DECEMBER 10-13, 2019
HIV PERSISTENCE DURING THERAPY™
9TH EDITION
Reservoirs & Eradication Strategies Workshop
FLORIDA
MIAMI
USA
www.hiv-persistence.com
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Steering Committee
Alain Lafeuillade, MD
General Hospital, Toulon – FR

David Margolis, MD
University of North Carolina at Chapel Hill, Chapel Hill – US

Karl Salzwedel, PhD
National Institute of Allergy and Infectious Diseases, Bethesda – US

Mario Stevenson, PhD
University of Miami Leonard M. Miller School of Medicine, Miami – US

Scientific Committee
José Alcami, Madrid – ES
Monsef Benkirane, Montpellier – FR
Nicolas Chomont, Montreal – CA
Tae-Wook Chun, Bethesda – US
Janice Clements, Baltimore – US
John Coffin, Boston – US
Steven Deeks, San Francisco – US
Robert Gallo, Baltimore – US
J. Victor García-Martinez, Chapel Hill – US
José Gatell, Barcelona – ES
Romas Geleziunas, Foster City – US
Marie-Lise Gougeon, Paris – FR
Warner Greene, San Francisco – US
George Hanna, Princeton – US
Daria Hazuda, West Point – US
Jacques Izopet, Toulouse – FR
Brian Johns, Chapel Hill – US
Jonathan Karn, Cleveland – US

Richard Koup, Bethesda – US
Guenter Kraus, Miami – US
Sharon Lewin, Melbourne – AU
Javier Martinez-Picado, Badalona – ES
Stephen Mason, New York – US
John W. Mellors, Pittsburgh – US
Sarah Palmer, Sydney – AU
Vicente Planelles, Salt Lake City – US
Guido Poli, Milan – IT
Douglas Richman, La Jolla – US
Jean-Pierre Routy, Montreal – CA
Christine Rouzioux, Paris – FR
Andrea Savarino, Rome – IT
Robert Siliciano, Baltimore – US
Carine Van Lint, Gosselies – BE
Jan Van Lunzen, London – UK
Mark Wainberg, Montreal – CA
Dear Colleagues,

Welcome to the Eighth International Workshop on HIV Persistence during Therapy. Since the first edition of this workshop in 2003 in St Maarten, the issues of HIV Persistence and reservoirs have become increasingly more relevant, not only for the biologist but also for the clinician facing the problem of the long-term control of this persistent retroviral infection.

Several meetings have now included reviews on these topics in their programme, but this biennial workshop is unanimously recognised as the reference workshop on HIV reservoirs and eradication strategies.

Our main objective is to keep it driven by science and new data. To this end, abstracts have undergone a rigorous selection procedure by the Scientific Committee.

This year’s Workshop has focused on improving participation by young investigators, in particular through submitting oral or poster abstracts, but also through receiving grants for attendance. These scholarships have been made possible by both the National Institutes of Health and the Steering Committee involvement. We all are all very grateful for this development that we hope will bring new energy, thinking and ideas to the field.

The program format will continue to follow the past successes and include presentations of new, unpublished data and a panel of experts to sum up the current advances in the field.

Lastly, we thank all the participants who have chosen to present their work here: the excellence of the abstracts we have received undoubtedly guarantees and interesting and thought-provoking workshop.

We wish you all an enjoyable and fruitful workshop.

Alain Lafeuillade, MD, Chairman,
On behalf of the Steering Committee
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<td><strong>DAIDS Martin Delaney Collaboratory satellite workshop</strong></td>
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<td>04.00 PM</td>
<td><strong>DAIDS Martin Delaney Collaboratory satellite workshop</strong></td>
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<td>Friday, December 15, 2017</td>
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<td><strong>Session 4:</strong> Virology of HIV Persistence</td>
<td><strong>Session 7:</strong> New Therapeutic Approaches I</td>
<td>8.00 AM, 10.00 AM</td>
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<td><strong>Coffee Break</strong></td>
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<td><strong>Session 5:</strong> Immunology of HIV Persistence</td>
<td><strong>Session 8:</strong> New Therapeutic Approaches II</td>
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<td><strong>Lunch</strong></td>
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<td><strong>Session 6:</strong> Human Studies</td>
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<td>Free Evening Dinner</td>
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NIH MARTIN DELANEY COLLABORATORIES SATELLITE SYMPOSIUM
Research Highlights from Martin Delaney Collaboratory Leaders

Chairs: Karl Salzwedel, National Institute of Allergy and Infectious Diseases, Bethesda, US
Diane Lawrence, National Institute of Allergy and Infectious Diseases, Bethesda, US

CARE – Collaboratory of AIDS Researchers for Eradication
David Margolis, University of North Carolina, Chapel Hill, US

I4C – Combined Immunologic Approaches to Cure HIV-1
Dan Barouch, Beth Israel Deaconess Medical Center, Boston, US

DARE – Delaney AIDS Research Enterprise to Cure HIV
Steven Deeks, University of California, San Francisco, US

03.30 – 04.00 Coffee break

BELIEVE – Bench to Bed Enhanced Lymphocyte Infusions to Engineer Viral Eradication
Douglas Nixon, George Washington University, Washington DC, US

DefeatHIV – Delaney Cell and Genome Engineering Initiative
Keith Jerome, Fred Hutchinson Cancer Research Center, Seattle, US

BEAT-HIV – Delaney Collaboratory to Cure HIV-1 Infection by Combination Immunotherapy
Luis Montaner, The Wistar Institute, Philadelphia, US

WELCOME
Alain Lafeuillade, General Hospital, Toulon, FR

OPENING LECTURE
Introduction: Karl Salzwedel, National Institute of Allergy and Infectious Diseases, Bethesda, US

Sustained ART-Free HIV Remission: Obstacles and Opportunities
Anthony S. Fauci, National Institute of Allergy and Infectious Diseases (NIAID), Bethesda, US

Long-term Virological Suppression Mediated by AAV-delivered Antibodies
Ronald C. Desrosiers, University of Miami Miller School of Medicine, Miami, US

WELCOME DINNER
SESSION 1: BASIC SCIENCE OF HIV LATENCY I

Chairs: Vicente Planelles, University of Utah School of Medicine, Salt Lake City, US
Carine Van Lint, University of Brussels, Gosselies, BE

OP 1.0: Understanding persistence of the latent reservoir
Author: Robert Siliciano
Johns Hopkins University School of Medicine, Howard Hughes Medical Institute, Baltimore, MD, US

OP 1.1: HIV-1 proviruses which are integrated into cancer-related genes are inducible
1 Johns Hopkins Whiting School of Engineering, Baltimore, MD, US
2 Johns Hopkins School of Medicine, Baltimore, MD, University of North Carolina, Chapel Hill, US
3 Johns Hopkins School of Public Health, Baltimore, MD, US
4 Howard Hughes Medical Institute, Baltimore, MD, US
5 Yale University School of Medicine, New Haven, CT, US

OP 1.2: The Contribution Of Memory CD4+ T Cell Subset Phenotype TO Latency Reversal Efficiency
1 Emory University, Atlanta, US
2 Case Western Reserve University, Cleveland, US
3 Merck & Co. Inc., Kenilworth, US
4 Case Western Reserve, Cleveland, US

OP 1.3: Identification of a Promising New Class of Latency Reversing Agents
Authors: A. Gramatica, W. Greene, R. Schwarzer, M. Montano, T. Packard, E. Herzig
Gladstone Institute of Virology and Immunology, San Francisco, US

OP 1.4: High-throughput single-cell transcriptome analysis of immune cells from HIV-1 infected individuals before and after therapy
Authors: T. Bradley 1, C. Hart 1, B. Hora 1, J. Pollara 1, E. P. Browne 2, M. Anthony Moody 1, Guido Ferrari 1, David Margolis 2, and Barton F. Haynes 1
1 Human Vaccine Institute, Duke Human Vaccine Institute, Durham, US
2 University of North Carolina HIV Cure Center, UNC Chapel Hill, Chapel Hill, US

OP 1.5: CD32 does not mark the HIV-1/SIV latent reservoir
Authors: C. E. Osuna1, R. Appas2, S.-Y. Lim1, J. L. Kublin1, R. Thomas3, E. Chen1, G. Yoon1, S. Han Huang1, D. Chan2, R. Truong1, Y. Ren2, N. D. Bachtel2, M. E. Ackerman4, J. Ananworanich3, D. H. Barouch1,5, N. L. Michael3, R. Brad Jones2, D. F. Nixon2, J. B. Whitney1,5, the BELIEVE Collaboratory
1 Center for Virology and Vaccine Research, Beth Israel Deaconess Medical Center, Harvard Medical School, Boston, US
2 Department of Microbiology Immunology and Tropical Medicine, The George Washington University, Washington DC, US
3 United States Military HIV Research Program, Bethesda, MD, US
4 Thayer School of Engineering, Dartmouth College, Hanover, DE
5 Ragon Institute of MGH, MIT, and Harvard, Cambridge, MA, US

OP 1.6: Single-Cell RNA-Seq Reveals Transcriptional Heterogeneity in Latent and Reactivated HIV-infected Cells
Authors: M. Golumbeanu1,2, S. Rato3, S. Cristinelli2, M. Munoz3, M. Cavassini4, N. Beerenwinkel1,2, A. Ciuffi3
1 Department of Biosystems Science and Engineering, ETH Zürich, Basel, CH
2 SIB Swiss Institute of Bioinformatics, Basel, CH

10.00 – 10.30 Coffee break
SESSION 2: BASIC SCIENCE OF HIV LATENCY II

Chairs: Brian A. Johns, Glaxo SmithKline’s director of HIV medicinal chemistry, Raleigh-Durham, US
Guenter Kraus, Director of Janssen, BE

▶ OP 2.0: Characterizing HIV Expression of Proviruses during ART in Tissues and Blood
Author: M. Kearney
HIV Dynamics and Replication Program, CCR, National Cancer Institute, Frederick, MD, US

▶ OP 2.1: The HIV-1 antisense transcript AST recruits the Polycomb Repressor Complex 2 to the HIV-1 5’LTR and acts as a viral latency factor
Authors: F. Romero1, J.C. Zapata1, R. Barclay2, M.D. Iglesias-Ussel1, F. Kashanchi2
1 Institute of Human Virology, Baltimore, MD, US
2 George Mason University, Manassas, VA, US

▶ OP 2.2: Majority of the Latent Reservoir Resides in CD32a Negative CD4+ T Cells
Johns Hopkins University School of Medicine, Baltimore, US

▶ OP 2.3: Brain Macrophages in SIV-infected ART-Suppressed Macaques Represent a Functional Latent Reservoir
Authors: J. Clements1, C. Abreu1, F. Mac Gabhann2, J. Mankowski1, L. Gama1
1 Johns Hopkins School of Medicine, Baltimore, US
2 Johns Hopkins University, Baltimore, US

▶ OP 2.4: CD4+ T Cells Expressing CD32 From HIV-1+ Patients Are Not Enriched for Proviral DNA
Authors: A. M. Spivak, R. A. Nell, M. L. Coletti, L. J. Montaner, V. Planelles
University of Utah, Salt Lake City, US

▶ OP 2.5: The impact of ART duration on the infection of T cells within anatomic sites
Authors: E. Lee1,2, S. von Stockenstrom3, V. Morcilla1, W. Shao4, W. Hartogensis5, P. Bacchetti6, J. Milush5, R. Hoh5, M. Somsouk5, P. W. Hunt5, R. Fromentin7, N. Chomont7, S. G. Deeks5, Fr. M. Hecht5, S. Palmer1,2
1 The Westmead Institute for Medical Research, NSW, AU
2 University of Sydney, NSW, AU
3 Department of Microbiology, Tumor and Cell Biology, Karolinska Institutet, Karolinska University Hospital, Stockholm, SE
4 Advanced Biomedical Computing Center, Leidos Biomedical Research Inc., Frederick National Laboratory for Cancer Research, Frederick, Maryland, US
5 Department of Medicine, University of California San Francisco, San Francisco, California, US
6 Department of Epidemiology and Biostatistics, University of California San Francisco, San Francisco, California, US
7 Centre de recherche du CHUM and Department of microbiology, infectiology and immunology, Université de Montréal, Montreal, CA

▶ OP 2.6: CD32+ CD4+ T Cells Are HIV Transcriptionally Active Rather than a Resting Reservoir
Authors: M. Abdel-Mohsen1, C. Tomescu1, S. Vadrevu1, A. Spivak2, L. Kuri-Cervantes3, G. Wu4, K. Cox4, S. Vemula4, M. Fair1, K. Lynn1,3, M. J. Buzon5, J. Martinez-Picado6, M. Betts3, V. Planelles2, K. Mounzer7, B. Howell4, D. Hazuda4, P. Tebas3, L. J. Montaner1
1 The Wistar Institute, PA, US
2 University of Utah School of Medicine, UT, US
3 University of Pennsylvania, PA, US
4 Merck & Co, Inc, NJ, US
5 Vall d’Hebron Research Institute, ES
6 IrsiCaixa, UVic-UCC & ICREA, Barcelona, ES
7 Jonathan Lax Center, Philadelphia FIGHT, PA, US
SESSION 3: IN VITRO AND ANIMAL MODEL STUDIES OF HIV PERSISTENCE

Chairs: Victor Garcia Martinez, University of North Carolina, Chapel Hill, US
Jeff D. Lifson, Frederick National Laboratory, Frederick, US

▶ OP 3.0: Testing cure approaches in NHPs: the Emory experience
Author: G. Silvestri
Emory University and Yerkes National Primate Research Center Atlanta, US

▶ OP 3.1: Visualization and quantification of HIV dissemination and reservoirs using in vivo imaging
Authors: W-B. Young¹, X. Qu², G. Wu²
¹ Temple University, Philadelphia, US,
² University of Pittsburgh, Pittsburgh, US

▶ OP 3.2: Enhancing Infection-Resistant Cells for HIV Cure in the Nonhuman Primate Model
Authors: C. W. Peterson¹,², A. Zhen³, C. Deleage⁴, J. D. Estes⁴, S. Kitchen⁴, and H.-P. Kiem¹,²
¹ Fred Hutchinson Cancer Research Center, Seattle, WA, US
² University of Washington, Seattle, WA, US
³ UCLA, Los Angeles, CA, US
⁴ AIDS and Cancer Virus Program, Frederick National Laboratory for Cancer Research, Leidos Biomedical Research, Inc., Frederick, MD, US

▶ OP 3.3: Modeling the graft-versus-viral-reservoir effect in a nonhuman primate model of HIV persistence
Authors: C. W. Peterson¹,², L. Colonna³, J. B. Schell³, J. M. Carlson³, S. Reddy¹, W. Obenza¹, H.-P. Kiem¹,³ and L. Kean²,³
¹ Fred Hutchinson Cancer Research Center, Seattle, WA, US
² University of Washington, Seattle, WA, US
³ Seattle Children’s Research Institute, Seattle, WA, US

▶ OP 3.4: Patient-Derived HIV Reservoirs can be Stably Engrafted into NSG Mice and Reactivated by Latency-Reversing Agents in vivo
Authors: A. Ward¹, E. Charleus¹, S. Karandish¹, E. Benko², C. Kovacs², D. Chan¹, A. Ramezani¹, R. Brad Jones¹
¹ Department of Microbiology, Immunology, and Tropical Medicine, The George Washington University, Washington DC, US
² Maple Leaf Medical Clinic, Toronto, ON, CA

▶ OP 3.5: SIV Persists in Lymphoid Tissues Despite Alemtuzumab-Induced CD4⁺ T Cell Depletion
Authors: A. A. Okoye¹,², S. R. Lewin³,⁴, C. H. Xu¹,², M. Vaidya¹,², D. M. Duell¹,², W. B. Brantley¹,², M. A. Marenco¹,², Y. Fukazawa¹,², H. M. Park¹,², T. A. Rasmussen², J. D. Lifson¹, M. K. Axthelm¹,², S. G. Deeks³, L. J. Picker¹,²
¹ Vaccine and Gene Therapy Institute, Oregon Health & Science University, Beaverton, OR, US
² Oregon National Primate Research Center, Oregon Health & Science University, Beaverton, OR, US
³ Department of Infectious Diseases, Aarhus University Hospital, Aarhus, DK
⁴ AIDS and Cancer Virus Program, Leidos Biomedical Research, Inc., Frederick National Laboratory, Frederick, MD, US
⁵ School of Medicine, University of San Francisco, San Francisco, CA, US
⁶ The Peter Doherty Institute for Infection and Immunity, The University of Melbourne and Royal Melbourne Hospital, Victoria, AU
⁷ Department of Infectious Diseases, Alfred Hospital and Monash University, Melbourne, Victoria, AU

▶ OP 3.6: Differential viral rebound between lymph node and colon after treatment interruption in SHIV-infected rhesus macaques
Authors: D. C. Hsu¹,²,³, D. Silsorn¹, D. Inthawong¹, Y. Kuncharin¹, J. Sopanaporn¹, S. Tayamun¹, R. Im-Erbsin¹, C. Ege¹, M. Wegner¹, P. Sunyakumthorn¹, R. J. O’Connell¹,², N. L. Michael², S. Vasan¹,²,³
¹ Armed Forces Research Institute of Medical Sciences, Bangkok, TH
² US Military HIV Research Program, Walter Reed Army Institute of Research, Silver Spring, MD, US
³ Henry M. Jackson Foundation for the Advancement of Military Medicine, Bethesda, MD, US
SESSION 4: VIROLOGY OF HIV PERSISTENCE

Chairs: Douglas Richman, University of California, San Diego, US
John Mellors, University of Pittsburgh, Pittsburgh, US

- **OP 4.0: Title to be confirmed**
  Author: D. Hazuda
  Merck & Co, Inc, NJ, US

- **OP 4.1: HIV-1 mediated insertional activation of STAT5B and BACH2 promotes the formation of a viral reservoir in T regulatory cells**
  Authors: D. Cesana¹, F. Santoni de Sio¹, L. Rudilosso¹, P. Gallina¹, A. Calabria¹, E. Bruzzesi², L. Passerini¹, S. Nozza², E. Vicenzi³, G. Poli³, S. Gregori¹, G. Tambussi², E. Montini¹
  ¹ San Raffaele Telethon Institute for Gene Therapy (SR-TIGET), San Raffaele Scientific Institute, IT
  ² Department of Infectious Diseases, San Raffaele Scientific Institute, IT
  ³ Division of Immunology, Transplantation and Infectious Diseases, San Raffaele Scientific Institute, IT

- **OP 4.2: Productive HIV-1 infection upregulates CD32 in vitro and in vivo**
  Authors: C. Serra-Peinado¹, J. Grau-Expósito¹, M. Genescà¹, L. Luque-Ballesteros¹, A. Astorga¹, C. Gálvez², J. Castellví³, R. Willekens¹, I. Ocaña¹, J. Burgos¹, J. Navarro¹, A. Curra¹, E. Ribera¹, L. Montaner¹, V. Falcó¹, J. Martínez-Picado², M. J. Buzon¹
  ¹ Infectious Disease Department, Hospital Universitari Vall d’Hebrón, Institut de Recerca (VHIR), Universitat Autònoma de Barcelona, Barcelona, ES
  ² Institució Catalana de Recerca i Estudis Avançats (ICREA), Barcelona, ES
  ³ Department of Pathology, Hospital Vall d’Hebrón, Universitat Autònoma de Barcelona, ES
  ⁴ HIV-1 Immunopathogenesis Laboratory, Wistar Institute, Philadelphia, Pennsylvania, US
  ⁵ AIDS Research Institute IrsiCaixa, Hospital Universitari Germans Trias i Pujol, Universitat Autònoma de Barcelona, Barcelona, ES

- **OP 4.3: No evidence for ongoing HIV replication in lymph nodes during suppressive ART**
  Authors: W. R. McManus¹, M. J. Bale¹, J. Spindler¹, A. Wiegand¹, A. Musick¹, X. Wu², D. Wells², S. H. Hughes¹, B. F. Keele², R. Hoh³, J. Mulish³, J. M. Coffin⁴, J. W. Mellors⁵, S. G. Deeks³, M. F. Kearney¹
  ¹ HIV Dynamics and Replication Program, CCR, National Cancer Institute, Frederick, MD, US
  ² Leidos Biomedical Research, Inc., Frederick National Laboratory for Cancer Research, Frederick, MD, US
  ³ Department of Medicine, University of California, San Francisco, San Francisco, CA, US
  ⁴ Department of Molecular Biology and Microbiology, Tufts University, Boston, MA, US
  ⁵ Department of Medicine, University of Pittsburgh, Pittsburgh, PA, US

- **OP 4.4: Tissue macrophages are a major viral reservoir in male urethra of HIV-1-infected individuals under suppressive anti-retroviral therapy**
  Authors: M. Bomsel¹, Y. Ganor¹, A. Sennepin¹, C.A. Dutertre¹, S. Cristofari², F. Real¹, C. Capron³, E. A. Eugenin¹, M. Revol², A. Hosmalin¹
  ¹ Institut Cochin, Paris, FR
  ² Saint-Louis Hospital, Paris, FR
  ³ Ambroise Paré Hospital, Boulogne, FR
  ⁴ New Jersey Medical School, Rutgers, The State University of New Jersey, Newark, NJ, US
OP 4.5: In vivo massive expansion of a T-cell clone carrying a defective HIV genome: implication for the measurement of the HIV reservoir
Authors: R. Fromentin1, M. Massanella1, C. Vandergeeten3, K. Barton4,5, B. Hiener4,5, W.W. Chiu6,7, D. Looney6,7, M. Ramgopal8, D.D. Richman6,7, L. Trautmann9,10, S. Palmer4,5, N. Chomont1,2
1 CRCHUM, Montreal, CA
2 Université de Montréal, Department of Microbiology, Infectiology and Immunology, Montreal, CA
3 VGTI-FL, Port St Lucie, US
4 The Westmead Institute of Medical Research, Sydney, AU
5 The University of Sydney, Sydney, AU
6 VA San Diego Healthcare System, San Diego, US
7 University of California San Diego, San Diego, US
8 Midway Immunology & Research Center, Fort Pierce, US
9 Henry M. Jackson Foundation for the Advancement of Military Medicine, Bethesda, US
10 U.S. Military HIV Research Program, Walter Reed Army Institute of Research, Silver Spring, US

OP 4.6: Gut and blood differ in mechanisms governing HIV transcription/latency
Authors: S. Telwatte1,2, S. Lee2, M. Somsouk2, H. Hatano2, C. Baker2, P. Kim1, T.-H. Chen2, J. Milush2, P. Hunt2, S. Deeks2, J. K. Wong1,2, S. A. Yukl1,2
1 Department of Medicine, San Francisco VA Health Care System, San Francisco, CA, US
2 Department of Medicine, University of California, San Francisco, CA, US

10.00 – 10.30 Coffee break

SESSION 5: IMMUNOLOGY OF HIV PERSISTENCE

Chairs: Nicolas Chomont, Université de Montreal, Montreal, CA
Richard Koup, Bethesda, Maryland, US

OP 5.0: The Role of B Cell Follicles in HIV Replication and Persistence
Author: E. Connick
Division of Infectious Diseases, University of Arizona, AZ, US

OP 5.1: Platelets from HIV-infected cART-treated patients carry infectious viruses and predict poor immunological recovery
Authors: M. Bomsel1, F. Real1, C. Capron2, E. Cramer2, E. Rouveix2
1 Institut Cochin, Paris, FR
2 Ambroise Paré Hospital, Boulogne, FR

OP 5.2: Follicular Regulatory T cell dynamics in peripheral blood and lymphoid tissue during very early treatment initiation in HIV-1 clade C infection
Authors: F. Laher1, Z.M. Ndhludzi1, O. Baiyegunhi1, F. Ogunshola1, V. Ramursan2, K. Pretorius1, N. Mewalal1, T. Nkosi1, N. Ismail1, B. D. Walker1,3,4, T. Ndung’u1,3,5,6
1 HIV Pathogenesis Programme, Doris Duke Medical Research Institute, Nelson R. Mandela School of Medicine, University of KwaZulu-Natal, Durban, ZA
2 KwaZulu-Natal Research Innovation and Sequencing Platform (KRISP), School of Laboratory Medicine and Medical Sciences, University of KwaZulu-Natal, Durban, ZA
3 Ragon Institute of Massachusetts General Hospital, Massachusetts Institute of Technology, and Harvard University, Cambridge, MA, US
4 Howard Hughes Medical Institute, Chevy Chase, Maryland, US
5 Africa Health Research Institute (AHRI), Nelson R. Mandela School of Medicine, University of KwaZulu-Natal, Durban, ZA
6 Max Planck Institute for Infection Biology, Charitestarße 1, Berlin, DE
OP 5.3: Single cell analysis of HIV latency reveals diverse proviral and host cell behavior
Authors: E. P. Browne1, T. Bradley2, G. Ferrari2, B. F Haynes2 and D. M Margolis1
1 UNC HIV Cure Center and Department of Medicine, University of North Carolina, Chapel Hill, US
2 Duke University, Human Vaccine Institute, Duke University School of Medicine, Durham, NC, US

OP 5.4: BCL-2 Inhibitor Sensitizes the Latent HIV Reservoir to Elimination by CTLs
Authors: S-H. Huang1, Y. Ren1, A. Macedo1, S. Patel2, D. Chan1, E. Horch1, R. Truong1, C. Bollard2, A. Bosque1, R.B. Jones1,
1 Department of Microbiology, Immunology and Tropical Medicine, George Washington University, Washington, Washington, D.C., US
2 Center for Cancer and Immunology Research, Children’s National Health System, Washington D.C., US

OP 5.5: Defining the nature of protective CD8+ T-cell response in lymph nodes of HIV elite controllers
Authors: M. Betts1, S. Nguyen1, C. Deleage8, S. Deeks3, M. Buggert4, A. Sada-Japp1, A. Naj1, G. Reyes-Teran5, P. Del Rio Estrada6, J. Estes6
1 Department of Microbiology, Perelman School of Medicine, University of Pennsylvania, Philadelphia, US
2 National Institutes of Health, Frederick, US
3 University of California San Francisco, San Francisco, US
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6 NIH/NCI, Rockville, Maryland, US

OP 5.6: Susceptibility to Neutralization by bnAbs Correlates with Infected Cell Binding for a Panel of Clade B HIV Reactivated from Latent Reservoirs
Authors: Y. Ren1, M. Korom1, R. Truong1, S.-H. Huang1, D. Chan1, C. Kovacs2, E. Benko2, R. Lynch1, R.B. Jones1,
1 Dept. of Microbiology Immunology and Tropical Medicine, The George Washington University, Washington DC, US
2 Maple Leaf Medical Clinic, Toronto, CA
SESSION 6: HUMAN STUDIES

Chairs: Sharon Lewin, Doherty Institute University of Melbourne, Melbourne, AU
Jean-Pierre Routy, McGill University, Montreal, CA

▶ OP 6.0: Current efforts in latency reversal and clearance
Author: D. Margolis
University of North Carolina HIV Cure Center, University of North Carolina at Chapel Hill, Chapel Hill, NC, US

▶ OP 6.1: HIV-seroreversion dynamics after allogeneic stem cell transplantation
Authors: M. Salgado¹, V. González², B. Rivaya², Cr. Gálvez¹, M. Kwon³, J. Badiola⁴, A. Bandera⁵, B. Jensen⁶, L. Vandekerckhove⁷, K. Raj⁸, M. Nijhuis⁹, Manuel Jurado⁴, J. Schulze zur Wiesch¹⁰, A. Saez-Cirión¹¹, J. Luis Diez-Martin⁶, A. Wensing⁹, J. Martinez-Picado¹, for the IciStem Consortium
¹ AIDS Research Institute, IrsiCaixa, Badalona, ES
² Microbiology Service, University Hospital “Germans Trias i Pujol”, Department of Genetics and Microbiology, Autonomous University of Barcelona, Badalona, ES
³ Hospital Gregorio Marañón, Madrid, ES
⁴ University Hospital Virgen de las Nieves, Granada, ES
⁵ San Gerardo Hospital - University of Milano-Bicocca, Monza, IT
⁶ Heinrich Heine University Hospital, Düsseldorf, DE
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⁸ Kings College Hospital, London, UK
⁹ University Medical Center Utrecht, Utrecht, NL
¹⁰ Cellex, Dresden, DE
¹¹ Pasteur Institute, Paris, FR

▶ OP 6.2: Sequencing HIV proviruses over time provides new insights into reservoir decay
Authors: D. J. VanBelzen¹, S. Weissman¹, W.-T. Hwang², B. Sherman³, U. O’Doherty¹
¹ Department of Pathology and Cellular Therapeutics, University of Pennsylvania, Philadelphia, PA, US, US
² Department of Biostatistics and Epidemiology, University of Pennsylvania, Philadelphia, PA, US, US
³ Laboratory of Human Retrovirology and Immunoinformatics, Frederick National Laboratories for Cancer Research, Leidos Biomedical Research, Inc. Supporting the Division of Clinical Research, NIAID, US

▶ OP 6.3: Brief ATI does not alter the size or composition of the latent HIV-1 reservoir
Authors: Katharine J Bar¹, Brenda Salantes¹, Yu Zheng², Felicity Mampe¹, Subul Beg³, Jun Lai³, Randal Tressler⁴, Richard Koup⁵, James Hoxie¹, Mohamed Abdel Mohsen¹, Robert Siliciano³, Janet M. Siliciano³, Edgar T. Overton⁶, and Pablo Tebas¹, for the ACTG A5340 clinical trial team.
¹ University of Pennsylvania, US
² Harvard University, US
³ Johns Hopkins University, US
⁴ National Institutes of Health, US
⁵ Vaccine Research Center, US
⁶ University of Alabama Birmingham, US
OP 6.4: No Residual Virus Replication in a Randomised Trial of Dolutegravir Intensification
Authors: T. A Rasmussen1,2, J. McMahon3, J. Chang1, J. Audsley1, A. Rhodes1, S. Tennakoon1, A. Dantanarayana1, T. Spelman1,3, T. Schmidt4, S. J Kent1,3,4, V. Morcilla5, S. Palmer5, J. Elliott3, S. R Lewin1,3
1 The Peter Doherty Institute for Infection and Immunity, The University of Melbourne and Royal Melbourne Hospital, Melbourne, AU
2 Department of Infectious Diseases, Aarhus University Hospital, Aarhus, DK
3 Department of Infectious Diseases, Alfred Hospital and Monash University, Melbourne, AU
4 Melbourne Sexual Health Centre, Alfred Health, Melbourne, AU
5 Centre for Virus Research, The Westmead Institute for Medical Research, The University of Sydney, Sydney, AU

OP 6.5: A phase 2 trial to evaluate the effects of 3BNC117 in addition to antiretroviral therapy on the latent reservoir and viral rebound
Authors: J. Lorenzi, Y. Cohen, L. Burke, M. Caskey, M. Nussenzweig
The Rockefeller University, New York, US

OP 6.6: Single Romidepsin infusions do not increase HIV expression in persons on ART (A5315)
Authors: D. McMahon1, L. Zheng2, J. Cyktor J1, E. Aga E2, B.J. Macatangay1, C. Godfrey3, M. Para4, R. Mitsuyasu5, E. Hogg6, J. Hesselgesser7, E. Acosta8, R.T. Gandhi9, J.W. Mellors1 for the A5315 Team
1 University of Pittsburgh, Pittsburgh, PA, US
3 National Inst of Allergy and Inf Diseases, Bethesda, MD, US
4 Ohio State Univ Med Ctr, Columbus, OH, US
5 UCLA Care Center, Los Angeles, CA, US
6 Social & Scientific Systems, Silver Spring, MD, US
7 Gilead Sciences, Inc., Foster City, CA, US
8 University of Alabama, Birmingham, AL, US
9 Massachusetts General Hospital, Boston, MA, US

4.00 – 7.00 Poster viewing with wine & cheese tasting
SESSION 7: NEW THERAPEUTIC APPROACHES I

Chairs: Romas Geleziunas, Senior Director in Biology at Gilead Sciences Foster City, US
Jan Van Lunzen, Global medical Director, ViiV Healthcare, London, UK

► OP 7.0: Early lessons from shock and kill trials
Author: Ole Schmeltz Søgaard
Associate Professor and MD at the Department of Infectious Diseases, Aarhus University Hospital, DK

► OP 7.1: Improved HIV-1 Clearance with BIT225 in the HIV-1 Infected Humanised Mouse Model
Authors: J. Wilkinson¹, G. Ewart¹, S. Tabruyn², K. Howangyin², C. Luscombe¹
¹ Biotron Limited, Sydney, AU
² TransCure bioServices SAS, Archamps, FR

► OP 7.2: In vivo suppression of HIV rebound by didehydro-Cortistatin A, a “block-and-lock” strategy for HIV cure
Authors: C.F. Kessing¹, ⁵, C.C. Nixon², ⁶, C. Li¹, ⁵, P.M. Tsai², H. Takata³, ⁴, G. Mousseau¹, P.T. Ho², J.B. Honeycutt², M. Fallahi¹, L.Trautmann³, ⁴, J.V. Garcia²*, S.T. Valente¹, ⁶*
¹ The Scripps Research Institute, Jupiter, FL, US
² University of North Carolina, School of Medicine, Chapel Hill, NC, US
³ Walter Reed Army Institute of Research, Silver Spring, MD, US
⁴ Henry M. Jackson Foundation for the Advancement of Military Medicine, Bethesda, MD, US
⁵ These authors contributed equally

► OP 7.3: Properties of eCD4-Ig relevant to reducing the viral reservoir
Authors: M. Farzan, M. Gardner, M. Davis-Gardner, C. Fellinger, I. Fetzer
The Scripps Research Institute, Jupiter, Florida, US

► OP 7.4: Treatment with native heterodimeric IL-15 increases cytotoxic lymphocytes in lymph nodes and reduces SHIV RNA
Authors: G. Pavlakis¹, D.C. Watson¹, E. Moysi¹, ⁵, A. Valentin¹, C. Bergamaschi¹, S. Devasundaram¹, S.P. Fortis¹, J. Bear¹, E. Chertova³, J. Bess Jr.³, R. Sowder³, D.J. Venzon⁴, C. Deleage³, J.D. Estes⁴, J.D. Lifson³, C. Petrovas⁵, B.K. Felber¹
¹ Human Retrovirus Section and Human Retrovirus Pathogenesis Section, Vaccine Branch, CCR, National Cancer Institute at Frederick, Frederick, US
³ AIDS and Cancer Virus Program, Leidos Biomedical Research, Inc., FNLCR, Frederick, US
⁴ Biostatistics and Data Management Section, CCR, National Cancer Institute, Rockville, US
⁵ Vaccine Research Center, National Institute of Allergy and Infectious Diseases, Bethesda, US
OP 7.5: The human IL-15 superagonist complex ALT-803 drives SIV-specific CD8+ T cells into B cell follicles
Authors: G. Webb1, S. Li2, G. Mwakalundwa2, J.S. Reed1, J.J. Stanton1, A.W. Legasse1, J. Folkvord3, B.S. Park1, M.K. Axthelm1, E.K. Jeng4, H.C. Wong4, J.B. Whitney5, R. Brad Jones6, D.F. Nixon6, E. Connick3, P.J. Skinner2, J.B. Sacha1
1 Oregon Health and Science University, Beaverton, US
2 University of Minnesota, Minneapolis, MN, US
3 University of Arizona, Tucson, AZ, US
4 Altor Bioscience Corporation, Miramar, FL, US
5 Ragon Institute, Harvard Medical School, Cambridge, MA, US
6 George Washington University, Washington DC, US

OP 7.6: Preclinical Development of a Bispecific HIV x CD3 DART Molecule that Redirects T Cells to Kill HIV Envelope (env)-expressing Cells
Authors: J. L. Nordstrom1, C. Nixon3, J. Pickeral2, Ch.-Y. Kao Lam1, L. Liu1, H. Li1, S. Sharma1, S. Gorlatov1, F. Chen1, K. Sampathkumar1, G. D. Tomaras2, S. M. Alam2, P. Tsai3, T. Morgan3, P.T. Ho3, B. F. Haynes2, G. Ferrari2, J. A. Sung3, D. M. Margolis3, J. Victor Garcia3, S. Koenig1
1 MacroGenics, Inc., Rockville, MD, US
2 Duke University, Durham, NC, US
3 University of North Carolina at Chapel Hill, Chapel Hill, US
SESSION 8: NEW THERAPEUTIC APPROACHES II

Chairs: Javier Martinez Picado, AIDS Research Institute irsiCaixa, ICREA & UVic-UCC, Barcelona, ES
Andrea Savarino, National Institute of Health, Roma, IT

▶ OP 8.0: New therapeutic strategies to cure HIV: so close, so far
Author: J. Martinez Picado
AIDS Research Institute irsiCaixa, ICREA & UVic-UCC, Barcelona, ES

▶ OP 8.1: HIV-Specific T Cells Generated from HIV-Naive Adult and Cord Blood Donors Target a Range of Novel Viral Epitopes — Implications for a Cure Strategy after Allogeneic HSCT and CBT
Authors: S. Patel, R.B. Jones, E. Shpall, D. Margolis, C.M. Bollard, E. Williams; S. Albihani; J. A.M. Sung; C. Russell Cruz; R. F. Ambinder
1 Center for Cancer and Immunology Research, Children’s National Health System, Washington, DC, US
2 Microbiology, Immunology, and Tropical Medicine, The George Washington University, Washington DC, US
3 University of North Carolina HIV Cure Center, University of North Carolina at Chapel Hill, Chapel Hill, NC, US
4 Department of Stem Cell Transplantation and Cellular Therapy, The University of Texas MD Anderson Cancer Center, Houston, TX, US
5 Sidney Kimmel Comprehensive Cancer Center, The Johns Hopkins University School of Medicine, Baltimore, MD, US

▶ OP 8.2: Oral ABX464 reduces the HIV DNA reservoir in CD4+ Peripheral Blood T Cells
Authors: J-M. Steens, R. Cranston, J. Martinez-Picado, R. Paredes, B. Clotet, P. Gineste, H. Ehrlich, I. McGowan
1 Abivax, Paris, FR
2 IrsiCaixa Institute for AIDS Research, Badalona, ES
3 University of Pittsburgh, Pittsburgh, US

▶ OP 8.3: Interim Safety Analysis of Cancer Immunotherapy Trials Network – 12 (CITN-12): A Phase 1 Study of Pembrolizumab in Patients with HIV and Cancer
1 National Cancer Institute, HIV & AIDS Malignancy Branch, Bethesda, US
2 Cancer Immunotherapy Trials Network/Fred Hutchinson Cancer Res Center, Seattle, US
3 Yale University, Medicine/Oncology, New Haven, US
4 Roswell Park Cancer Institute, Buffalo, US
5 National Cancer Institute at Frederick, AIDS and Cancer Virus Program, Frederick MD, US
6 Stanford University, Medicine/Oncology, Stanford, US
7 National Cancer Institute, HIV Dynamics and Replication Program, Frederick, MD, US
8 Louisiana State University Health Science Center, New Orleans, US
9 National Cancer Institute, Cancer Therapy and Evaluation Program, Bethesda, US

▶ OP 8.4: Direct and indirect effects of synthetic dual TLR-2 and TLR-7 agonists (Dual TLR-2/7) on latent HIV
Authors: A. B. Macedo, C. L. Novis, A. M. Spivak, V. Planelles, J. Szu-han Huang, Y. Ren, R. Brad Jones, A. Bosque
1 Department of Microbiology, Immunology and Tropical Medicine, George Washington University, Washington, District of Columbia, US
2 Division of Microbiology and Immunology, Department of Pathology, University of Utah School of Medicine, Salt Lake City, Utah, US
3 Division of Infectious Diseases, Department of Medicine, University of Utah School of Medicine, Salt Lake City, Utah, US
OP 8.5: Partial control of viral rebound with a Rev-dependent lentiviral vector carrying HSV-tk gene in SIV-infected rhesus macaques
Authors: Y. Wu¹, B. Hetrick¹, S. Iqbal², B. Ling²
¹ National Center for Biodefense and Infectious Diseases, School of System Biology, George Mason University, Manassas, US
² Tulane National Primate Research Center, Covington, US

OP 8.6: Chronically Treated HIV+ Subjects Can Naturally Harbor Extremely Low Viral Reservoir
Authors: C. Gálvez¹, J. Dalmau¹, V. Urrea¹, B. Clotet¹², L. Leal⁴, F. García⁴, J. Martinez-Picado¹³, M. Salgado¹
¹ AIDS Research Institute IrsíCaixa, Institut d’Investigació en Ciències de la Salut Germans Trias i Pujol, Universitat Autònoma de Barcelona, Badalona, ES
² Fundació Lluita contra la SIDA, Badalona, ES
³ Universitat de Vic-Central de Catalunya, UVIC-UCC, Vic, ES
⁴ Infectious Diseases Department, Hospital Clínic, University of Barcelona, Barcelona, ES
⁵ ICREA, Barcelona, ES
SESSION 1: BASIC SCIENCE OF HIV LATENCY I

**PP 1.0:** Insights into mechanisms of HIV reactivation from latency using RNA-Seq gene expression profiling in CD4+ T cells and their maturation subsets following treatment with latency reversing agents.
Authors: N. Beliakova-Bethell¹, H. Abewe², A. Mukim¹, S. Deshmukh¹, C. Spina¹
¹ VA San Diego Healthcare System, San Diego, US
² University of California, San Diego, La Jolla, US

**PP 1.1:** Whole genome sequencing of single HIV provirus and its proviral integration site for the study of HIV latency
Authors: C. Sun, J. Mullins ², A. Abate ¹
¹ Department of Bioengineering and Therapeutic Sciences, California Institute for Quantitative Biosciences, University of California, San Francisco, California, US
² Department of Microbiology, University of Washington, Seattle, Washington, US

**PP 1.2:** CD4+ T-cell activation does not lead to expression of latent infection
Authors: N. A Kumar, J. McBrien, M. Mavinger, C. Robinson, E. White, F. Viviano, D. Carnathan, A. Chahrouri, G. Silvestri, T. Vanderford
Yerkes National Primate Centre, School of Medicine, Emory University, US

**PP 1.4:** Integration site-independent enhancement of latency reversal by HIV-1 Nef
Authors: X. T. Kuang¹, S. W. Jin¹, T. M. Markle¹, Mark A. Brockman¹ ²
¹ Simon Fraser University, Burnaby, CA
² British Columbia Centre for Excellence in HIV/AIDS, Vancouver, CA

**PP 1.5:** A modified viral outgrowth assay incorporating ultra-sensitive P24 measurements
Authors: N. Archin, E. Stuelke, S. Katherine, J. Kirchherr, D. Margolis
UNC HIV Cure Center, University of North Carolina, Chapel Hill, US

**PP 1.6 Regulation of HIV-1 provirus and CD4+ T cell biology by transcriptional coregulators**
Authors: B. C. Nikolai² ³, B. York³, A. P. Rice¹, Qin. Feng³, B. W. O’Malley² ³
¹ Center for Reproductive Medicine, Baylor College of Medicine, Houston, TX, US
² Department of Molecular and Cellular Biology, Baylor College of Medicine, Houston, TX, US
³ Department of Molecular Virology and Microbiology, Baylor College of Medicine, Houston, TX, US

**PP 1.7:** Developing an in vitro model for HIV-1 latency in Tfh cells using tonsillar tissue
Authors: B. Luttge, C. Dobrowolski, M.A. Checkley, J. Karn
Department of Molecular Biology & Microbiology, Case Western Reserve University School of Medicine, Cleveland, Ohio, US

**PP 1.8:** Histone Lysine Methyltransferases Selectively Restrict HIV In Central Memory T-cells
Authors: C. Dombrowski, K. Nguyen, J. Karn
Case Western Reserve University, Cleveland, United States Minor Outlying Islands
Department of Molecular Biology and Microbiology, School of Medicine, Cleveland, US
POSTER PRESENTATION

PP 1.9: Identification of a new factor involved in DNA methylation-mediated repression of latent HIV-1
Authors: C. Van Lint¹, S. Bouchat¹, R. Verdikt¹, B. Van Driessche¹, A. Pasternak², G. Darcis¹²³, N. Delacour¹, C. Vanhulle¹, V. Avettel-Fenoel⁴, V. Ledouche⁵, C. Schwartz⁵, C. Necsoi⁷, S. De Wit⁷, B. Berkhour³, V. Gautier⁵, C. Rouzioux⁴, O. Rohr⁶⁸.
¹ Service of Molecular Virology, Département de Biologie Moléculaire (DBM), Université Libre de Bruxelles (ULB), BE
² Laboratory of Experimental Virology, Department of Medical Microbiology, Academic Medical Center of the University of Amsterdam, NL
³ Service des Maladies Infectieuses, University of Liège, CHU of Liège, Domaine Universitaire du Sart-Tilman, BE
⁴ Service de Virologie, Université Paris-Descartes, AP-HP, Hôpital Necker-Enfants Malades, FR
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⁶ Institut de Parasitologie et de Pathologie Tropicale, University of Strasbourg, FR
⁷ Service of Infectious Diseases, CHU Saint-Pierre, Université Libre de Bruxelles, BE
⁸ Institut Universitaire de Technologie Louis Pasteur de Schiltigheim, University of Strasbourg, FR

PP 1.10: Upregulation of the Nrf2 antioxidant pathway characterizes the transition from productive to latent infection in CD4+ T-cells
Authors: I. Shytaj¹²*, B. Lucic¹²*, S. Bicciato³, M. Forcato³, O. Romano³, E. Battivelli⁴, E. Verdin⁴, A. Savarino⁵, M. Lusic¹².
¹ Department of Infectious Diseases Integrative Virology, Heidelberg University, Heidelberg, DE
² German Center for Infection Research (DZIF), Heidelberg, DE
³ Department of Life Sciences, University of Modena and Reggio Emilia, Modena, IT
⁴ Buck Institute for Aging, Novato, California, US
⁵ Department of Infectious and Immune-Mediated Diseases, Italian Institute of Health, Rome, IT
*equal contribution

PP 1.11: Identification of macrophage reservoirs through tropism of HIV-1 envelope
Authors: V. Machado¹, T. Alvarado¹, L. Barrios¹, A. Morales¹, M. Sharkey¹, C. Mavian², M. Salemi², M. Stevenson³.
¹ Miller School of Medicine, University of Miami, Miami, US
² Department of Pathology, University of Florida, US

SESSION 2: BASIC SCIENCE OF HIV LATENCY II

PP 2.0: Targeted Screens Identify New Chromatin Regulators of HIV Latency
Authors: A-M. Turner¹, R. Dronamraju², B. Strahl², L. James³, D. Margolis¹
¹ HIV Cure Center, University of North Carolina, Chapel Hill, US
² Biochemistry/Biophysics, University of North Carolina, Chapel Hill, US,
³ Eshelman School of Pharmacy, University of North Carolina, Chapel Hill, US

PP 2.1: QVOA Coupled With Digital p24 Analysis Enhances HIV Reservoir Quantification
Authors: E. R. Wonderlich¹, Y. V. Kuzmichev¹, C. Lackman-Smith¹, M. K. Mankowski¹, C. N. Raney¹, H. P. Madeira¹, J. Wei², R. Bernbaum¹, K. Subramanian¹, R. L. Jarrett¹, E. R. Nordgren¹, M. Stone², M. P. Busch³, R. G. Ptak¹, D. A. Kulpa¹ǎ³
¹ Southern Research, Frederick, MD, US
² Blood Systems Research Institute, San Francisco, US
³ Department of Pediatrics, Emory University, Atlanta, US. Present affiliation: Battelle Memorial Institute, Frederick, US
PP 2.2: Activation of mature dendritic cells via PKC agonist induces HIV-1 reactivation of latently infected cells
Authors: S. Benet¹ I. Erkizia¹, J. Martinez-Picado², N. Izquierdo-Useros¹
¹ AIDS Research Institute IrsiCaixa, Barcelona, ES
² AIDS Research Institute IrsiCaixa, ICREA, Barcelona, ES

PP 2.3: Single-cell transcriptomics to evaluate HIV latency establishment in primary CD4 T cells
Authors: L. De Armas, S. Williams, K. Russell, L. Pan, S. Pahwa
University of Miami, Miami, US

PP 2.4: Quantitation of the CD4+ T cell and Macrophage Reservoirs in SIV-infected ART-Suppressed Macaques: Two Functional Latent Reservoirs
Authors: J. Clements¹, F. Mac Gabhann², J. Mankowski¹, L. Gama¹, C. Abreu¹
¹ Johns Hopkins School of Medicine, Baltimore, US
² Johns Hopkins University, Baltimore, US

PP 2.5: Lack of transcriptional latency in infected primary cells in the presence of exosomes and cART.
Authors: C. DeMarino¹, R. Barclay¹, M. Pleet¹, G. Sampey¹, S. Iordanskiy¹, B. Lepene², N. El-Hage³, F. Kashanchi¹.
¹ Laboratory of Molecular Virology, George Mason University, Manassas, Virginia, US
² Ceres Nanosciences Inc., Manassas, Virginia, US
³ Department of Immunology, Herbert Wertheim College of Medicine, Miami, US

PP 2.6: DNA-PK regulates HIV transcription and latency by supporting the activity of RNA polymerase II and the recruitment of transcription machinery at HIV LTR
Authors: M. Tyagi, Z. Sonia, L. Sun, L. Dubrovsky, M. Bukrinsky
George Washington University, Washington DC, US

PP 2.7: Using barcoded HIV-1 to understand inducibility of the latent HIV-1 reservoir
Authors: E. Larragoite, E. Williams, V. Planelles
Department of Pathology University of Utah, Salt Lake City, US

PP 2.8: Increased Expression and Phosphorylation of SAMHD1 in SIV and HIV Encephalitis Is Associated with Proliferation of Brain Macrophages
Eastern Virginia Medical School, Norfolk, US

PP 2.9: T-cell signaling pathways leading to reactivation of P-TEFb and HIV transcription elongation in resting memory T cells
Authors: U. Mbonye¹ S. Yang², B. Wang², W. Shi², J. Karn¹
¹ Department of Molecular Biology and Microbiology, Cleveland US, US
² Center for Proteomics and Bioinformatics, Cleveland US, US

PP 2.11: SIV proviral landscape differs from that of HIV-1 and shows gross hypermutation
Authors: A.J. Murray¹, K.M. Bruner, M.R. Kumar¹, A.E. Timmons¹, P-T Liu¹, J.E. Clements¹, D.H Barouch¹, J.D. Siliciano¹, RF Siliciano¹
¹ Johns Hopkins School of Medicine, Baltimore, US

PP 2.12: CD4+ T Cells Expressing CD32 From HIV-1+ Patients Are Not Enriched for Proviral DNA
Authors: A. M. Spivak, R. A. Nell, M. L. Coletti, L. J. Montaner, V. Planelles
University of Utah, Salt Lake City, US
SESSION 3: IN VITRO AND ANIMAL MODEL STUDIES OF HIV PERSISTENCE

▶ PP 3.0: Persistence of SIV in the brain of SIV-infected Chinese rhesus macaques with or without antiretroviral therapy
Authors: B. Ling, S. Perez, A.M. May, R. S. Veazey, Y. Wu, A.-M. Johnson, S.-H. Xiang, J. Li, B.T Foley, L. Doyle-Meyers, A. Panganiban, A. Kaur
1 Tulane National Primate Research Center, Tulane University School of Medicine, Covington, Louisiana, US
2 Nebraska Center for Virology, School of Veterinary Medicine and Biomedical Sciences, University of Nebraska, Lincoln, Nebraska, US
3 Department of Statistics, Tulane University School of Public Health and Tropic Medicine, New Orleans, Louisiana, US
4 Theoretical Biology and Biophysics Group, Los Alamos National Laboratory, Los Alamos, New Mexico, US
5 Department of Microbiology and Immunology, Tulane University School of Medicine, New Orleans, Louisiana, US
6 Department of Pathology and Laboratory Medicine, Tulane University School of Medicine, New Orleans, Louisiana, US
7 National Center for Biodefense and Infectious Diseases, Department of Molecular and Microbiology, George Mason University, Manassas VA, US

▶ PP 3.1: Evaluation of the In Vivo Capacity of Broadly Neutralizing anti-HIV Antibodies to Eliminate Latently Infected Cells from HIV-infected Individuals Using a Novel Humanized Mouse Model
Authors: N. Flerin, A. Bardhi, J. H. Zheng, M. Korom, R. Lynch, R. B. Jones, H. Goldstein
1 Department of Microbiology and Immunology, Albert Einstein College of Medicine, Bronx, US
2 Department of Microbiology, Immunology, and Tropical Medicine, The George Washington University, Washington DC, US

▶ PP 3.2: Assessing Antiretroviral Drug (ARV) Bioavailability in HIV Tissue Reservoirs using In Vitro and In Vivo Pharmacokinetic (PK) Studies with Human Primary Lymphoid Endothelial Cells and Mice
Authors: S. Dyavar, A. Podany, N. Gautam, Y. Alnouti, C. Fletcher, L. Winchester, T. Mykris, J. Weinhold, K. Campbell
1 Antiviral pharmacology laboratory, College of Pharmacy, University of Nebraska Medical Center, Omaha, US
2 Department of Pharmaceutical sciences, College of pharmacy, University of Nebraska Medical Center, Omaha, US

▶ PP 3.4: Next generation viral outgrowth assays as proxies for classic QVOA to measure HIV-1 reservoir size
1 Blood Systems Research institute, San Francisco, US
2 Columbia University College of Physicians and Surgeons, New York, US
3 Department Of Epidemiology And Biostatistics, University Of California San Francisco, San Francisco, US
4 Department of Medicine, University of California San Francisco, San Francisco, California, US
5 Department of Medicine, University of Pittsburgh, Pittsburgh, US
6 University of California San Diego, San Diego, US
7 Johns Hopkins School of Medicine, Baltimore, US
8 Southern Research, Frederick, MD, US
9 Université de Montréal, Department of Microbiology, Infectiology and Immunology, Montreal, CA

▶ PP 3.5: Broadly Neutralizing Antibody Cocktail Prevents the Establishment of Viral Reservoir Against a Mixed SHIV Challenge
Authors: P-T. Liu, B. Julg, P. Abbink, D. H. Barouch
Harvard Medical School, Boston, US
PP 3.6: Novel SHIVs Encoding Transmitted/Founder Envs for Latency and Cure Research
Authors: K. Bar¹, A. Bauer¹, R. Veazey², H. Li¹, G. Shaw¹, F.-H. Lee¹, M. Watkins²
¹ University of Pennsylvania, Philadelphia, US
² Tulane University, New Orleans, US

PP 3.7: HIV latency reversal using designed PKC modulators
Authors: M. D. Marsden¹, T. W. Chun², P. A. Wender³, J. A. Zack¹
¹ UCLA, Los Angeles, California, US
² National Institute of Allergy and Infectious Diseases, Bethesda, Maryland, US
³ Stanford University, Stanford, California, US

PP 3.8: In vitro and in vivo quantification of HIV-induced neuroinflammation and effect of antiviral agents in primary human microglia and a murine HAND model
Authors: C. Gavegnano¹, W. B. Haile²,³, C. Montero¹, W. R. Tyor²,³, F. Schinazi¹
¹ Center for AIDS Research, Department of Pediatrics, US
² Department of Neurology, Emory University, Atlanta, US
³ Veterans Affairs Medical Center, Atlanta, US

PP 3.10: Influence of sex as an intrinsic biological variable in a primary cell model of HIV latency
Authors: A. B. Macedo¹, L. J. Martins², A. M. Spivak³, M. A. Szaniawski², V. Planelles², A. Bosque¹
¹ Department of Microbiology, Immunology and Tropical Medicine, George Washington University, Washington, District of Columbia, US
² Division of Microbiology and Immunology, Department of Pathology, University of Utah School of Medicine, Salt Lake City, Utah, US
³ Division of Infectious Diseases, Department of Medicine, University of Utah School of Medicine, Salt Lake City, Utah, US

PP 3.11: Visualization and quantification of HIV dissemination and reservoirs using in vivo imaging
Authors: W-B. Young ¹, X. Qu ², G. Wu²
¹ Temple University, Philadelphia, US,
² University of Pittsburgh, Pittsburgh, US

PP 3.12: Differential viral rebound between lymph node and colon after treatment interruption in SHIV-infected rhesus macaques
Authors: D. C. Hsu¹,²,³, D. Silsorn¹, D. Inthawong¹, Y. Kuncharin¹, J. Sopanaporn¹, S. Tayamun¹, R. Im-Erbsin¹, C. Ege¹, M. Wegner¹, P. Sunyakumthorn¹, R. J. O'Connell¹,², N. L. Michael², S. Vasan¹,²,³
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PP 3.13: Multiple NF-κB elements in the LTR of HIV-1 subtype C coordinate with the auto-regulatory circuit of Tat to drive rapid establishment of latency
Authors: S. Chakraborty, M. Kabi, U. Ranga
HIV-AIDS Laboratory, MBGU, Jawaharlal Nehru Centre for Advanced Scientific Research, Bangalore, IN
SESSION 4: VIROLOGY OF HIV PERSISTENCE

PP 4.0: Intrinsic resistance of HIV-1 to SAMHD1 restriction permits efficient macrophage infection
Authors: T. Plitnik¹, M. Stevenson², M. Sharkey²
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PP 4.1: Measurement and characterization of the latent reservoir for HIV-1 in patients receiving solid organ transplant
Authors: A. Martin¹, C. Durand², T. Quinn¹, R. Siliciano², A. Redd¹
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PP 4.2: Enrichment of HIV proviral DNA from mononuclear leukocytes for next-generation sequencing of integration sites
Authors: C. Williams-Wietzikoski¹, S. McLaughlin¹,², W. Deng³, R. Milne¹, L. Frenkel¹,²
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² University of Washington, Seattle Childrens Research Institute, Seattle, US
³ University of Washington, Seattle, US

PP 4.3: Infection of astrocytes by a virus isolated from CSF cells of an HIV-positive patient virologically suppressed with ART
Authors: G. Li¹, B. Smith¹, H. Imamichi², L. Henderson¹, S. Steinbach¹, C. Lane² and A. Nath¹
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PP 4.4: Replicate Aptima VL testing detects residual viremia in most ART-treated adults
Authors: S. Bakkour¹,², S. M. Keating¹,², X. Deng¹,², M. Stone¹, A. Worlock³, S. Deeks², P. Bacchetti², M. Dimapasoc¹, J. Lau¹, L. Montalvo¹, S. Hauenstein³, D. Richman⁴, M. P. Busch¹,², for the Reservoir Assay Validation and Evaluation Network (RAVEN) Study Group
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PP 4.5: Examining functional alterations of HIV-1 Tat variants associated with neurocognitively impaired patients in the Drexel Medicine CARES Cohort
Authors: M. R. Nonnemacher¹,², A. R. Mele¹,², K. M. King³, G. Antell¹,², W. Dampier¹,², R. Tata¹,², V. Pirrone¹,², J. Williams¹,², G. Homan¹,², Shendra Passic¹,², Katie Kercher¹,², Wen Zhong¹,², Z. Szep⁵,⁶, J. Jacobson⁷,⁸, B. Wigdahl¹,²,⁹, S. Kortagere¹,²
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⁸ Department of Medicine, Section of Infectious Disease, Lewis Katz School of Medicine, Temple University, Philadelphia, US
⁹ Sidney Kimmel Cancer Center, Thomas Jefferson University, Philadelphia, US
PP 4.6: Blinded Evaluation of Ultrasensitive Assays of HIV in Plasma
Authors: S. M. Keating1,2, M. Stone1,2, X. Deng1,2, J. Mellors4, S. Bakkour1,2, D. Richman5, R. Gorelick6, J. Lifson6, C. Jennings9, M. Stengel10, G. Wu9, B. J. Howell9, P. Bacchetti3, M. P. Busch1,2,3 for the Reservoir Assay Validation and Evaluation Network (RAVEN) Study Group
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PP 4.7: HIV persistence in lymph nodes from virally suppressed individuals: residual production VS latency
Authors: M. Pardons1, R. Fromentin1, L. Leyre1, A. Pagliuzza1, P. Vohra2, D. Ng2, R. Hoh2, M. Kerbleski2, V. Tai2, J. Milush2, F. Hecht2, S. Deeks2, N. Chomont1
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2 Department of Medicine, University of California, San Francisco, California, US

PP 4.9: Genotypic and phenotypic characterization of replication-competent HIV clones from patients’ reservoir
Authors: F. Mammano, A. Nicolas, J. Migraine, J. Dutrieux, M. Salmona, J.-M. Molina, F. Clavel, A. J. Hance
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PP 4.11: HIV Viremia is the Product of a Small Fraction of Infected cells
Authors: E. Anderson1, J. Bell2, M. Kearney1, J. Coffin3, F. Maldarelli1
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PP 4.12: Genetic diversity and CTL escape burden in the replication-competent HIV reservoir in Youth in a therapeutic HIV vaccine trial
Authors: Z. L. Brumme1,2, H. Sudderudder1, C. Ziemniak3, K. Luzuriaga4, C. K. Cunningham5, T. Greenough4, D. Persaud6
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3 Johns Hopkins University School of Medicine, Baltimore, US
4 University of Massachusetts, Worcester, US
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PP 4.13: The Role of APOBEC 3G/3F in Shaping Early HIV-1 Reservoir Landscapes
Authors: K. Reddy1, G.Q. Lee2, B.D. Walker2, M.D. Lichterfeld2, T. Ndung’u1
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PP 4.14: The latent reservoir as a genetically diverse archive recapitulating within-host HIV evolutionary history
Authors: B. Jones1, N. Kinloch2, J. Horacek1, B. Ganase1, M. Harris1, R. Harrigan1,4, R. B. Jones3, M. Brockman1,2, J. Joy1,4, A. Poon5*, Z. Brumme1,2
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5 Department of Pathology and Laboratory Medicine, University of Western Ontario, London, CA
PP 4.15: Effector memory T cells contribute to monotypic residual plasma virus production during long-term suppression
Authors: H. Aamer1, S. Mclaughlin1, M. Dapp2, J. I. Mullins2, L. Frenkel1
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PP 4.16: Differences in the proviral HIV DNA between HIV monoinfected and HIV/HCV coinfected individuals
Authors: M. S. Carrillo1, B. E. Cartelle1, M. G. Arquero1, L. M. Carbonero2, L. Domínguez-Domínguez3, P. Ryan4, I. de los Santos5, S. de la Fuente6, O. Bisbal7, M. Matarranz9, M. Lagarde3, A. Moreno6, J. M. Castro2, E. Mateos7, J. Alcamí2, S. Resino1, A. F. Rodríguez1, M. Coiras7, V. Briz1
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PP 4.17: Temporary ART initiated during primary HIV-1 infection limits the viral reservoir but increases virus diversity upon therapy interruption
Authors: Y.L. Verschoor, J. Vroom, J.M. Prins, B. Berkhout, A. Pasternak
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PP 4.18: Genetically intact but functionally impaired HIV-1 Env glycoproteins in the T-cell reservoir
Authors: A. de Verneuil1, J. Migraine1, F. Mammano1, J.-M. Molina1,2, S. Gallien1,2, V. Lorin3, H. Mouquet3, A. J. Hance1, F. Clavel1,2, J. Dutrieux1
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PP 4.19: Pacific Biosciences Small Molecule Real-Time (SMRT) deep sequencing detects significant viral population structure in brain vs. non-brain autopsy tissues from combined antiretroviral therapy (cART)-positive subjects
Authors: S. L. Lamers1, D. J. Nolan1, R. Rose1, R. Breese2, M. Somasundaran2, P. Clapham2
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PP 4.20: Association between time spent with residual viremia after achievement of virological suppression and type of first-line antiretroviral regimen
Authors: A. Lazzarin1, L. Galli1, N. Galizzi2, A. Castagna2, N. Gianotti1, M. Ripa1,2, A. Andolina1,2, S. Nozza1, V. Spagnuolo1,2, A. Poli1
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PP 4.21: Spread of HIV-DNA in CD4+ T-cells subsets depends on ART initiation timing
Authors: P. Gantrner1,2, C. Barnig Cindy2,3, M. Partisani Marialuisa4, G. Beck-Wirth Geneviève5, J.-P. Faller6, M. Martinot7, M. Mosheni-Zadeh7, C. Cheneau4, M.-L. Batard4, P. Fischer4, B. Uring-Lambert6, S. Bahram2, D. Rey4, S. Fafi-Kremer1,2
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PP 4.22: Disease-Specific HIV Nef Identified in Multiple Patients with Neurological Disorders and Cancers
Authors: S. Lamers 1, G. Fogel 2, D. Nolan 1, R. Rose 3, M. Mcgrath 3, Enoch Liu 4
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PP 4.23: HIV-DNA, CD32a CD4+ T-cells and immune activation on successfull dolutegravir-based regimen
Authors: P. Gantner 2, M. Partisani 3, C. Barnig 4, G. Beck-Wirth 5, J.P. Faller 6, M. Artinot 7, M. Mohseni-Zadeh 7, C. Cheneau 3, M.L. Batard 3, A. Fuchs 1, P. Fischer 3, S. Bahram 2, D. Rey 3, S. Fafi-Kremer 1, 2
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PP 4.24: Chromatin Functional States Correlate with the Reversal of Latently HIV-1 Infected Primary CD4+ T cells
Authors: E. Battivelli 1,2, M. S. Dahabieh 1,2, M. Abdel-Mohsen 4,5,6, J. P. Svensson 7, I. Tojal Da Silva 6,9, L. B. Cohn 6, A. Gramatica 1,2,3, S. Deeks 2, W. Greene 1,2,3, S. K. Pillai 4,5, E. Verdin 1,2
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SESSION 5: IMMUNOLOGY OF HIV PERSISTENCE

PP 5.0: Retinoic acid (RA) upregulates α4β7 on CD4+ T cells and activates latent reservoirs
Authors: O. A. Omalla 1, N. Kishore Routhu 1, N. Sidell 2, A. A Ansari 3, S. N. Byrareddy 1
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3 Department of Pathology and Laboratory Medicine, Emory University School of Medicine, Atlanta, US

PP 5.1: HIV antibody and T cell responses on ART are associated with HIV DNA but not RNA
Authors: S.M. Keating 1,2, B. Jones 3, C. M. Lalam 4, R. Bosch 4, D. McMahon 5, D. Hampton 1, E. Hogg 6, J. Cyktor 5, J. J. Eron 5, J. W. Mellors 5, M. P. Busch 1,2, R. T. Gandhi 8 and the ACTG 5321 team
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5 Univ of Pittsburgh, Pittsburgh, US
6 Social and Scientific Systems, Silver Spring, US
7 University of North Carolina at Chapel Hill, Chapel Hill, US
8 Massachusetts General Hospital, Boston, US

PP 5.2: Diverse Interferons Restrict HIV-1 Infection in Macrophages Through Activation of SAMHD1
Authors: M. Szaniawski 1, A. Spivak 1, A. Bosque 2, V. Planelles 1
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2 George Washington University, Washington D.C, US
POSTER PRESENTATION

PP 5.3: TCF-1 Expression is Associated with HIV-specific CD8+ T Cell Proliferative Capacity
Authors: R. Rutishauser 1, C.D. Deguit1, R. Hoh1, M. Hough1, M. Krone1, R.-P. Sékaly2, F. M. Hecht1, C. D. Pilcher1, J. N. Martin1, J.M. Mccune1, S.G. Deeks1, P.W. Hunt1
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PP 5.4: Myeloid-Derived Suppressor Cells Decrease T-Cell Responses to Viral Antigens and Therapeutic Conserved Elements DNA Vaccine and Increase Following Analytic Treatment Interruption
Authors: S. Dross1, P. Munson1, A. Gervassi2, H. Horton3, D. Fuller4
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3 Immune Modulation Research, Janssen Infectious Diseases and Vaccines, Beerse, BE

PP 5.5: SIV-specific CD8 T cells are largely excluded from B cell follicles during early SIV infection
Authors: S. Li, J. M. Folkvord2, K. J. Kovacs3, R. K Wagstaff1, G. Mwakalundwa1, E. G. Rakasz3, E. Connick2 and P. J. Skinner1
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PP 5.6: CD8 T cells from HIV+ individuals on ART have a skewed differentiation phenotype and impaired proliferative responses.
University of North Carolina at Chapel Hill, Chapel Hill, US

PP 5.7: Functional profiling of HIV-specific CTL clonotypes and their ability to reduce HIV reservoir
Authors: N. Lima1,2 S.H. Huang3, S. Blackmore1,2, A. Garland1,2, D. Chan3, R. Truong3, M. L. Robb1,2 N. L. Michael1; R. B. Jones3, L. Trautmann1,2
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PP 5.8: Persistence of CD4+PD-1high T cells Despite Long-Term Suppressive ART
Authors: B. Macatangay1, R. Gandhi2, D. Mcmahon1, C. Lalama3, R. Bosch3, J. Cyktor1, C. Hensel4, E. Hogg5, J. Eron6, J. Mellors1, C. Rinaldo1
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PP 5.9: Novel dual role of dendritic cells in priming de novo CTL responses while inhibiting memory CTL responses to HIV-1 through the PD-L1 pathway
Author(s): T. M. Garcia-Bates3, M. Palma1, B. Macatangay2, C. Rinaldo1, R. Mailliard1 and the Multicenter AIDS Cohort Study (MACS)
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PP 5.10: Intrinsic resistance of HIV-infected macrophages to CTL-mediated killing drives immune activation
Authors: K. Clayton1, D. Collins1,3, J. Lengieza1, J. Lieberman2,4, B. Walker1,3
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2 Program in Cellular and Molecular Medicine, Boston Children’s Hospital, Boston, US
3 Howard Hughes Medical Institute, Chevy Chase, US
4 Department of Pediatrics, Harvard Medical School, Boston, US
PP 5.11: Comparative Transcriptome Profiles In HIV-Infected Persons According To Their Clinical Phenotype
Authors: C. K. Psomas¹, D.G. Kontopoulos², S. Kinloch-De Loes³, S. Kossida⁴, M.L. Gougeon⁵
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³ Royal Free Hospital, London, UK
⁴ Institute of Human Genetics, Montpellier, FR
⁵ Institut Pasteur, Paris, FR

PP 5.12: Characterization of Immune Exhaustion in Natural Killer Cells and Role in HIV infection
Authors: C. Garrido, B. Allard, N. Soriano-Sarabia, D. Margolis
UNC HIV Cure Center, Chapel Hill, US

PP 5.13: CXCR3/CCR6 double positive Germinal Center T follicular Helper cells (GC TFH) harbor residual virus during cART initiated during hyperacute HIV infection
Authors: Z. Ndhlovu¹, O. Baiyegunhi¹, T. Ndung’u¹, B. D. Walke²
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² Ragon Institute of MGH, MIT and Harvard, Cambridge, US

PP 5.14: Drug-induced modulation of cellular activation during latency reversal changes antigen processing and peptide presentation in primary CD4 T cells
Authors: J. Boucau, A. Sanchez-Bernabeu, S. Le Gall
Ragon Institute of MGH, MIT and Harvard, Cambridge, US

PP 5.15: Impact of time of ART initiation on HIV specific T cell functionality in perinatally infected children
Authors: S. Rinaldi ¹, N. Cotugno ², S. Pallikkuth¹, P. Palma², S. Pahwa¹
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² Bambino Gesù Children’s Hospital, Rome, IT

PP 5.16: Persistence of antigen presenting cell-mediated HIV trans infection during cART
Authors: G. Rappocciolo, D.C. Delucia, N. Sluis-Cremer, C.R. Rinaldo
University of Pittsburgh, Pittsburgh, US

PP 5.17: Preservation of IL-17 producing γδ T cells and their role in the control of immune activation in HIV controllers - ANRS EP56 study
Authors: L. Weiss¹, N. Bhatnagar², D. Scott-Algara², C. Duivivier³, P.M. Girard⁴, M. Lopez-Gonzales¹, C. Didier¹, L. Collias², D. Bollens³, C. Jung², the ANRS EP56 study group
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PP 5.18: Defining the Landscape of HIV-Specific T-Cell Responses in HIV-1 Infected Durably Suppressed Participants
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PP 5.19: Follicular Regulatory T cell dynamics in peripheral blood and lymphoid tissue during very early treatment initiation in HIV-1 clade C infection
Authors: F. Laher¹, Z.M. Ndhlovu¹², O. Baiyegunhi¹, F. Ogunshola¹, V. Ransmuran², K. Pretorius¹, N. Mewalal¹, T. Nkosi¹, N. Ismail¹, B. D. Walker¹², T. Ndung’u¹²³⁵⁶
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⁶ Max Planck Institute for Infection Biology, Charitestraße 1, Berlin, DE
SESSION 6: HUMAN STUDIES

PP 6.0: Higher Rectal p24 Levels Correlate with Poor CD4 Recovery in Treated HIV Infection
Authors: B. J. Howell¹, G. Wu¹, S. L. Goh¹, P. Zuck¹, M. Pao², M. Deswal³, R. Hoh², J. N. Martin², S. G. Deeks², M. Somsouk², D. Hazuda¹, P. W. Hunt²
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PP 6.1: The CCR5-agonist Maraviroc reverses HIV latency, results from ex vivo studies and a randomized placebo controlled clinical trial
Authors: J Symons¹, SFL van Lelyveld³, W de Spiegelaere⁴, AMJ Wensing¹, J Drylewicz⁵, AIM Hoepelman³, PU Cameron², H Lu², T Mota³, AI Dantanarayana², L Vandekerckhove⁴, SR Lewin², K Tesselaar³, M Nijhuis³
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PP 6.2: Immunocapture Identification of Myeloid Cell-derived HIV in CSF that is Evolutionarily Divergent from Plasma Virus
Authors: J. Johnson¹, J.F. Li, J.T. Lipscomb¹, A. Swaims-Kohlmeier¹, K.A. Curtis¹, A. Santos², S. Li³, Albert M. Anderson⁴
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PP 6.3: Safety and potential impact of auranofin on the viral reservoir in HIV+ individuals under mega-ART
Authors: R. S. Diaz¹, L. B Giron¹, J. Galinskas¹, D. Dias¹, J. Hunter¹, S. Tenore¹, G. Gosuen¹, S. Samer¹, M. Umaki¹, M Shoab Arif¹, M. Nutini¹, I. Luca Shytaj2,3, B. Lucic2,3, M. Lusic2,3, M. Janini¹, M. C. Sucupira¹, A. Savarino²
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PP 6.4: Balancing risk-benefit ratio in donors of gut biopsy samples for HIV persistence research
Authors: J.-P. Routy¹,2,10, R. Ramendra¹,2,3, P. Ghali⁴, C. Costiniuk¹,2, B. Lebouché¹,2,5, R. Ponte¹,2, R. Reinhard⁶, J. Sousa⁷, N. Chomont⁶, E. Cohen⁶, P. Ancuta⁸, V. Mehraj¹,2
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PP 6.5: Determinants of early ART initiation during primary HIV infection: Implications for HIV cure research
Authors: J.-P. Routy\(^1,2,10\), V. Mehraj\(^1,2\), B. Lebouché\(^1,2,3\), C. Costiniuk\(^1,2\), W. Cao\(^1,2,4\), R. Ponte\(^1,2\), R. Thomas\(^5\), J. Szabo\(^1,5\), J.-Guy. Baril\(^6\), B. Trottier\(^6\), P. Coté\(^6\), R. LeBlanc\(^7\), C. Tremblay\(^8,9\), J. Bruneau\(^8\), J. Cox\(^1,2\)
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\(^9\) Département de microbiologie, infectiologie et immunologie, Université de Montréal, Montreal, CA
\(^10\) Division of Hematology, McGill University Health Centre, Montreal, CA

PP 6.6: Lymph Node CA-DNA Strongly Correlates with CD4+ Tc Count, Plasma Viral Load and CD4/CD8 Ratio During Chronic HIV Infection
Authors: G. Salgado\(^1\), R. Getz\(^2\), H. Ahmed\(^2\), J. Li\(^2\), G. Reyes-Terán\(^1\), P. Del Rio-Estrada\(^1\)
\(^1\) CIENI-INER, Mexico City, MX
\(^2\) Brigham and Women’s Hospital, Boston, US

PP 6.7: Rapid antiretroviral therapy of blood donors with acute and recent HIV infection: a preliminary report from the Monitoring and Acute Treatment of HIV Study (MATHS)
Authors: K. van den Berg\(^1\), M. Vermeulen\(^1\), C. Barker\(^2\), M.I P. Busch\(^3,4\), E. L. Murphy\(^4,3\) for the NHLBI Recipient Epidemiology and Donor Evaluation Study-III (REDS-III)
\(^1\) ZAn National Blood Service, Johannesburg, ZA
\(^2\) Clinical HIV Research Unit, Johannesburg, ZA
\(^3\) Blood Systems Research Institute, San Francisco, US
\(^4\) University of California San Francisco, San Francisco, US

PP 6.8: Effect of Switching to Integrase Inhibitor on the HIV Reservoir in Ileum Biopsies
IrsiCaixa AIDS Research Institute, Badalona, ES

PP 6.9: Quantification of undetectable plasma HIV RNA
Authors: N. Margot\(^1\), D. Koontz\(^2\), S. Mccallister\(^3\), J. Mellors\(^2\), C. Callebaut\(^1\)
\(^1\) Gilead, Foster City, US
\(^2\) University of Pittsburgh, Pittsburgh, US

PP 6.10: The Critical Importance of Social Sciences in Early-Phase HIV Cure Research: What’s In It for Biomedical HIV Cure Scientists?
Authors: K. Dube\(^1\), D. Evans\(^2\), L. Sylla\(^3\), J. Taylor\(^4\), L. Dee\(^5\)
\(^1\) UNC Gillings School of Global Public Health, Chapel Hill, US
\(^2\) Project Inform, Los Angeles, US
\(^3\) defeatHIV CAB, Seattle, US
\(^4\) Coachella Valley Community Research Initiative, Palm Springs, US
\(^5\) AIDS Action Baltimore, Baltimore, US

PP 6.11: Stimulating cellular locomotion using α1PI therapy to eradicate reservoirs without adverse effects
Author: C. Bristow
Alpha-1 Biologics, Stony Brook, US
SESSION 7: NEW THERAPEUTIC APPROACHES I

PP 7.0: Therapeutic efficacy of optimized eCD4-Ig proteins in SHIV-infected rhesus macaques
Authors: M. R. Gardner1, M. Guttman2, I. Fetzer1, K. K. Lee2, M. Farzan1
1 Department of Microbiology and Immunology, The Scripps Research Institute, Jupiter, US
2 Department of Medicinal Chemistry, University of Washington, Seattle, Washington, US

PP 7.1: eCD4-Ig promotes ADCC activity of sera from HIV-1-infected patients
Authors: M. E. Davis-Gardner, M. R. Gardner, B. Alfant, M. Farzan
Department of Immunology and Microbiology, The Scripps Research Institute, Jupiter, United States Minor Outlying Islands

PP 7.2: Re-evaluating the peptide repertoire of MHC-E
Authors: S. Brackenridge, L. Walters, P. Borrow, G. Gillespie, A. Mcmichael
Nuffield Department of Medicine Research Building, Old Road Campus, Headington, Oxford, UK

PP 7.3: Designing broad-spectrum gRNAs to target the HIV-1 LTR with CRISPR/cas9-based therapeutic strategies
Authors: A. Allen1,2, N. T. Sullivan1,2, W. Dampier1,2,3, C.-H. Chung1,2, A. Atkins1,2, G. Homan1,2, V. Pirrone1,2, S. Passic1,2, J. Williams1,2, Z. Szep1,6, J. M. Jacobson1,6,7, M. R. Nonnemacher1,2,8, B. Wigdahl1,2,4,8
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7 Department of Medicine, Section of Infectious Disease, Lewis Katz School of Medicine, Temple University, Philadelphia, US
8 Sidney Kimmel Cancer Center, Thomas Jefferson University, Philadelphia, US

PP 7.4: In situ multiplex RNA fluorescence imaging of SHIV1157ipd3N4 and anti-HIV CAR T cells to study CAR T cell trafficking to sites of viral reservoir in macaque lymphoid tissues
Authors: K. Eichholz1, C. Peterson1, T. Wagner2, D. Rawlings2, J. Zhu1, L. Corey1
1 University of Washington, Fred Hutchinson cancer research center, Seattle, WA, US
2 Seattle Children’s hospital, Seattle, WA, US
3 Fred Hutchinson cancer research center, Seattle, WA, US

PP 7.5: Clonotypic differences in TCR reactivity to HIV-1 Gag TL9 in the context of HLA-B*42 and HLA-B*81
Authors: G. Anmole1, F. Ogunshola2, R. L. Miller1, Z. M. Ndlovu2, M. A. Brockman1,3
1 Simon Fraser University, Burnaby, CA
2 University of KwaZulu-Natal, Durban, ZA
3 BC Centre for Excellence in HIV/AIDS, Vancouver, CA

PP 7.6: Mobilizing NK Cells for an HIV Cure: NK Cells Can Target and Kill Latently HIV-1-Infected Primary T Cells Following Proviral Reactivation
Authors: M. Checkley, B. Luttge, C. Dobrowolski, J. Karn
Department of Molecular Biology and Microbiology, School of Medicine, Case Western Reserve University, US
PP 7.7: SMAC Mimetics Reverse HIV Latency by Selective Activation of the Non-canonical NF-κB Pathway
Authors: G. C. Sampey 1, E. P. Browne 1, D. M. Irlbeck 1,2, D. M. Margolis 1, R. M. Dunham 1,2
1 UNC HIV Cure center, Chapel Hill, US
2 GlaxoSmithKline HIV DPU, RTP NC, US

PP 7.8: Effect of tyrosine kinase inhibitors on the cytotoxic activity against HIV-1 infection
Authors: S. Rodriguez-Mora 1, G. Bautista 2, E. Mateos 1, V. García 3, J. L. Steegmann 4, J. Ambrosioni 5, Nuria Climent 6, F. Cervantes 7, J. M. Miro 5, M. Plana 8, J. Alcamí 1, M. Coiras 1
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6 Retrovirology and Viral Immunopathology Laboratory, AIDS Research Group, Hospital Clinic, IDIBAPS, Barcelona, ES
7 Hematology Department, Hospital Clinic, IDIBAPS, Barcelona, ES

PP 7.9: SMAC Mimetics Are Potent Latency Reversal Agents With Single Agent and Combination Activity Ex Vivo
Authors: R. M. Dunham 1,2, G. C. Sampey 1, D. M. Irlbeck 1,2, E. P. Browne 1, D. M. Margolis 1
1 UNC HIV Cure Center, University of North Carolina School of Medicine, Chapel Hill, NC, US
2 GlaxoSmithKline, HIV DPU, ID TAU, Research Triangle Park, NC, US

PP 7.10: Novel Use of Alprazolam as a Potential HIV-1 Latency Reversing Agent
Authors: W. Elbezanti, A. Lin, S. Luca, F. Maldarelli, Z. Klase
University of the Sciences, Philadelphia, US

PP 7.11: HIV-1 Nef dimerization and AP-2 recruitment contribute to viral replication and T-cell loss in humanized mice
Authors: S. Shu, L. Chen, T. Smithgall
University of Pittsburgh, Pittsburgh, US

PP 7.12: Adoptive T cell as a Strategy for Targeted Delivery of Immune Checkpoint Therapy
University of North Carolina at Chapel Hill, Chapel Hill, US

PP 7.13: HIV-Specific T Cells Expressing an X5-GPI Artificial Receptor can Suppress HIV Replication In Vitro – Implications for a Cure Strategy for HIV+ Individuals with Hematologic Malignancies
Authors: S. Patel 1,2, R.B. Jones 1, J. Kimata 1, C.M. Bollard 1,2, C.R. Cruz 1, S-H. Huang 1, K. Wright 1, S. Albihani 1, A. Misra 1, P. Zhou 1, C. Russell Cruz 1,2
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3 Department of Molecular Virology and Microbiology, Baylor College of Medicine, Houston, TX, US
4 Unit of Anti-Viral Immunity and Genetic Therapy, Institut Pasteur of Shanghai-Chinese Academy of Sciences, Shanghai, CN

PP 7.14: HIV Protease Cleavage Sites Vaccine Augments Quality of T cell Responses during ART
Authors: R. W. Omange 1, H. Li 1, N.P. Toledo 1, F.A. Plummer 1, M. Luo 1
1 Department of Medical Microbiology and Infectious Diseases, University of Manitoba, Winnipeg, CA
2 Department of Medical Microbiology and Infectious Diseases, University of Manitoba, Winnipeg, CA,
HIV Host Genetics Laboratory-National Microbiology Laboratory, Winnipeg, CA
**PP 7.15: HIV-Specific T Cells Generated from HIV-Naive Adult and Cord Blood Donors Target a Range of Novel Viral Epitopes — Implications for a Cure Strategy after Allogeneic HSCT and CBT**

Authors: S. Patel¹², R.B. Jones², E. Shpall³, D. Margolis³, C.M. Bollard¹², E. Williams¹; S. Albihani¹; S. Lam¹; J. A.M. Sung³; C. Russell Cruz¹²; R. F. Ambinder⁵

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⁴ Department of Stem Cell Transplantation and Cellular Therapy, The University of Texas MD Anderson Cancer Center, Houston, TX, US

⁵ Sidney Kimmel Comprehensive Cancer Center, The Johns Hopkins University School of Medicine, Baltimore, MD, US

**PP 7.17: In vivo suppression of HIV rebound by didehydro-Cortistatin A, a “block-and-lock” strategy for HIV-1 cure**

Authors: C.F. Kessing¹⁵, C.C. Nixon²⁵, C. Li¹⁵, P.M. Tsai², H. Takata³⁴, G. Mousseau¹, P.T. Ho², J.B. Honeycutt², M. Fallahi¹, L.Trautmann³⁴, J.V. Garcia², S.T. Valente¹⁶

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³ Walter Reed Army Institute of Research, Silver Spring, MD, US

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⁵ These authors contributed equally

**PP 7.18: Partial control of viral rebound with a Rev-dependent lentiviral vector carrying HSV-tk gene in SIV-infected rhesus macaques**

Authors: Y. Wu¹, B. Hetrick¹, S. Iqbal², B. Ling²

¹ National Center for Biodefense and Infectious Diseases, School of System Biology, George Mason University, Manassas, US

² Tulane National Primate Research Center, Covington, US
SESSION 9: PHARMACOLOGY & DRUG DISCOVERY

PP 9.0: Role of Mitochondrial Antiviral Signaling Protein in Reactivation of Latent HIV-1 in CD4+ T cells
Authors: C. L. Novis1, I. Sarabia2, A. B Macedo2, R. Nell3, B. Shakya3, H.L. Schubert3, C. P. Hill3, A. B. De Paula-Silva1, A. M Spivak4, V. Planelles1, A. Bosque2
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2 Department of Microbiology, Immunology and Tropical Medicine, George Washington University, Washington, US
3 Department of Biochemistry, University of Utah, Salt Lake City, Utah, US
4 Division of Infectious Diseases, Department of Medicine, University of Utah, Salt Lake City, US

PP 9.1: Synergistic HIV Latency Reversal from an In Vitro Screen of Epigenetic and Kinase Inhibitors
Authors: D. Irlbeck 1, Y. Zhao 2, A. Axtman3, B. Zuercher 3, L. Ingerman-James4
1 University of North Carolina HIV Cure Center, GlaxoSmithKline, Chapel Hill, US
2 GlaxoSmithKline Target Sciences-Statistics, Research Triangle Park, US
3 University of North Carolina HIV Cure Center, Structural Genomics Consortium, Chapel Hill, US
4 University of North Carolina HIV Cure Center, Center for Integrative Chemical Biology and Drug Discovery, Chapel Hill, US
This work was done in collaboration with the laboratory of Dr. David Margolis at the University of North Carolina at Chapel Hill HIV Cure Center

PP 9.2: Novel Mechanisms of Baricitinib to Block Reservoir Seeding and HIV Persistence
Authors: J. Kohler, C. Gavegnano, J. J. Kohler, C. Montero, R. F. Schinazi
Emory University SOM, Atlanta, US

PP 9.3: Molecular characterization of the inhibitor didehydro-Cortistatin A with the HIV-1 Tat protein
Authors: S. Mediouni1, M. Ekka2, K. Chinthalapudi3, Usui4, G. Mousseau1, J. Jablonski1, M. Clementz1, J. Nowak3, J. Beverage4, E. Esquenazi4, K.I Nettles3, P. Baran6, E. Loret6, T. Izard3, S. Maiti2, S. Valente1
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4 Sinenas Marine Discovery, San Diego, CA, US
5 Chemistry, Scripps Research Institute, Jupiter, FL, US
6 Aix Marseille University, Faculty of Pharmacy, Aix en Provence and Marseille, FR

PP 9.4: Validation of an unbiased screen method for the identification of secondary fungal metabolites reversing HIV-1 latency
Authors: M. Stoszko1, M. Röling1, E. De Crignis1, T. Wai Kan1, A. Mohammed Said Al-Hatmi2,3, M. Sulc4, A. Bourne1, E. LeMasters1, N.E. Funa1, J. Kang5, Y. Müller6, P. Katsikis6, S. de Hoog2,3, V. Havliek4, T. Mahmoudi1
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5 Key Laboratory of Medical Microbiology and Parasitology & Key Laboratory Of Environmental Pollution Monitoring and Disease Control, Ministry of Education & Department of Microbiology, Guizhou Medical University, Guiyang, CN
6 Department of Immunology, Erasmus University Medical Center, Rotterdam, NL
POSTER AREA

Poster authors are asked to be present next to their poster during the poster viewing session with wine & cheese tasting, during the following times:

Wednesday, December 13: 4.00 pm – 7.00 pm

Thursday, December 14: 4.00 pm – 7.00 pm

POSTER TOPICS

Basic science of HIV latency

Basic science of HIV latency II

In vitro and animal models studies of the persistence

Virology of HIV persistence

Immunology of HIV persistence

Human studies

New therapeutic approaches

Pharmacology & drug discovery

The selected abstracts will benefit from a high visibility thanks to their presentation into the open access scientific Journal of Virus Eradication from December 15, 2017.

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Tuesday, December 12: 3.30 pm – 4.00 pm

Wednesday, December 13: 10.00 am – 10.30 am

Thursday, December 14: 10.00 am – 10.30 am

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CONGRESS VENUE

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WORKSHOP OPENING HOURS

- Tuesday December 12: 12.00 pm - 7.00 pm
- Wednesday December 13: 7.45 am - 7.00 pm
- Thursday December 14: 7.45 am - 7.00 pm
- Friday December 15: 7.45 am - 2.00 pm

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- **Certificates of attendance**
  Certificates of attendance will be send by email after the week after the workshop.

- **Badges**
  The name badge must be worn at all times during the workshop and is non transferable. Access to the conference will not be granted without an official conference name badge.

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  Payment of the Workshop registration fee includes the following:
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  - Single-occupancy accommodation for three (3) nights
  - Official Workshop materials
  - Breakfast, lunch, refreshment breaks and dinner during the days of the conference

- **Accompanying guests, sharing room with delegate: $600**
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- **Workshop administration fee: $300**
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- Provide a place for network and information-sharing between scientists specialized in the reservoir
- Present state-of-the-art basic science and clinical researches on HIV therapy with unpublished data and have a panel of experts to sum up the current advances in the field
- Accelerate researches on reservoirs and latency to find a cure

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Lunches will be served free of charge in dedicated room on level 2 - in Watson Island room/Bayview. Ballroom if the weather is bad or in the Bayfront Terrace if the weather is fine - as follows:

Lunches:
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• Thursday, December 14: 12.30 pm - 2.00 pm

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Validity: from December 7th 2017 to December 20th, 2017.
The National Institute of Allergy and Infectious Diseases (NIAID) will host the Fourth Biennial *Strategies for an HIV Cure meeting* at the NIH main campus in Bethesda, MD **October 10-12, 2018.** The goal of the meeting is to facilitate communication and foster collaboration among NIAID-funded researchers, the broader HIV cure research community, and community stakeholders. The meeting also serves as the biennial joint meeting of the Martin Delaney Collaboratories, along with the HIV Persistence During Therapy workshop in Miami in alternate years. Registration is free, and poster abstracts are encouraged.

Information on last year’s meeting, as well as video links to presentations can be found at:  
[https://respond.niaid.nih.gov/conferences/hivcuremeeting2016](https://respond.niaid.nih.gov/conferences/hivcuremeeting2016)

We look forward to seeing you again next year in Bethesda.

Lillian Kuo  
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