QAU)
- Research & Development (R&D)
- Sequence & Computational Analysis Center (LANL)
- Vaccine Immunology Statistical Center (VISC)

# Immune Monitoring Services

Assist the CAVD Vaccine Discovery Groups (VDCs) and other groups in need of reliable measurements of vaccine-elicited antibody responses that will help to identify improved vaccine immunogens.

- Preclinical NAb Core – Harvard
- GCLP NAb Core – NVITAL
- GCLP ELISA Core – Duke
- GCLP ADCC Core – Duke

Michael Seaman



Neutralizing Abs

John Mascola



Neutralizing Abs

Georgia Tomaras



ELISA

Guido Ferrari



ADCC

# Regional Laboratories

- Perform GCLP neutralization assays and ELISA.
- Perform ancillary studies related to assay and reagent standardization, including participation in SVPC and NSDP.
- Monitor vaccine-elicited neutralizing Ab responses in preclinical and clinical trials.

Lynn Morris



South Africa

Kunxue Hong



China - CDC

Vera Bongertz



S. America

Ramesh Paranjape



India

P. Balakrishnan



India

Ruengpung Sutthent



Thailand

Chitraporn Kamasuta



Thailand

Fred Wabwire-Mangen



Uganda

Vicky Polonis



HMJF

# Reference Laboratory – Duke

Rigorous program of assay standardization, validation, SOP development, interactive training and regular competency and proficiency testing in preclinical and clinical laboratories

D. Montefiori



Kelli Greene



Hongmei Gao



Barbara Wolak



# Quality Assurance Unit – Duke

Implement and supervise policies regarding common topics of quality assurance for laboratories that perform end-point assays on specimens from human clinical trials.

Marcella Sarzotti-  
Kelsoe



Dan Ozaki



# Cloning/Sequencing Centers

Clone and sequence functional gp160 clones of a large number of HIV-1 strains from around the world to be used as standard reference reagents. In addition, perform full genome sequencing of these same virus strains to facilitate the development of standardized reagents for T cell assays.

Beatrice Hahn



UAB-Birmingham

Francine  
McCutchan



HMJF

Ron Swanstrom



UNC-Chapel Hill

Feng Gao



Duke

Carolyn  
Williamson



Univ. Cape Town,  
S. Africa

Miguel Thomson



Inst. de Salud Carlos,  
Spain

# Acute Infection Specimen Acquisition Laboratory – Harvard

Acquire plasma, sera and PBMC from early seroconverters at diverse geographic locations, including international vaccine trial sites, for Env cloning, full genome sequencing and new monoclonal Abs.

Raphael Dolin



Lindsey Baden



# Research & Development

Develop new assays and monoclonal antibodies for a better understanding of vaccine-elicited antibody responses. Focus on neutralizing antibodies and other possible protective antibodies, including but not limited to FcR and complement effector functions.

John Mascola



VRC-NIH

George Shaw



UAB-Birmingham

Norman Chen



Duke

James Binley



Torrey Pines  
Inst.

Ken Rosenthal



McMaster Univ.

James Robinson



Tulane Univ.

# Sequence Database

This will be the first large-scale effort to generate neutralization data with viral reagents that have a precisely known Env sequence. This information may be used to identify genetic signatures of neutralization phenotypes, to delineate neutralization serotypes, and to identify optimal peptide reagents for T cell assays.

Bette Korber



# Vaccine Immunology Statistical Center (VISC)

The CA-VIMC works closely with the VISC to:

- design and implement an efficient system to capture, manage and analyze specimen information and antibody data from preclinical and clinical vaccine studies
- perform biostatistical analyses of data from assay validation experiments, proficiency testing and reference reagent development

Steve Self



Blake Wood



Al Williams

