Tuesday December 3, 2013
Satellite meeting sponsored by the NIMH Division of AIDS Research
Virus-CNS Interplay: Role of Myeloid cells in HIV Latency and Persistence

15:45 Opening Remarks

16:00 Modulation of Myeloid Cell Traffic into and out of the CNS; the Effects on Macrophage Populations and Viral Infection
Kenneth Williams; Boston College; Boston, USA

16:15 Persistent Perturbation of CNS Myeloid-lineage Cells during Suppressive Therapy
Serena Spudich; Yale University; New Haven, USA

16:30 Virus Compartmentalization in the CNS
Ronald Swanstrom, University of North Carolina, Chapel Hill, Chapel Hill, USA

16:45 Antiviral Restriction of Myeloid Cell Infection
Baek Kim, Emory University, Atlanta, USA

17:00 Analysis of Macrophage Reservoirs in HIV-infected Individuals
Mario Stevenson, University of Miami, Miami, USA

17:15 Strategies to Purge the Macrophage Reservoir
Jonah Sacha, Oregon Health & Science University, Portland, USA

17:30 Discussion

18:20 Welcoming Message

18:30 Challenges in HIV Eradication Research
Robert Siliciano; John Hopkins University, Baltimore, USA

19:00 Dinner
Wednesday December 4, 2013
08:00-10:00  Session I: Basic Mechanisms of HIV Latency

Chairs: Carine Van Lint; Université Libre de Bruxelles, Gosselies, Belgium
Monsef Benkirane; CNRS, Montpellier, France

8:00  Signaling Pathways and Epigenetic Mechanisms Controlling HIV Latency
Jonathan Karn; Case Western Reserve University, Cleveland, USA

8:20  Role of Lysine Methylation in HIV Latency
Melanie Ott; Glastone Institute of Immunology and Virology, San Francisco, USA

8:40  A Novel Pathway of HIV-1 Proviral Latency Controlled by Amino Acid Starvation via HDAC4
Guido Poli; San Raffaele University, Milano, Italy

9:00  Dual role of the cellular cofactor CTIP2 in HIV-1 latency
Carine Van Lint; Université Libre de Bruxelles, Gosselies, Belgium

9:20  Iws1 connects LEDGF/p75 and Spt6 to silence HIV-1 gene expression in latently infected cells
Stéphane Emiliani; INSERM U1016, Paris, France

9:40  The NCOR2-Nurr1-CoREST Transrepression Axis Impairs HIV Reactivation in Latently Infected Microglial Cells
David Alvarez-Carbonell; Case Western Reserve University, Cleveland, USA

10:00 Break, Posters
10:30-12:10  Session II: Assays to Measure HIV Persistence

Chairs: Sarah Palmer; Westmead Millenium Institute for Medical Research and University of Sydney, Westmead, Australia
Douglas Richman; University of California San Diego/VA Medical Center, La Jolla, USA

10:30  Comparative Analysis of Measures of Viral Reservoirs in HIV-1 Eradication Studies
Janet Siliciano; John Hopkins University, Baltimore, USA

10:50  “Digital” Assays for Quantitative Analysis of Persistent Infection
Matthew Strain; University of California, San Diego, USA

11:10  Assessment and Quantification of Cell Associate Unspliced HIV-1 RNA using Reverse Transcriptase Droplet Digital PCR
Zixin Hu; Brigham and Woman’s Hospital and Harvard Medical School, Cambridge, USA

11:20  Droplet Digital PCR, the new tool in HIV reservoir quantification?
Ward De Spiegelaere; Ghent University, Ghent, Belgium

11:30  Subtype Independent Amplification and Sequencing of Low Level Viremia in HIV-1 Infected Patients on Combination Antiretroviral Treatment
Tomas Mellberg; University of Gothenburg, Goteborg, Sweden

11:40  Sensitive HIV-1 RNA detection in plasma and cerebrospinal fluid (CSF) of patients receiving stable antiretroviral therapy
Anna Maria Geretti; University of Liverpool, Liverpool, United Kingdom

11:50  Pyroptosis Drives Both CD4 T-Cell Death and Chronic Inflammation In HIV-Infection: Potential Implications for the Latent HIV Reservoir
Warner Greene; Gladstone Institute of Virology and Immunology, San Francisco, USA

12:00  Comparison of Latent HIV-1 Reactivation in Multiple Cell Models and Resting CD4+ T Cells from Aviremic Patients
Vicente Planelles; University of Utah, Salt Lake City, USA

12:10  Lunch
14:00-15:10  Session III: In vivo and in vitro Models of HIV Persistence

Chairs: Jose Alcamí; Instituto de Salud Carlos III, Madrid, Spain
       Vicente Planelles; University of Utah, Salt Lake City, USA

14:00  Viral Reservoirs and Anti-Latency Interventions in Nonhuman Primate Models of SIV/SHIV Infection
       Koen VanRompay; UC Davis, Davis, USA

14:20  In vivo Analysis of HIV Persistence and Eradication
       J. Victor Garcia-Martinez; University of North Carolina at Chapel Hill, Chapel Hill, USA

14:40  HIV Latency Drug Discovery: Optimizing Drugs to Induce Latent HIV Expression
       Daria Hazuda; Merck, West Point, USA

15:00  Modeling a Cure for HIV in Nonhuman Primates Using Hematopoietic Stem Cell Gene Therapy Approaches
       Hans-Peter Kiem; Fred Hutchinson Cancer Research Center, Seattle, USA
15:10 Understanding Lentiviral Persistence in vivo Using Nonhuman Primate Models
Jacob Estes; SAIC-Frederick, Inc, Frederick, USA

15:30 Does Expression of Vpx by SIV Facilitate Infection of Macrophages and Resting CD4 T cells in vivo?
Jason Brenchley National Institutes of Health, Bethesda, USA

15:50 Longitudinal analysis of infection frequencies and genetic makeup of intracellular HIV-1 from tissue compartments during long-term suppressive therapy
Sarah Palmer; Westmead Millennium Institute and University of Sydney, Westmead, Australia

16:00 Persistent Elevation in HIV viremia during cART with Identical WT Sequences Imply Expansion of a Clonal Source
Frank Maldarelli; HIV-Drug Resistance Program, Frederick, USA

16:10 Break, Posters

16:40 Anatomic and Cellular Reservoirs of HIV Infection Before and During HIV Therapy
Timothy Schacker; University of Minnesota, Minneapolis, USA

17:00 Quantitation of Latently Infected Macrophages in Tissues of Suppressed SIV-infected Macaques that Contribute to the Viral Reservoir
Janice Clements; John Hopkins University School of Medicine, Baltimore, USA

17:20 Experimental CD4 Depletion Prior to SIV Infection in rhesus macaques Results in Massive Macrophages and Microglia Infection with Rapid Turnover of Infected Cells
Mirko Paiardini; Emory University, Atlanta, USA

17:35 Distribution and Fine Structure Genetic Analysis of HIV in Gut Associated Lymphoid Tissue (GALT) and Blood after Prolonged Antiretroviral Therapy
Francesco Simonetti; NCI-NIH; Frederick, USA

17:50 Persistent expression of HIV-1 p24-Gag in tissues of patients on cART
Richard Fox; University of Washington, Seattle, USA

Free Evening to enjoy Miami!
Thursday December 5, 2013
08:00-10:00  Session VI: Immunology of HIV Persistence

Chairs: Marie-Lise Gougeon; Institut Pasteur, Paris, France
Nicolas Chomont; VGTI-Florida, Port St. Lucie, USA

8:00  The Non-human Primate Model for Studies of HIV Eradication
Guido Silvestri; Emory University, Atlanta, USA

8:20  The Role of Immune-based Therapeutics in Curing HIV Infection
Steven Deeks; University of California San Francisco, San Francisco, USA

8:40  The Negative Regulators PD-1, LAG-3 and TIGIT are Associated with HIV Persistence and Incomplete Immune Reconstitution during ART
Remi Fromentin; VGSI Florida, Port St Lucie, USA

9:00  Low Tryptophan 2,3-dioxygenase (TDO) Expression is Associated with Distinctive Immune-metabolism of Tryptophan and Preserved Th17/Treg Balance in HIV Elite Controllers
Jean-Pierre Routy; McGill University Health Centre, Montreal, Canada

9:20  All Bark and no Bite: HIV Exploitation of CTL ‘Help’ in the Absence of Killing
Robbie Mailliard; University of Pittsburgh, Pittsburgh, USA

9:40  Seminal Cytomegalovirus (CMV) Replication is Associated with Increased CD4+ T-cells Immune Activation and Higher Levels of Proviral HIV DNA Reservoir in Effectively Treated HIV-1 Infected Men who Have Sex with Men (MSM)
Marta Massanella; University of California, San Diego, La Jolla, USA

10:00 Break, Posters

10:30-12:00  Session VII: Pharmacology of HIV Persistence

Chairs: Alain Lafeuillade; General Hospital, Toulon, France
Courtney Fletcher; University of Nebraska Medical Center, Omaha, USA

10:30  Is There a Pharmacologic Basis for Persistent HIV Replication?
Courtney Fletcher; University of Nebraska Medical Center, Omaha, USA

10:50  Current and Future Approaches to Quantifying the Relationship Between Pharmacology and HIV Persistence
Angela Kashuba; University of North Carolina Eshelman School of Pharmacy, Chapel Hill, USA

11:10  Inhibitory Slopes Show Minimal Variation Within and Across Mechanistic Classes of HIV-1 Antiretroviral Agents and Are Not Likely to Contribute to Differential Effectiveness of Combination Therapy and Viral Persistence
Jay Grobler; Merck & Co., West Point, USA

11:25  Farnesyl Transferase inhibitors: Identification and validation of a class which reactivates HIV latent expression and is synergistic with other mechanisms in vitro
Richard Barnard; Merck & Co., West Point, USA

11:40  What If a Drug that was Developed to Treat HIV Infection Could Actually Help to Cure It?
Mark Wainberg; McGill University AIDS Centre, Montreal, Canada
12:00 Lunch

14:00-15:00  Session VIII: Late Breakers

Chairs: Alain Lafeuillade; General Hospital, Toulon, France
        Mario Stevenson; University of Miami - Miller School of Medicine, Miami, USA

14:00 Suppression of low-level transcription from latently infected cells and Inhibition of HIV-1 reactivation by a potent Tat inhibitor
Susana Valente; The Scripps Research Institute, Jupiter, USA

14:20 The effect of maraviroc on HIV transcription in resting CD4+ T-cells from ART-suppressed HIV-1-infected patients
Nadia Madrid; Hospital Ramon Y Cajal, Madrid, Spain

14:40 HIV Sanctuaries, Latency and Reactivation
Boris Peterlin; UCSF, San Francisco, USA

15:00-16:00  Session IX: Drug Discovery

Chairs: Mario Stevenson; University of Miami - Miller School of Medicine, Miami, USA
        David Margolis; University of North Carolina at Chapel Hill, Chapel Hill, USA

15:00 Anti-PD-L1 immunotherapy in ARV-suppressed rhesus monkeys
James Whitney; Beth Israel Deaconess Medical Center, Boston, USA

15:10 Dual Approach to HIV-1 Cure: Activation of Latency and Restoration of Exhausted Virus-specific T Cell Function
Steve Mason; Bristol Myers Squibb, New York, USA

15:30 Concepts of Combination Therapy for HIV Eradication
Romas Gelezniunas; Gilead Sciences, Inc, Foster City, USA

16:00 Break, Posters
16:30-18:30  Session X: Acute HIV Infection and Functional Cure

Chairs: Deborah Persaud; John Hopkins University, Baltimore, USA
Andrew Spaltenstein; GlaxoSmithKline, Raleigh - Durham, USA

16:30  Challenges and Strategies Towards Functional Cure: How Low Do You Need To Go
Timothy Henrich; Brigham and Women's Hospital, Boston, USA

16:50  Virologic and Immunologic Characterization of HIV reservoirs in Children Following Early Therapy
Katherine Luzuriaga; University of Massachusetts Medical School, Worcester, USA

17:10  Persistence of HIV-1 Transcription in Patients Initiating Antiretroviral Therapy during Primary Infection
Alexander Pasternak; University of Amsterdam, Amsterdam, Netherlands

17:30  Small Peripheral Blood HIV-1 Reservoir after Allogeneic (Cord Blood) Stem Cell Transplantation
Annemarie Wensing; University Medical Center Utrecht, Utrecht, Netherlands

17:50  Mathematical Model of Spontaneous HIV Infection Control Following Termination of Antiretroviral Therapy
Alan Perelson; Los Alamos National Laboratory, Los Alamos, USA

18:10  Sigmoid Lamina Propria CD4 T cell Depletion during Acute HIV Infection is Associated with Activated CD4/CD8 T cells, Inflammatory Biomarkers and Viral Burden in the Gut and Blood
Jintanat Ananworanich; SEARCH, The Thai Red Cross AIDS Research Center, Bangkok, Thailand

19:30  Dinner
Friday December 6, 2013
08:00-10:00  Session XI: New Therapeutic Approaches – Part I

Chairs: Andrea Savarino; Instituto Superiore Di Sanita, Rome, Italy
        George Hanna; Bristol-Myers Squibb, Princeton, USA

8:00  Translational Challenges in Targeting Latent HIV Infection
     David Margolis; University of North Carolina at Chapel Hill, Chapel Hill, USA

8:20  Activating Latent HIV with Vorinostat. The Knowns and Unknowns
     Sharon Lewin; Monash University, Melbourne, Australia

8:40  Cyclic Dosing of Panobinostat to Reverse HIV Latency: Findings from a Clinical Trial
     Thomas Rasmussen; Aarhus University Hospital, Skejby, Denmark

9:00  Pharmacologically Induced Functional Cure-like Condition in Chronically SIVmac251 Infected Macaques is Associated with Immune Reconstitution and Broad Anti-Gag Immune Responses Increasing over Time
     Iart Shytaj; Istituto Superiore di Sanità, Rome, Italy

9:10  Design and delivery of homing endonucleases for inactivation of HIV provirus
     Keith Jerome; Fred Hutchinson Cancer Research Center, Seattle, USA

9:20  Novel CD4-Based Chimeric Antigen Receptors as Immunotherapy for an HIV Functional Cure
     Ed Berger; NIAID, NIH, Bethesda, USA

9:30  Evaluating CTL-based flush and kill HIV Eradication Strategies Against Primary Cell Models of Latency and Natural HIV Reservoir
     Brad Jones; Ragon Institute of MGH, MIT, and Harvard, Cambridge, USA

9:40  Ex-Vivo Expanded Cytotoxic T Cell Lymphocytes Enhance Clearance of Latent HIV Infection
     Julia Sung; University of North Carolina, Chapel Hill, USA

10:00 Break, Posters
10:30-12:00  Session XII: New Therapeutic Approaches – Part II
Chairs: Jose Gatell; Hospital Clinic, Barcelona, Spain
        Mark Wainberg; McGill University AIDS Centre, Montreal, Canada

10:30  Progress Towards the Clinical Validation of a Cytokine-enhanced pDNA Prime, rVSV Boost Therapeutic Vaccination Regimen Capable of Eliciting Robust, de novo, HIV-specific Immunity
        Michael Egan; Profectus Biosciences, Tarrytown, USA

10:50  Immune Activation and HIV Persistence: New Therapeutic Approaches
        Hiroyu Hatano; University of California, San Francisco, USA

11:10  Update in HIV Therapeutic Vaccines and Immunotherapy
        Jose Gatell; Hospital Clinic, Barcelona, Spain

11:30  HIV Protected Zinc Finger Nucleases Mediated CCR5 Modified Autologous CD4 T-cells (SB-728-T) Reduce HIV Viral Load in CCR5 ?32 Heterozygote Subjects During Treatment Interruption (TI): Correlates of Effect, and Effect of Cytoxan Pre-Conditioning Regimen
        Joumana Zeidan; VGTI, Florida, Port St Lucie, USA

11:40  Using an autologous HIV vaccine/activator (based on the full length virus genome and the intrapatient virus population) to induce latent HIV and boost immunity
        Eric Arts; Case Western Reserve University, Cleveland, USA

11:50  Dendritic Cell-based HIV Therapeutic Vaccination Increases Residual Viremia in Individuals on Antiretroviral Therapy
        Bernard Macatangay; University of Pittsburgh, Pittsburgh, USA

12:00  HIV-1 Infection Abrogated by Drug-Induced Reactivation of Apoptosis
        Michael Matthews; Rutgers University, Newark, USA

12:10  In vivo Administration of Lithium Does Not Induce HIV-1 Reactivation or Changes in the Viral Reservoir
        Maria Puertas; IrsiCaixa, Badalona, Spain

12:20  Ing-B (ingenol-3-hexanoate) is a Potential PKC Activator for the Shock and Kill Strategy in HIV Eradication
        Lucio Gama; Johns Hopkins School of Medicine, Baltimore, USA

12:30  Workshop Conclusion