

AIDS in India 2007
A Regional Workshop-Symposium to enhance HIV/AIDS Research Capacity
Program

Laboratory Hands-on Workshop
Sunday 8th July to Wednesday 11th July

Protocols offered & Instructors

A. HIV Protocols

1. Measuring CD4 T cell levels by Flow Cytometry

Instructor
V. Ravi, MD
NIMHANS
Bangalore, Karnataka, India

Assistance:
Asokan Mangaiarkarasi
JNCASR
Bangalore, Karnataka, India

Assistance:
Venkatesh Prasanna KS
JNCASR
Bangalore, Karnataka, India

2. Real-Time HIV PCR

Instructor:
U. Ranga, PhD
JNCASR
Bangalore, Karnataka, India

Assistance:
Intiaz Nisar Lone
JNCASR
Bangalore, Karnataka, India

Assistance:
Siddhartha
JNCASR
Bangalore, Karnataka, India

3. Use of reporter cell lines

Instructor
Debashis Mitra, PhD
National Centre for Cell Science
Pune, Maharashtra, India

Assistance:
Prashanta Kumar Dash
JNCASR
Bangalore, Karnataka, India

Vasudev R. Rao
Albert Einstein College of Medicine
Bronx, NY, USA

4. Elispot and ICS Assay

Instructors
Ramarao Amara, PhD
Emory University
Atlanta, GA USA

Assistance:
Krishnamurthy Kumar Anand
JNCASR
Bangalore, Karnataka, India

B. Shacklett, PhD
University of California Davis
Davis, CA USA

5. Heteroduplex Mobility shift Assay

Instructor:
Dr. Raj Shankarappa, PhD
University of Pittsburgh
Pittsburgh, PA USA

Assistance:
N. Siddappa, PhD
Harvard University
Boston, MA, USA

B. TB Protocols

1. MIRU-VNTR typing

Instructor:
Sayera Banu, MBBS, PhD
ICDDR,B
Dhaka, Bangladesh

Assistance by:
Khaja Mafiz Uddin
ICDDR,B
Dhaka, Bangladesh

2. Spoligotyping

Instructor:
Sujatha Narayanan, PhD
TRC
Chennai, Tamilnadu, India

Assistance:
Sivakumar Shanmugam
TRC
Chennai, Tamilnadu, India

Assistance:
Srinivasan Govindaraju
TRC
Chennai, Tamilnadu, India

Assistance:
Dinakar Sambandan
Albert Einstein College of Medicine
Bronx, NY USA

3. Phage-based assays for detection of TB (includes Luciferase reporter phage assay and Blue phage assays)

Instructor
Vanaja Kumar, PhD
Tuberculosis Research Centre
Chennai, Tamilnadu, India

Assistance:
N. S. Gomathi
TRC
Chennai, Tamilnadu, India

Assistance:
Azger Dustackeer
TRC
Chennai, Tamilnadu, India

Instructor
Jordan Kriakov, MD
Albert Einstein College of Medicine
Bronx, NY, USA

Assistance:
S. Balaji
TRC
Chennai, Tamilnadu, India

Please Note: There will be 3 to 4 tracks running simultaneously. Each track is color coded for simplicity as indicated below. The participants are requested to follow the time line provided in order to complete all the training.

Measuring CD4 T cell levels by Flow Cytometry
Real Time HIV PCR
Use of Reporter Cell lines
Elispot and ICS Assay
Heteroduplex Mobility shift Assay
TB Protocols

Introduction	Practical Session
Lecture Hall	FACS Lab
Lecture Hall	Clean PCR Room
Lecture Hall	BSL2 facility
Lecture Hall	BSL2 facility
Lecture Hall	Mol. Bio. Lab
Lecture Hall	Mol. Bio. Lab

Sunday July 8th

Time	Measuring CD4 (FACS Laboratory)	Real Time HIV PCR (Clean PCR room)	Use of Reporter Cell lines (BSL Laboratory)
9:30-10:00	Introduction (Lecture Hall) Practical session on CD4 count		
10:00-10:30			
10:30-11:00			
11:00-11:30			
11:30-12:00			
12:00-12:30			
12:30-1:00			
1:00-1:30			
1:30-2:00	Lunch Break		
2:00-2:30			
2:30-3:00		Introduction (Lecture Hall) Practical session on real-time PCR	
3:00-3:30			
3:30-4:00			
4:00-4:30			
4:30-5:00			
5:00-5:30	Coffee Break		
5:30-6:00			Introduction Plate cells
6:00-6:30			
6:30-7:00			
7:00-7:30		Analysis of real-time PCR results	
7:30-8:00			

Monday July 9th

Time	ELISPOT and ICS (BSL Laboratory)	HMA (Molecular Biology Lab)	Use of Reporter Cell lines (BSL Laboratory)	TB (Molecular Biology Laboratory)
9:00-9:30	Introduction (Lecture Hall)			
9:30-10:00				
10:00-10:30			Incubation with antivirals and initiation of infection	Introduction to Phage assays Dr. V. Kumar Dr. J. Kriakov
10:30-11:00				
11:00-11:30	PBMC preparation (could start earlier depending on reporter virus experiment)			Phage Propagation & Luciferase Reporter assay
11:30-12:00				
12:00-12:30				Blue Phage Assay
12:30-1:00				
1:00-1:30	Lunch Break			
1:30-2:00				
2:00-2:30		Introduction (Lecture Hall)		
2:30-3:00		Sample Preparation, DNA extraction	Washing (participants need not take part)	
3:00-3:30				
3:30-4:00				
4:00-4:30	Stimulation			Introduction to Spoligotyping (Dr. S. Narayanan)
4:30-5:00				
5:00-5:30	Coffee Break			
5:30-6:00		Set up PCR		
6:00-6:30				

Tuesday July 10th

Time	ELISPOT and ICS (BSL Laboratory)	HMA (Molecular Biology Laboratory)	TB (Molecular Biology Laboratory)
9:30-10:00		Agarose Gels Pour PAGE Gels	Introduction to MIRU-VNTR typing (lecture Hall) Dr. Banu
10:00-10:30			
10:30-11:00	ELISPOT: Development 1 ICS: Staining		PCR for MIRU-VNTR Typing
11:00-11:30			
11:30-12:00			Spoligotyping Demonstration (Setting up PCR) Dr. Narayanan
12:00-12:30			
12:30-1:00			
1:00-1:30	Lunch Break		
1:30-2:00			
2:00-2:30		Set up HMA, Load, Electrophoresis O/N	
2:30-3:00			
3:00-3:30	ELISPOT: Development 2 ICS: Acquire:		
3:30-4:00			
4:00-4:30			
4:30-5:00			
5:00-5:30	Coffee break		
5:30-6:00	Mini Symposium – I		
6:00-6:30			
6:30-7:15			

Mini-Symposium I

Challenges in TB Diagnosis: Implications for HIV-infected patients and drug-resistance
5:30PM to 6:30PM

Chairs

Soumya Swaminathan, MD
Tuberculosis Research Centre
Chennai, India

Sarita Shah, MD
Albert Einstein College of Medicine
Bronx, NY USA

5:30PM - 5:45PM

'Global epidemiology of TB in HIV-infected persons: Importance of TB/HIV integration and TB screening in HIV care and treatment settings'

Soumya Swaminathan, MD
Deputy Director
Tuberculosis Research Centre
Chennai, India

5:45PM – 6:00PM

'Challenges in TB diagnosis in HIV-infected persons: Limitations of current diagnostic tools and algorithms'

Sarita Shah, MD
Assistant Professor
Divisions of Internal Medicine and Infectious Diseases
Albert Einstein College of Medicine
Bronx, NY USA

6:00PM to 6:15PM

'New WHO guidelines for diagnosis of smear-negative and extra-pulmonary TB in resource-limited settings'

Fraser Wares, MD
Office of the WHO Representative to India
New Delhi - 110001 India

6:15PM to 6:30PM

'New diagnostics for TB and drug resistance'

Neel Gandhi, MD
Divisions of Internal Medicine and Infectious Diseases
Albert Einstein College of Medicine
Bronx, NY USA

Wednesday July 11th

Time	ELISPOT and ICS	HMA	Use of Reporter Cell lines	TB
9:30-10:00	ELISPOT: Acquire			Luciferase reporter assay Readings/Phage Titre calculation/Phage-biotics Dr. V. Kumar
10:00-10:30				
10:30-11:00				Analysis of MIRU Results Dr. S. Banu
11:00-11:30				
11:30-12:00			Stain Gel, Analyze and interpret HMA	
12:00-12:30				
12:30-1:00				
1:00-1:30	Lunch Break			
1:30-2:00	Lunch Break			
2:00-2:30			Show β -gal staining and perform Luciferase assay.	Early start (1:30 PM) Spoligotyping Demonstration (Dr. S. Narayanan)
2:30-3:00				
3:00-3:30				
3:30-4:00				
4:00-4:30				
4:30-5:00				
5:00-5:30	Coffee Break			
5:30-7:00	Mini Symposium-II			
7:15-7:45			Visualize β -gal stain (continue the next day)	Spoligotyping Demonstration (Dr. S. Narayanan)

Mini-symposium II
A Symposium to Highlight the AIDS Research of Selected Trainees
11th July 2007

5:30PM – 7:00PM

Chairs

Vasanthapuram Ravi, MD
National Institute of Mental Health and Neurosciences
Bangalore, Karnataka, India

Anita Shet, MBBS
St. John's Medical College
Bangalore, Karnataka, India

Session I : HIV Pathogenesis and Genetic basis of HIV infection

5:30PM – 5:40PM 'Env mediated CCR5 down-modulation affects cell activation survival and CTL function'

Shweta Dubey, PhD
International Centre for Genetic Engineering and Biotechnology
New Delhi, India

5:40PM – 5:50PM 'Studies on the role of heat shock proteins in HIV-1 pathogenesis'

Pratima Rawat
National Centre for Cell Science
Pune, Maharashtra, India

5:50PM – 6:00PM 'Genetic Correlates of HIV-1 infection in the Indian Population'

Gaurav Sharma
All India Institute of Medical Sciences
New Delhi, India

Session II: NeuroAIDS and Drug abuse

6:00PM – 6:10PM 'Neuronal apoptosis by HIV-1 Tat protein derived from clades B and C'

Mamata Mishra
National Brain Research Center
Manesar, Haryana, India

6:10PM – 6:20PM 'Enhanced viral replication in cerebral compartment & accelerated onset of AIDS in SIV/SHIV infected chronic morphine exposed rhesus macaques'

Rakesh Kumar, PhD
Kumaun University
Pithoragarh, U.A., India

6:20PM – 6:30PM

'Prevalence of HIV and HCV infections in Injecting drug users'

Anuradha Dutta, MD
T.N. Medical College
Mumbai, India

Session III: Population studies of HIV-1 and HIV-2

6:30PM – 6:40PM

'Surveillance of HIV-1 Drug resistance in HAART treated patients and in the general population'

John Rusine
Ministere de la Sante
Laboratoire National de Reference
Kigali-RWANDA

6:40PM – 6:50PM

'A Molecular Epidemiological Study of HIV-2 infections from Karnataka'

Susmita Gurjar R.
National Institute of Mental Health and Neurosciences
Bangalore, Karnataka, India

6:50PM – 7:00PM

'Efficacy and safety evaluation of a *Siddha* medicine *HIVS-2004* for HIV/AIDS'

Asokan Mangaiarkarasi
Jawaharlal Nehru Centre for Advanced Scientific Research
Bangalore, Karnataka, India

Session IV: Drug resistant TB

7:00PM – 7:10PM

'Drug resistant tuberculosis in a tertiary referral teaching hospital of Bangladesh'

Arman Hossain, MBBS
International Centre for Diarrheal Diseases Research
Dhaka, Bangladesh

Thursday July 12th

Round-Table Workshop

Creating effective partnerships: Role of epidemiological, behavioral and ethical aspects on AIDS research

Session I: 9:30am – 1:10pm

Chairs

Laurie Bauman, PhD
Albert Einstein College of Medicine
Bronx, New York, USA

Ruth Macklin, PhD
Albert Einstein College of Medicine
Bronx, New York, USA

9:35 – 10:05 am

Epidemiological Study Design

Ellie Schoenbaum, MD
Albert Einstein College of Medicine
Bronx, New York, USA

10:05 -10:15 am

Q & A

10:15 – 10:45 am

Ethical issues in epidemiological research and surveillance

Ruth Macklin, PhD
Albert Einstein College of Medicine
Bronx, New York, USA

10:45 – 10-55 am

Q & A

10:55 – 11:10 am

Coffee Break

11:10 – 11:40 pm

Behavioral Study Design

Laurie Bauman, PhD
Albert Einstein College of Medicine
Bronx, New York, USA

11:40 – 11:50 am

Q & A

11:50 – 12:20 pm

Clinical Trials

Julia Arnsten, MD
Albert Einstein College of Medicine
Bronx, New York, USA

12:20 – 12:30 pm

Q & A

12:30 – 1:00 pm

Ethical issues in behavioral studies and clinical trials

Ruth Macklin, PhD
Albert Einstein College of Medicine
Bronx, New York, USA

1:00 -1:10 pm

Q & A

1:10 – 2:10 pm

Lunch Break

Session II: 2:15pm – 5:00pm

Chairs

Rosy Chhabra, PsyD
Albert Einstein College of Medicine
Bronx, New York, USA

Julia Amsten, MD
Albert Einstein College of Medicine
Bronx, New York, USA

2:20 – 3:50 pm

Concurrent Workgroups

Group A

What's love got to do with it?
Preventive interventions for youth

Moderators

Laurie Bauman, PhD
Albert Einstein College of Medicine
Bronx, New York, USA

Rosy Chhabra, PsyD
Albert Einstein College of Medicine
Bronx, New York, USA

Group B

Interventions to prevent sexual & drug use related
transmission (Condoms, microbicides, circumcision and
needle exchange)

Moderators

Ellie Schoenbaum, MD
Albert Einstein College of Medicine
Bronx, New York, USA

Jayanthi Shastri, MD
T.N. Medical College & B.Y.L. Nair Hospital
Mumbai, India

Group C

Adherence with Antiretroviral Therapies

Moderators

Julia Amsten, MD
Albert Einstein College of Medicine
Bronx, New York, USA

Group D

HIV testing, stigma & ethical Issues

Moderators

Ruth Macklin, PhD
Albert Einstein College of Medicine

Bronx, New York, USA

Amar Jesani, MBBS
Centre for Studies in Ethics and Rights
Mumbai, India

Group E

Behavioral interventions to prevent HIV among vulnerable groups (Interventions for Women; Reaching migratory workers etc.)

Moderators

Sonia Suchday, PhD
Ferkauff School of Psychology
Bronx, New York, USA

Sanghamitra Iyengar
Samraksha
Bangalore 560018

Shivnath Ghosh, PhD
H.P. University
Shimla, India

Group F

Qualitative research in sexuality with specific focus on male vulnerability

Moderators

Sharful Islam Khan, MBBS, PhD
ICDDR,B
Dhaka-1000

3:50 – 4:15 pm

Coffee break

4:15 – 4:45 pm

Individual group presentations & future direction
(10 minutes for each of the 6 groups)

4:45-5:00PM

Closing remarks

Julia Arnsten, MD
Albert Einstein College of Medicine
Bronx, New York, USA

Banquet

Friday July 13th

Symposium on HIV/AIDS: Trials, Treatment and Research

9:30AM to 6:00PM

- 09:30AM – 9:40AM **Introductory Remarks**
- Vinayaka R. Prasad, PhD
Albert Einstein College of Medicine
Bronx, NY, USA
- 09:40AM – 9:50AM **Program Outline**
- Ganjam Kalpana, PhD
Albert Einstein College of Medicine
Bronx, NY, USA
- 09:50 AM – 10:00AM **Welcome**
- Udaykuamr Ranga, PhD
Jawaharlal Nehru Centre for Advanced Scientific Research
Bangalore, Karnataka State, India
- 10:00AM – 10:45AM **Inaugural Address**
‘Challenges to HIV/AIDS research in resource poor setting’
- Dr. Suniti Solomon, MD
YRG Care
Chennai, Tamilnadu State, India

10:45AM – 11:00AM Coffee Break

Session A: HIV/AIDS Studies Using Clinical Cohorts

11:00AM to 12:00PM

Chairs

Dr. Ellie Schoenbaum, MD
Albert Einstein College of Medicine
Bronx, New York, USA

Lt. Gen. D. Raghunath, MD
Sir Dorabji Tata Centre for Research in Tropical Diseases
Bangalore, Karnataka, India

- 11:00AM - 11:20AM **‘Predictors of favorable outcomes of antiretroviral therapy in US & Rwandan Women**
- Kathryn Anastos, MD
Albert Einstein College of Medicine
Bronx, NY, USA
- 11:20AM - 11:40AM **‘Impact of Antiretroviral Therapy on changing the Natural History of HIV disease in Southern India’**

Dr. N. Kumarasamy, MBBS, PhD
YRG Care
Chennai, Tamil Nadu State, India

11:40AM – 12:00PM

'Using cohorts of STD patients and HIV sero-discordant couples to estimating HIV incidence, prevalence and associated risk factors'

Dr. Arun Risbud, MD, MPH
National AIDS Research Institute
Pune, Maharashtra State, India

Session B: Animal Models for HIV and Vaccine Studies
12:00PM to 3:10PM

Chairs

Vijaya Sachidanandam, PhD
Indian Institute of Science
Bangalore, Karnataka State, India

Udaykumar Ranga, PhD
Jawaharlal Nehru Centre for Advanced Scientific Research
Bangalore, Karnataka State, India

Plenary Lecture I

12:00PM – 12:45PM

'Tackling HIV Clade C: Pathogenesis Studies and Vaccine Development in Primate Models'

Ruth Ruprecht, MD, PhD
Harvard University
Boston, MA USA

12:45PM – 1:45PM

Lunch Break

1:45PM – 2:05PM

'Regulatory T cells in SIV infection'

Ramarao Amara, PhD
Emory University
Atlanta, GA, USA

2:05PM – 2:25PM

'Not quiet on the mucosal front: HIV-specific immune responses in mucosal tissues'

Barbara Shacklett, PhD
University of California Davis
Davis, CA, USA

Plenary Lecture II

2:25PM – 3:10PM

'Killing the Tubercle Bacillus: Strategies to make a better TB Vaccine'

William R. Jacobs, Jr., PhD
Albert Einstein College of Medicine
Bronx, NY, USA

Session C: HIV-1 Replication and Pathogenesis

3:10PM to 5:35PM

Chairs

Ganjam V. Kalpana, PhD
Albert Einstein College of Medicine
Bronx, NY, USA

Susarla K. Shankar, MD
National Institute of Mental Health and Neurosciences
Bangalore, Karnataka, India

Plenary Lecture III

3:10PM – 3:55PM

‘Interactions between HIV-1 and host cell proteins and RNAs in virus replication’

Kuan Teh Jeang, MD, PhD
National Institute of Allergy and Infectious Diseases, NIH
Bethesda, MD, USA

3:55PM – 4:15PM

Coffee Break

4:15PM – 4:35PM

‘Dynamics of host-virus interaction during HIV-1 replication’

Ganjam Kalpana, PhD
Albert Einstein College of Medicine
Bronx, NY, USA

4:35PM – 4:55PM

‘Influence of subtype-specific genetic polymorphism on HIV-1 neuropathogenesis’

Vinayaka R. Prasad, PhD
Albert Einstein College of Medicine
Bronx, NY, USA

4:55PM – 5:15PM

‘A Unique HIV-1 subtype-C molecular clone demonstrates expanded coreceptor use’

Udaykumar Ranga, PhD
Jawaharlal Nehru Centre for Advanced Scientific Research
Bangalore, Karnataka State, India

5:15PM – 5:35PM

‘HIV accessory proteins and their role in pathogenesis’

Shahid Jameel, PhD
International Center for Genetic Engineering and Biotechnology
New Delhi

Closing Ceremony

6:00PM to 7:00PM

6:00PM to 7:00PM

Closing Remarks

Dr. M. R. S. Rao, PhD
President, JNCASR
Bangalore, Karnataka, India