9TH EDITION

DECEMBER 10-13, 2019

HIV PERSISTENCE DURING THERAPY

Reservoirs & Eradication Strategies Workshop

FINAL PROGRAM

FLORIDA MIAMI USA

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10TH EDITION

DECEMBER 2021

HIV PERSISTENCE DURING THERAPY™

Reservoirs & Eradication Strategies Workshop

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SUMMARY

MIAMI FLORIDA USA

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DECEMBER 10-13, 2019

HIV PERSISTENCE DURING THERAPY

Reservoirs & Eradication Strategies Workshop

Steering Committee

Alain Lafeuillade, MD
Infectious disease private practice, La Valette du Var – FRA

David Margolis, PhD
University of North Carolina, Chapel Hill – USA

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

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

Scientific Committee

José Alcami, Madrid – ESP
Monsef Benkirane, Montpellier – FRA
Nicolas Chomont, Montreal – CAN
Tae-Wook Chun, Bethesda – USA
Janice Clements, Baltimore – USA
John Coffin, Boston – USA
Steven Deeks, San Francisco – USA
J. Victor Garcia-Martinez, Chapel Hill – USA
Romas Geleziunas, Foster City – USA
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George Hanna, Princeton – USA
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Jacques Izopet, Toulouse – FRA
Rowena Johnston, New York City – USA
Jonathan Karn, Cleveland – USA
Richard Koup, Bethesda – USA
Guenter Kraus, Beerse – BEL
Sharon Lewin, Melbourne – AUS
Javier Martinez-Picado, Badalona – ESP
John W. Mellors, Pittsburgh – USA
Sarah Palmer, Sydney – AUS
Vicente Planelles, Salt Lake City – USA
Guido Poli, Milan – ITA
Christina Psomas, Montpellier – FRA
Douglas Richman, La Jolla – USA
Jean-Pierre Routy, Montreal – CAN
Andrea Savarino, Rome – ITA
Robert Siliciano, Baltimore – USA
Carine Van Lint, Gosselies – BEL
Jan Van Luzen, London – UK

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WELCOME ADDRESS

Dear Colleagues,

Welcome to the ninth 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 program, 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 involvment. 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

PROGRAM

<table>
<tr><th>Time</th><th>TUESDAY, DECEMBER 10</th><th>WEDNESDAY, DECEMBER 11</th></tr>
<tr><td>8:00
9:00
AM</td><td colspan="2"></td><td rowspan="2">SESSION 1:
Basic Science
of HIV Latency</td></tr>
<tr><td>9:00
10:00
AM</td><td rowspan="3">NIMH Satellite
Symposium:
CNS
and Myeloid
Cell Reservoirs</td><td rowspan="3">Meeting
of the Martin
Delaney
Collaboratories
Community
Advisory Board

HIBISCUS
ISLAND ROOM</td></tr>
<tr><td>10:00
10:30
AM</td><td></td></tr>
<tr><td>10:30
AM
12:30
PM</td><td rowspan="2">SESSION 2:
In Vitro and Animal
Model Studies of HIV Persistence</td></tr>
<tr><td>12:30
2:00
PM</td><td>Lunch
on your own</td><td>Lunch on your own</td><td>Lunch</td></tr>
<tr><td>2:00
3:30
PM</td><td colspan="2">NIAID satellite symposium:
Martin Delaney Collaboratories
research highlights (SESSION 1)</td><td rowspan="2">SESSION 3:
Virology
of HIV Persistence</td></tr>
<tr><td>3:30
4:00
PM</td><td colspan="2">Coffee Break</td></tr>
<tr><td>4:00
5:30
PM</td><td colspan="2">NIAID satellite symposium:
Martin Delaney Collaboratories
research highlights (SESSION 2)</td><td rowspan="2">Poster viewing</td></tr>
<tr><td>5:30
7:30
PM</td><td colspan="2">Opening Lecture</td></tr>
<tr><td>7:30
PM</td><td colspan="2">Welcome Dinner</td><td>Dinner on your own</td></tr>
</table>

AT A GLANCE

THURSDAY, DECEMBER 12	FRIDAY, DECEMBER 13
SESSION 4: Immunology of HIV Persistence	SESSION 7: Human studies and drug development II
Coffee Break	
SESSION 5: Human studies and drug development I	SESSION 8: New Therapeutic Approaches II
Lunch	Closing Ceremony
SESSION 6: New Therapeutic Approaches I	ALL THE SESSIONS WILL BE IN THE MAIN PLENARY SESSION ROOM (SALON A TO E).
with wine and cheese tasting	
Dinner on your own	

TUESDAY, DECEMBER 10, 2019

09:00 12:00 **NIMH SATELLITE SYMPOSIUM: CNS AND MYELOID CELL RESERVOIRS**

Chairs: Jeymohan JOSEPH, Division of AIDS Research, NIMH - USA
Mario STEVENSON, University of Miami - USA

09:00 09:15 **Session Goals and NIMH Research Priorities in CNS and Myeloid Reservoirs**

Jeymohan JOSEPH, AIDS Research, NIMH - USA

09:15 09:30 **Unexpected Outcomes in the Rebound Zone: Utilizing Correlative PET/CT and Multi-Scale Imaging to Define SIV Rebound After ART Cessation**

Thomas HOPE, Northwestern University - USA

09:30 09:45 **Macrophage-tropic HIV-1 variants populate plasma viremia in chronic and acute subjects undergoing analytic treatment interruption**

Viviane MACHADO, University of Miami - USA

09:45 10:00 **Evidence of HIV Persistence in Circulating Myeloid Cells: Implications for HIV-associated Complications and Remission**

Brooks MITCHELL, University of Hawaii at Manoa - USA

10:00 10:15 **Genetic and functional differences in the CNS vs systemic HIV-1 reservoirs**

Maria GONZALEZ PEREZ, University of Massachusetts Medical School - USA

10:15 10:30 **HIV-infected macrophages evade NK cell-mediated killing while driving inflammation**

Kiera CLAYTON, Ragon Institute - USA

10:30 - 11:00 AM Break

11:00 11:15 **Targeting lncRNA SAF to induce apoptosis in HIV-1 infected macrophages**

Tsaikat BOLIAR, Cornell University - USA

11:15 11:30 **Low-level Persistent/Latent HIV-1 Infection of Macrophages Corresponds to Decreased NF-kB Activity**

Tim HANLEY, University of Utah Health Sciences Center - USA

11:30 11:45 **Effects of Blocking NOX Signaling on HIV Persistence and HIV-associated Neurocognitive Dysfunction in a Murine HAND Model**

Christina GAVEGNANO, Emory University - USA

11:45 12:00 **Detection and modulation of HIV reservoirs in HIV infected patients on ART**

Avi NATH, NIH - USA

TUESDAY, DECEMBER 10, 2019

09:00 01:30 **MEETING OF THE MARTIN DELANEY COLLABORATORIES COMMUNITY ADVISORY BOARD**
HIBISCUS ISLAND ROOM

02:00 03:30 **NIAID SATELLITE SYMPOSIUM: MARTIN DELANEY COLLABORATORIES RESEARCH HIGHLIGHTS (SESSION 1)**

02:00 02:30 **DARE Collaboratory**

Introduction
Steven DEEKS, University of California, San Francisco - USA

Engaging CD8+ T cell responses in SIV Reservoir Reduction or Reactivation Control
Afam OKOYE, Oregon Health & Science University - USA

02:30 03:00 **BEAT-HIV Collaboratory**

Introduction
Luis MONTANER, The Wistar Institute - USA

Peripheral Blood SIV/HIV Originates from Infected Cells in Tissues
Leticia KURI-CERVANTES, University of Pennsylvania - USA

Contribution of Antigenic Exposure to the Persistence of HIV-Infected CD4+ T Cells In Vivo
Francesco R. SIMONETTI, Johns Hopkins University - USA

03:00 03:30 **BELIEVE Collaboratory**

Introduction
R. Brad JONES, Weill Cornell Medicine – USA

Combination IL-15 Therapy in a SHIV NHP Model
James B. WHITNEY, Beth Israel Deaconess Medical Center - USA

3:30 - 4:00 PM Coffee Break

04:00 05:30 **NIAID SATELLITE SYMPOSIUM: MARTIN DELANEY COLLABORATORIES RESEARCH HIGHLIGHTS (SESSION 2)**

04:00 04:30 **I4C Collaboratory**

Introduction
Dan BAROUCH, Beth Israel Deaconess Medical Center - USA

Origin of Rebound Virus in Chronically SIV-Infected Monkeys Following Treatment Discontinuation
Po-Ting LIU, Beth Israel Deaconess Medical Center - USA

HIV-1 Diversity Considerations for Clinical Studies of Passively Transferred Broadly Neutralizing Antibodies
Kshitij WAGH, Los Alamos National Laboratory - USA

TUESDAY, DECEMBER 10, 2019

04:30 05:00 **DefeatHIV Collaboratory**

Introduction
Hans-Peter KIEM, Fred Hutchinson Cancer Research Center - USA

CAR T Cell-Treated Rhesus Macaques Suppress SHIV Viremia Following ART Treatment Interruption
Christopher PETERSON, Fred Hutchinson Cancer Research Center - USA

05:00 05:30 **CARE Collaboratory**

Introduction
David MARGOLIS, University of North Carolina at Chapel Hill - USA

Novel Bivalent Chemical Degraders to Reverse HIV Latency
Anne-Marie TURNER, UNC HIV Cure Center, University of North Carolina, Chapel Hill - USA

Improved Killing of HIV-infected Cells by a Combination of Three Antibodies: Implications for Clearing Persistent Infection
Marina TUYISHIME, Department of Surgery, Duke University Medical Center, Durham, NC - USA

05:30 05:45 **CanCURE Overview**

Eric COHEN, IRCM, Human Retrovirology research unit, Montréal - CAN

☕ 5:45 - 6:00 PM Break

06:00 **WELCOME**

Mario STEVENSON, University of Miami - USA

06:05 07:30 **Opening Lecture**

Introduction
Chairs:
Karl SALZWEDEL, National Institute of Allergy and Infectious Diseases, Bethesda - USA
David MARGOLIS, University of North Carolina at Chapel Hill - USA

Ending the HIV Pandemic: Follow the Science
Anthony S. FAUCI, National Institute of Allergy and Infectious Diseases (NIAID), Bethesda, WA - USA

Bringing curative interventions for HIV to resource-limited parts of the world
Mike McCUNE, HIV Frontiers, Global Health Innovative Technology Solutions, Bill & Melinda Gates Foundation - USA

07:30 **WELCOME DINNER**

WEDNESDAY, DECEMBER 11, 2019

08:00 10:00

SESSION 1: BASIC SCIENCE OF HIV LATENCY

Chairs: Jonathan KARN, Professor and Chair, Department of Molecular Biology and Microbiology, School of Medicine, Director, Case Center for AIDS Research, Cleveland/Akron, OH - USA
Una O'DOHERTY, Associate Professor Department of Pathology and Laboratory Medicine, Perelman School of Medicine, University of Pennsylvania, PA - USA
Christina PSOMAS, Clinical and Translational Research in the Department of Infectious Diseases of Montpellier University Hospital - FRA

▶ OP 1.0: Cellular Mechanisms that Establish and Maintain HIV Latency

Lecturer: Andrew HENDERSON, Professor of Medicine, Assistant Dean Graduate Medical Sciences Department of Medicine and Microbiology, Section of Infectious Diseases Boston University School of Medicine, Boston, MA - USA

▶ OP 1.1: Expression Profiling of HIV Latently-Infected Cells Using Nanostring And Mass Cytometry

Author(s): H. Sperber [1, 2, *], T. Ma [3], N.R. Roan [3], S.K. Pillai [1]

[1]Vitalant Research Institute - San Francisco (USA)
[2]Free University of Berlin - Berlin (GER)
[3]Gladstone Institutes - San Francisco (USA)

▶ OP 1.2: A quantitative single cell, single molecule RNA-FISH + IF and single cell RNA-seq analysis reveals stochasticity of reactivation of latent provirus.

Author(s): G. Kalpana [1,*], R. Pathak [1], A. La Porte [1], E. Bock [1], C. Eliscovich [1], L. Martins [2], A. Spivac [2], U. Dixit [1], V. Planelles [2], R. Singer [1]

[1]Albert Einstein College of Medicine - New York (USA)
[2]University of Utah School of Medicine - Salt Lake City (USA)

▶ OP 1.3 : Single-cell transcriptome sequencing of latently-infected cells ex vivo using PCR-activated cell sorting (PACS).

Author(s): I. Clark [1, 2, *], A. Abate [1], F. Quintana [2], S. Deeks [1], D. Douek [3], E. Boritz [3, *]

[1]UCSF - San Francisco (USA)
[2]Harvard - Boston (USA)
[3]NIH - Bethesda (USA)

▶ OP 1.4 : Single cell analysis of in vivo HIV reservoir uncovers novel markers of latent cells

Author(s): N. Roan [1,*], Jason Neidleman [1, 8], Xiaoyu Luo[1], Julie Frouard[1, 8], Feng Hsiao [1, 8], Guorui Xie [1, 8], Vincent Morcilla[2], Katherine Sholtis James[3], Rebecca Hoh[4], Ma Somsouk[5], Peter Hunt[6], Steve Deeks[4], Nancie Archin[3], Sarah Palmer[2], Warner C. Greene [1,7]

[1]Gladstone Institute of Virology and Immunology, San Francisco, CA (USA)
[2]Centre for Virus Research, the Westmead Institute for Medical Research, The University of Sydney, Sydney, NSW 2145 (AUS)
[3]Division of Infectious Diseases, School of Medicine, University of North Carolina at Chapel Hill, Chapel Hill, NC (USA)
[4]Division of HIV, Infectious Diseases and Global Medicine, University of California San Francisco, San Francisco, CA (USA)
[5]Department of Medicine, Division of Gastroenterology, San Francisco General Hospital and University of California, San Francisco, CA (USA)
[6]Division of Experimental Medicine, University of California San Francisco, San Francisco, CA (USA)
[7]Department of Medicine, University of California, San Francisco, CA (USA)
[8]Department of Urology, University of California, San Francisco, CA (USA)

OP 1.5 : Quantifying the contribution of cellular proliferation to maintaining the HIV reservoir

Author(s): A. Hill [1,*], G. Andrei [1], J. Gerold [1]

Harvard University - Cambridge, Ma (USA)

OP 1.6 : Tyrosine Kinase Inhibition: the new Front in HIV Cure Efforts.

Author(s): V. Planelles [1,*], M. Szaniawski [1], E. Williams [1], E. Innis [1], L. Martins [1], A. Spivak [1], J. Alcami [2], M. Coiras [2]

☕ 10:00 - 10:30 AM Coffee Break

10:30
12:30

SESSION 2: IN VITRO AND ANIMAL MODEL STUDIES OF HIV PERSISTENCE

Chairs:
Ann CHAHROUDI, Associate Professor of Pediatrics, Division of Pediatric Infectious Diseases, Emory University School of Medicine, Atlanta, GA - USA
Afam OKOYE, Research Associate Professor Vaccine & Gene Therapy Institute, and Division of Pathobiology and Immunology, Oregon National Primate Research Center, Oregon Health & Science University, Beaverton - USA

▶ **OP 2.0 : In vivo platforms for the evaluation of novel approaches to HIV persistence and eradication**
Lecturer: J. Victor GARCIA MARTINEZ, Professor of Medicine, Center for AIDS Research, Division of Infectious Diseases, Chapel Hill - USA

▶ **OP 2.1: Understanding the establishment and persistence of the rebound competent reservoir using barcoded viruses**
Lecturer: Brandon F. KEELE, AIDS and Cancer Virus Program, Leidos Biomedical Research, Frederick National Laboratory, Frederick - USA

▶ **OP 2.2 : Barcoded viruses facilitate tracking changes to the composition of the rebound-competent reservoir**
Author(s): T. Immonen [1,*], C. Fennessey [1], J. Lifson [1], B. Keele [1,*]
AIDS and Cancer Virus Program, Frederick National Laboratory for Cancer Research - Frederick (USA)

▶ **OP 2.3 : Delay in Viral Rebound with TLR7 Agonist, N6-LS and PGT121 in SHIV-infected Macaques**
Author(s): D. Hsu [1,*], D. Silsorn [2], R. Imerbsin [2], A. Pegu [3], J. Mascola [3], R. Geleziunas [4], R. Koup [3], D. Barouch [5], N. Michael [6], S. Vasan [6]
[1]MHRP - Bangkok (THA)
[2]AFRIMS - Bangkok (THA)
[3]NIH - Bethesda (USA)
[4]Gilead Sciences - Foster City (USA)
[5]BIDMC - Boston (USA)
[6]MHRP - Silver Spring (USA)

▶ **OP 2.4: Chimeric Antigen Receptor T-Cells and Stem Cells Control and Protect Against SHIV Replication in Nonhuman Primates**
Author(s): C. Peterson [1,*], B. Rust [1], A. Zhen [2], K. Brandenstein [1], N. Poole [1], C. Maldini [3], G. Ellis [3], S. Kitchen [2], J. Riley [3], H.P. Kiem [1]
[1]Fred Hutchinson Cancer Research Center - Seattle (USA)
[2]University of California, Los Angeles - Los Angeles (USA)
[3]University of Pennsylvania - Philadelphia (USA)

▶ **OP 2.5: The latency reversal activity of the SMAC mimetic AZD5582 in ART-suppressed SIV-infected rhesus macaques is potentiated by CD8a cell depletion**
Author(s): M. Mavigner [1,*], A. Brooks [1], C. Mattingly [1], T. Vanderford [1], B. Keele [2], J. Lifson [2], R. Dunham [3], D. Margolis [3], G. Silvestri [1], A. Chahroudi [1]
[1]Emory University - Atlanta (USA)
[2]Frederick National Laboratory for Cancer Research - Frederick (USA)
[3]UNC Chapel Hill - Chapel Hill (USA)

▶ **OP 2.6 : Utilizing correlative PET/CT and multiscale imaging to define the dynamics of SIV infected cells from early ART initiation to the rebound after analytic treatment interruption**
Author(s): T. Hope [1,*], M.S. Arif [1], Y. Thomas [1], I. Clerc [1], A. Carias [1], E. Allen [1], M. Mcraven [1], M. Ramirez [2], P. Santangelo [3], F. Villinger [2]
[1]Northwestern - Chicago (USA)
[2]New Iberia Research Center - New Iberia (USA)
[3]Georgia Tech - Atlanta (USA)

🍽 12:30 - 2:00 PM Lunch

02:00
03:30

SESSION 3: VIROLOGY OF HIV PERSISTENCE

Chairs :
Katherine BAR, Associate professor of medicine, Perelman School of Medicine, University of Pennsylvania, USA
Zabrina BRUMME, Director, Laboratory Program, BC Centre for Excellence in HIV/AIDS, Saint Paul Hospital, Vancouver - CAN

▶ **OP 3.0 : CD4-MBL-CAR/CXCR5 T cell immunotherapy shows promise at reducing SIV replication post-ART release**
Lecturer: Pamela SKINNER, Professor Department of Veterinary and Biomedical Sciences Microbiology, Immunology and Cancer Biology (MICaB) Ph.D. Graduate Program, University of Minnesota, MN - USA

▶ **OP 3.1: Differential decay of intact and defective proviral DNA in HIV-1-infected individuals on suppressive antiretroviral therapy**
Author(s): M. Peluso [1,*], P. Bacchetti [1], K. Ritter [2], S. Beg [3], P. Hunt [1], T. Henrich [1], J. Siliciano [3], R. Siliciano [3], G. Laird [2], S. Deeks [1]
[1]University of California, San Francisco - San Francisco (USA)
[2]Accelevir Diagnostics - Baltimore (USA)
[3]Johns Hopkins School of Medicine - Baltimore (USA)

▶ **OP 3.2: Women undergoing reproductive aging show increased reservoir sizes associated with removal of hormonal control of HIV-1 latency by estrogen**
Author(s): J. Karn [1,*], C. Dobrowolski [1,*], E. Scully [2], K.M. Weber [3], A.L. Landay [4]
[1]Department of Molecular Biology and Microbiology, Case Western Reserve University School of Medicine - Cleveland (USA)
[2]Johns Hopkins University, Department of Medicine, Division of Infectious Diseases - Baltimore (USA)
[3]WIHS/CORE Center of Cook County Health - Chicago (USA)
[4]Rush University Medical Center, Department Internal Medicine - Chicago (USA)

▶ **OP 3.3: Contribution of Antigenic Exposure to the Persistence of HIV-infected CD4+ T-cells in vivo**
Author(s): F. Simonetti [1,*], H. Zhang [1], G. Soroosh [1], S. Beg [1], H. Raymond [2], K. Mccormick [2], S. Deeks [3], F. Bushman [2], J. Siliciano [4], R. Siliciano [1]
[1]Johns Hopkins University - Baltimore (USA)
[2]University of Pennsylvania - Philadelphia (USA)
[3]University of California San Francisco - San Francisco (USA)
[4]Johns Hoppkins University - Baltimore (USA)

▶ **OP 3.4: Multiplexed RNA flow cytometric FISH allows single-cell viral transcriptional profiling and phenotypic characterization of translation-incompetent HIV reservoirs**
Author(s): M. Dubé [1,*], D. Kaufmann [1,*], G. Sannier [1], N. Brassard [1], G.G. Delgado [1], A. Baxter [1], J.P. Routy [2], N. Chomont [1]
[1]Research Centre of the Centre Hospitalier de l'Université de Montréal (CRCHUM) and Université de Montréal, Montreal, Quebec, Canada - Montréal (CAN)
[2]Chronic Viral Illnesses Service and Division of Hematology, McGill University Health Centre - Montréal (CAN)

▶ **OP 3.5: Low Viral Reservoir Treated Individuals Show Unusual HIV Latency Distribution**
Author(s): C. Gálvez [1,*], V. Urrea [1], S. Benet 1, B. Mothe 1, L. Bailón [2], J. Dalmau [1], L. Leal [3], F. García [3], J. Martinez-Picado [1], M. Salgado [1]
[1]AIDS Research Institute IrsiCaixa - Badalona (SPA)
[2]Infectious Diseases Department, University Hospital "Germans Trias i Pujol" - Badalona (SPA)
[3]Infectious Diseases Department, Hospital Clínic, University of Barcelona - Barcelona (SPA)

☕ 3:30 - 4:00 PM Coffee Break

04:00
07:00

POSTER VIEWING SESSION WITH WINE AND CHEESE TASTING

07:00

DINNER ON YOUR OWN

08:00
10:00

SESSION 4: IMMUNOLOGY OF HIV PERSISTENCE

Chairs :
Lydie TRAUTMANN, Associate Professor, OHSU, Vaccine & Gene Therapy Institute, Beaverton - USA
R. Brad JONES, Assistant Professor, Department of Medicine, Weill Cornell Medicine, New York, NY - USA

▶ OP 4.0: CellulaT Cells and The Cure Agenda

Lecturer: Bruce WALKER, Founding Director of the Ragon Institute of MGH, MIT and Harvard and the Director of the Harvard University Center for AIDS Research, Cambridge, MA - USA

▶ OP 4.1: HIV persistence during ART: Keeping memory, keeping HIV

Lecturer: Nicolas CHOMONT, Associate Professor in the Department of Microbiology and Immunology at the Université de Montréal – CHUM Research Center, Montreal - CAN

▶ OP 4.2: Characterizing "exceptional" control among HIV elite controllers

Author(s): M. Peluso [1,*], P. Burbelo [2], S. Kumar [1], S. Munter [1], R. Hoh [1], S. Lee [1], P. Hunt [1], R. Rutishauser [1], T. Henrich [1], S. Deeks [1]
[1]University of California, San Francisco - San Francisco (USA)
[2]National Institutes of Health - Bethesda (USA)

▶ OP 4.3: Single-cell TCR sequencing reveals that clonally expanded cells highly contribute to the inducible HIV reservoir during ART

Author(s): P. Gantner [1,*], A. Pagliuzza [2], M. Pardons [1], M. Ramgopal [3], J.P. Routy [3], R. Fromentin [2], N. Chomont [1]
[1]Université de Montréal - Montréal (CAN)
[2]CRCHUM - Montréal (CAN)
[3]Midway Immunology & Research Center - Fort Pierce (USA)

▶ OP 4.4: Single-cell phenotyping of HIV-infected expanded clones in ART-suppressed individuals

Author(s): C. Dufour [1,*], M. Pardons [1], R. Fromentin [1], M. Massanella [1], S. Palmer [2], S. Deeks [3], B. Murrell [4], J.P. Routy [5], N. Chomont [1]
[1]Centre de Recherche du CHUM and Department of Microbiology, Infectiology and Immunology, Université de Montréal - Montreal (CAN)
[2]Centre for Virus Research, The Westmead Institute of Medical Research, The University of Sydney - Sydney (AUS)
[3]Department of Medicine, University of California San Francisco - California (USA)
[4]Department of Microbiology, Tumor and Cell Biology, Karolinska Institutet - Stockholm (SWE)
[5]Division of Hematology & Chronic Viral Illness Service, McGill University Heath Centre - Montreal (CAN)

▶ OP 4.5: The IciStem consortium: T-cell immunology in HIV-1 infected individuals after allogeneic stem cell transplantation

Author(s): J. Martinez-Picado [3,*] J. Eberhard [1,*], M. Angin [2], C. Passaes [2], M. Salgado [3], J.L. Díez Martín [4], M. Nijhuis [5], A. Wensing [5], J. Schulze Zur Wiesch [1], A. Sáez-Cirión [2]
[1]Department of Medicine, Infectious Diseases Unit, University Medical Center Hamburg-Eppendorf - Hamburg (GER)
[2]Institut Pasteur, HIV, Inflammation and Persistence - Paris (FRA)
[3]AIDS Research Institute IrsiCaixa - Barcelona (SPA)
[4]Hospital Universitario Gregorio Marañón, Instituto de Investigación Sanitarias Gregorio Marañón, Universidad Complutense - Madrid (SPA)
[5]University Medical Center - Utrecht (NET)

▶ OP 4.6: Dynamics of HIV-Specific T-Cells on Long-Term ART Differ by Antigen Recognized and by Sex

Author(s): Eva M. Stevenson[1], Adam R. Ward[1,2,3], Thomas R. Dilling[1], John K. Bui[1], John Mellors[4], Rajesh Gandhi[5], Deborah McMahon[4], Joseph Eron[6], Ronald Bosch[7], Christina Lalama[7], Joshua Cyktor[4], and Brad Jones[1,2], for the A5321 Team
[1]Division of Infectious Diseases, Weill Cornell Medicine, New York, NY (USA)
[2]Department of Microbiology, Immunology, and Tropical Medicine, George Washington University, Washington, DC (USA)
[3]PhD program in Epidemiology, George Washington University, Washington, DC (USA)
[4]University of Pittsburgh, Pittsburgh, PA (USA)
[5]Massachusetts General Hospital, Boston, MA (USA)
[6]University of North Carolina, Chapel Hill, NC (USA)
[7]Harvard University, Boston, MA (USA)

☕ 10:00 - 10:30 AM Coffee Break

10:30
12:30

SESSION 5: HUMAN STUDIES AND DRUG DEVELOPMENT I

Chairs :
Bonnie HOWELL, Executive Director, Infectious Disease and Vaccines Merck, West Point, Pennsylvania, PE - USA
Javier MARTINEZ PICADO, ICREA Research Professor at Institut de Recerca de la Sida - IrsiCaixa, Barcelona – SPA

▶ **OP 5.0: Discovery and development of novel latency reversing agents**
Lecturer: Richard DUNHAM, Scientific Leader and Fellow at ViiV Healthcare; Adj Asst Professor at UNC-CH Région de Raleigh-Durham, NC - USA

▶ **OP 5.1: Virologic Outcomes of Vesatolimod Administration in People Living with HIV on ART**
Lecturer: Joseph HESSELGESSER, Research scientist, Gilead, Foster city, CA - USA

▶ **OP 5.2: HIV Post-Treatment Control Despite Plasma Viral Evolution and Dual Infection**
Author(s): J. Li [1,*], B. Etemad [1], G. Namazi [1], Y. Wen [2], N. Jilg [3], E. Esmaeilzadeh [1], X. Zhang [4], R. Sharaf [1], Z. Brumme [5], M. Kearney [6]
[1]Brigham and Women's Hospital, Harvard Medical School - Boston (USA)
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[4]Beijing Friendship Hospital - Beijing (CHI)
[5]Simon Fraser University - Burnaby (CAN), 6Frederick National Laboratory for Cancer Research - Frederick (USA)

▶ **OP 5.3: Optimization of Smac Mimetics as HIV-1 Latency Reversing Agents**
Author(s): L. Pache [1,*], P. Teriete [1], M.D. Marsden [2], A.M. Spivak [3], D. Heimann [1], A.J. Portillo [1], V. Planelles [3], J.A. Zack [2], N.D.P. Cosford [1], S.K. Chanda [1]
[1]Sanford Burnham Prebys Medical Discovery Institute - La Jolla (USA)
[2]University of California, Los Angeles - Los Angeles (USA)
[3]University of Utah School of Medicine - Salt Lake City (USA)

▶ **OP 5.4: HIV Particles Expressed in Semen under INSTI-based Suppressive Therapy are Largely Myeloid Cell-Derived and Exhibit Widely Diverse Genotypes**
Author(s): J. Johnson [1,*], D. Anderson [2], J.F. Li [1], A. Santos Tino [3], J. Politch [2], J. Lipscomb [1], J. Defelice [4], M. Gelman [4], K. Mayer [4]
[1]CDC, Atlanta (USA)
[2]BU School of Medicine, Boston (USA)
[3]The DESA Group, Atlanta, USA 4The Fenway Institute,Boston (USA)

▶ **OP 5.5: Impact of anti-PD-1 and anti-CTLA-4 on the HIV reservoir in vivo: The AMC-095 Study**
Author(s): Thomas A Rasmussen[1], Laskhmi Rajdev[2], Ajantha Rhodes[1], Ashanti Dantanarayana[1], Surekha Tennakoon[1], Socheata Chea[1], Danielle Rigau[3], Shelly Lensing[4], Rachel Rutishauser[5], Sonia Bakkour[6], Michael Busch[6], Dirk P Dittmer[7], Steven Deeks[5], Christine Durand[3], Sharon R Lewin[1, 8 3]
[1]The Peter Doherty Institute for Infection and Immunity, The University of Melbourne and Royal Melbourne Hospital, Melbourne, (AUS)
[2]Department of Medicine, Albert Einstein College of Medicine, New York (USA)
[3]Department of Medicine, Johns Hopkins University School of Medicine, Baltimore, Maryland (USA)
[4]Department of Biostatistics, University of Arkansas for Medical Biosciences, Arkansas (USA)
[5]Department of Medicine, University of California San Francisco, California (USA)
[6]Vitalant Research Institute, San Francisco, California (USA)
[7]Department of Microbiology and Immunology, University of North Carolina (USA)
[8]Department of Infectious Diseases, Alfred Hospital and Monash University, Melbourne (AUS)

▶ **OP 5.6: Intact Proviral DNA Levels Decline in People with HIV on Antiretroviral Therapy (ART)**
Author(s): J. Cyktor [2,*], R. Gandhi [1,*], R. Bosch [3], H. Mar [3], G. Laird [4], B. Macatangay [2], J. Eron [5], R. Siliciano [6], D. Mcmahon[2], J. Mellors[2]
[1]Massachusetts General Hospital - Boston (USA),
[2]University of Pittsburgh - Pittsburgh (USA),
[3]Harvard TH Chan School of Public Health - Boston (USA),
[4]Accelevir Diagnostics - Baltimore (USA),
[5]University of North Carolina - Chapel Hill (USA),

☕ 12:30 - 2:00 PM Lunch

02:00 03:30 **SESSION 6: NEW THERAPEUTIC APPROACHES I**

Chairs :
Ya-Chi HO, Assistant Professor of Microbial Pathogenesis and Medicine; Investigator, HIV Reservoirs and Viral Eradication Transformative Science Group (Cure TSG) New Haven, CT - USA
Alberto BOSQUE, Assistant Professor,Department of Microbioloy, Immunology and Tropical Medicine, George Washington Universisty, Washington, WA - USA

▶ **OP 6.0 Genome editing against HIV**
Lecturer: Paula CANNON, Professor of Molecular Microbiology & Immunology; Associate Director of Cross School Programs for the MESH Academy Molecular Microbiology and Immunology, Los Angeles, CA - USA

▶ **OP 6.1: Multispecific anti-HIV duoCAR-T cell therapy mediates robust HIV suppression and elimination of HIV-infected cells in humanized mice**
Author(s): K. Anthony-Gonda [1,*], A. Bardhi [2], A. Ray [2], W. Krueger [1], D. Schneider [1], Z. Zhu [1], R. Orentas [1], D. Dimitrov [3], H. Goldstein [2], B. Dropulic [1]
[1]Lentigen, a Miltenyi Biotec Company - Gaithersburg (USA)
[2]Albert Einstein College of Medicine - Bronx (USA)
[3]University of Pittsburg - Pittsburg (USA)

▶ **OP 6.2: Location, abundance and persistence of CAR/CXCR5 transduced T cells within lymphoid tissues of SIV-infected rhesus macaques**
Author(s): H. Abdelaal [1,*], M. Pampusch [1], P. Skinner [1], E. Berger [2]
[1]University of Minnesota - Minneapolis (USA)
[2]University of Minnesota - The National Institutes of Health, Bethesda, Md (USA)

▶ **OP 6.3: Combinatorial latency reversal activity of Inhibitor of Apoptosis antagonists (IAPa) with mechanistically distinct classes of HIV latency reversal agents**
Author(s): S. D. Falcinelli[1,3], D. M. Irlbeck[1,5], A.-M. Turner[1], J. Peterson[1,3], F. Potjewyd[2], L. I. James[1,2], D. Margolis[1,3,4], N. Archin[1,4], R. Dunham[1,5]
[1]UNC HIV Cure Center (USA)
[2]Center for Integrative Chemical Biology and Drug Discovery (USA)
[3]Dept. of Microbiology and Immunology (USA)
[4]Dept. of Medicine University of North Carolina, Chapel Hill, NC (USA)
[5]HIV Drug Discovery, ViiV Healthcare, Research Triangle Park, NC (USA)

▶ **OP 6.4: $\alpha 4\alpha 7$-blockade delays viral rebound in SHIV infected macaques treated with a combination of HIV bNAbs**
Author(s): E. Martinelli [1,*]
CBR, Population Council - New York (USA)

▶ **OP 6.5: Replacing daily cART with AAV-expressed eCD4-Ig**
Author(s): M. Gardner [1,*], M. Davis-Gardner [1], M. Farzan [1]
[1]The Scripps Research Institute - Jupiter (USA)

☕ 3:30 - 4:00 PM Coffee Break

04:00 07:00 **POSTER VIEWING SESSION WITH WINE AND CHEESE TASTING**

07:00 **DINNER ON YOUR OWN**

08:00
10:00

SESSION 7: HUMAN STUDIES AND DRUG DEVELOPMENT II

Chairs:
David SMITH, University of California, San Diego School of Medicine, La Jolla - USA

▶ **OP 7.0 Main challenges of human studies in the HIV eradication field**
Lecturer: Beatriz MOTHE PUJADAS, MD, PhD. Associate Investigator. HIV Unit & IrsiCaixa AIDS Research Institute. Hospital Germans Trias i Pujol. UVic-UC, Barcelona - SPA

▶ **OP 7.1 : Whole Body Imaging of HIV Persistence, Viral Biomarkers and Immune Activation**
Lecturer: Timothy HENRICH, Associate Professor of Medicine at University of California, San Francisco, CA - USA

▶ **OP 7.2: Plasma and Antibody Glycomic Biomarkers of Time to HIV Rebound and Viral Setpoint**
Author(s): L. Giron [1,*], E. Papasavvas 1, L. Azzoni [1], K. Mounzer [2], J. Kostman [2], I. Sanne [3], C. Firnhaber [4], Q. Liu [1], L. Montaner [1], M. Abdel-Mohsen [1,*]
[1]The Wistar Institute - Philadelphia (USA)
[2]Philadelphia FIGHT - Philadelphia (USA)
[3]University of the Witwatersrand - Johannesburg (ZAF)
[4]University of Colorado School of Medicine - Aurora (USA)

▶ **OP7.3: Single cell RNA-seq identifies host genes that correlate with HIV-1 reservoir size**
Author(s): R. Thomas [1,*], A. Waickman [2], P. Ehrenberg [1], A. Geretz [1], M. Eller [1], S. Tovanabutra [1], J. Ananworanich [1], N. Chomont [3], J. Currier [2], N. Michael [1]
[1]U.S. Military HIV Research Program, Walter Reed Army Institute of Research - Silver Spring (USA)
[2]Viral Diseases Branch, Walter Reed Army Institute of Research - Silver Spring (USA)
[3]Université de Montréal, Faculty of Medicine - Montreal (CAN)

▶ **OP 7.4: Sex differences in the latent reservoir of virally suppressed HIV-1 infected individuals living in Rakai, Uganda**
Author(s): T.C. Quinn [3,*], J. Prodger [1,*], A.M. Capoferri [2], K. Yu [1], S.J. Reynolds [3], J. Kasule [4], D. Serwadda [4], E. Scully [2], K.J. Kwon [2], A.D. Redd [3]
[1]Western University - London (CAN)
[2]Johns Hopkins School of Medicine - Baltimore (USA)
[3]National Institutes of Health - Baltimore (USA)
[4]Rakai Health Sciences Program - Kalisizo (UGA)

▶ **OP 7.5: Clones Of HIV Infected Cells Are Widely Distributed In T Cell Subsets In Blood And In Anatomic Tissues**
Author(s): F. Maldarelli [1,*], M. Gozoulis [1], X. Wu [2], L. Perez [3], R. Gorelick [4], C. Lange [1], S. Hill [1], J. Virga[1], T. Uldrick [5], R. Yarchoan [6], S. Hughes [1]
[1]CCR/NCI - Frederick (USA)
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[4]Leidos, INC - Peoria (USA)
[5]CCR/NCI - U Washington (USA)
[6]CCR/NCI - Bethesda (USA)

▶ **OP 7.6: Tissue-specific differences in the mechanisms that govern HIV latency in blood, liver, gut and genital tract in ART-suppressed women**
Author(s): S. Moron-Lopez [1,*], G. Xie [2], P. Kim [3], J. Wong [1], J. Price [4], N. Elnachef [4], R. Greenblatt [4], P. Tien [1], N. Roan [2], S. Yukl [1]
[1]University of California San Francisco - SFVAMC - San Francisco (USA)
[2]University of California San Francisco - Gladstone Institutes - San Francisco (USA)
[3]San Francisco VA Medical Center (SFVAMC) - San Francisco (USA)
[4]University of California San Francisco - San Francisco (USA)

☕ 10:00 - 10:30 AM Coffee Break

10:30 12:30 **SESSION 8: NEW THERAPEUTIC APPROACHES II**

Chairs:
Susanna VALENTE, Associate Professor Department of Immunology and Microbiology130 Scripps Way, 3C1, Jupiter, FL - USA
Lesley de ARMAS, Department of Immunology and Microbiology, University of Miami Miller School of Medicine, Miami – USA
Guido POLI, Division of Immunology, Transplantation and Infectious Diseases, San Raffaele Scientific Institute - ITA

▶ **OP 8.0: A viable pathway to HIV-1 remission**
Lecturer: Michael FARZAN, Professor an d co-chair of the Department of Immunology and Microbiology on the Florida campus of The Scripps Research Institute, FL - USA

▶ **OP 8.1: The Human IL-15 Superagonist N803 Does Not Reverse Latency in ART-suppressed, SHIV-infected macaques**
Author(s): G. Webb [1,*], J. Berrocal [2], K. Busman-Sahay [1], S. Abdulhaqq [1], J. Smedley [1], J. Safrit [3], J. Estes [1], P. Skinner [2], J. Sacha [1]
[1]Oregon Health and Science University - Portland (USA)
[2]University of Minnesota - St. Paul (USA)
[3]NantKWest - Culver City (USA)

▶ **OP 8.2: How Long is Long-term? Delivery of anti-HIV Antibodies Using AAV Vector**
Author(s): J. Martinez-Navio [1,*], R. Desrosiers [1,*], S. Fuchs [1], D. Mendes [1], E. Rakasz [2], G. Gao [3], J. Lifson [4],
[1]University of Miami - Miami (USA)
[2]Wisconsin National Primate Research Center UW - Madison (USA)
[3]Gene Therapy Center UMass - Worcester (USA)
[4]Frederick National Laboratory for Cancer Research - Frederick (USA)

▶ **OP 8.3: Intensification of ART with ABX464 decreases the total HIV reservoir and HIV transcription initiation in CD4+ T cells from HIV-infected ART-suppressed individuals**
Author(s): S. Bernal [1,*], S. Moron-Lopez [2,*], S. Bernal [1,*], J.M. Steens [3], J.K. Wong [4], J. Martinez-Picado [1], S.A. Yukl [4]
[1]IrsiCaixa AIDS Research Institute - Badalona (SPA)
[2]University of California San Francisco - San Francisco (USA)
[3]ABIVAX - Paris (FRA)
[4]San Francisco VA Medical Center - San Francisco (USA)

▶ **OP 8.4: HIV persistence despite reservoir decay during combinatorial immunotherapy including therapeutic conserved elements (CE) DNA vaccination, PD-1 therapy, GS-986 TLR7-agonism, and CCR5 gene-edited CD4+ T cell infusion in rhesus macaques**
Author(s): S. Dross [1,*], C. Peterson [2], M. O' Connor [1], H. Tunggal [1], J. Li [1], K. Jerome [2], H.P. Kiem [2], B. Felber [3], J. Mullins [1], D. Fuller [1]
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[2]Fred Hutchinson Cancer Research Center - Seattle (USA)
[3]Human Retrovirus Pathogenesis Section, Vaccine Branch, Center for Cancer Research, National Cancer Institute - Frederick (USA)

▶ **OP 8.5: PD-1 Blockade boost Vaccine-Induced anti-HIV responses in the absence of HIV reactivation**
Author(s): M. Marin Lopez [1,*], J.-G. Prado, M. Marin Lopez [1,*], E. Jimenez-Moyano [1], D. Ouchi [1], O. Blanch-Lombarte [1], D. Gorman [2], T. Hanke [3], C. Brander [1], B. Howell [4], B. Mothe [1]
[1]IrisiCaixa - Badalona (Barcelona) (SPA)
[2]Merck & Co. Inc. - Palo Alto, California (USA)
[3]The Jenner Institute Nuffield Department of Medicine, University of Oxford - Oxford (GBR),
[4]Department of Infectious Disease, Merck & Co. Inc. - Kenilworth, Nj (USA)

▶ **OP 8.6: Post-therapy viral set-point abatement following combined antiproliferative and immune-boosting interventions: Results: from a randomized clinical trial**
Author(s): R. Sobhie Diaz [1,*], L.B. Giron [2], J. Galinskas [1], J. Hunter [1], M. Janini [1], I.L. Shytaj [3], R. Cauda [4], M.C. Sucupira [5], J. Maricato [5], A. Savarino [6]
[1]Federal University of Sao Paulo, Infectious Diseases Department - São Paulo (BRA)
[2]Wistar Institute - Philadelphia (USA)
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[5]Federal University of Sao Paulo, Infectious Diseases Department - São Paulo (BRA)
[6]Department of Infectious Diseases, Italian Institute of Health - Rome (ITA)

▶ **OP 8.7: B cell depletion alone or in combination with IL-15 or PD-1 blockade facilitates enhanced control of virus replication in SIV-infected rhesus macaques**
Author(s): Y. Fukazawa [1,*],L.J. Picker [1,*], Y. Fukazawa [1,*], H. Behrns [1], B.E. Randall [1], B. Varco-Merth [1], H. Park [1], B.K. Felber [2], G.N. Pavlakis [2], J.D. Lifson [3], A.A. Okoye [1]
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[2]Center for Cancer Research, National Cancer Institute - Frederick, Md (USA)

12:30 **CLOSING CEREMONY**

Alain LAFEUILLADE, Infectious disease private practive, La Valette du Var - FRA
David MARGOLIS, University of North Carolina, Chapel Hill, NC - USA
Karl SALZWEDEL, NIAID, Division of AIDS, Bethesda, MD - USA
Mario STEVENSON, University of Miami Leonard School of Medicine, Miami, FL - USA

SESSION 1: BASIC SCIENCE OF HIV LATENCY

▶ PP 1.1: **Remodeling of the core leads HIV-1 pre-integration complex into the nucleus of human lymphocytes**

Author(s): F. Di Nunzio [1,*], G. Blanco-Rodriguez [1], A. Gazi [2], B. Monel [3], S. Frabetti [1], V. Scoca [1], O. Schwartz [4], J. Krijnse-Locker [2], P. Charneau [1]
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▶ PP 1.2: **Combination of quadruplex qPCR and next-generation sequencing for qualitative and quantitative analysis of the HIV-1 latent reservoir**

Author(s): C. Gaebler [1,*]
[1]The Rockefeller University - New York (USA)

▶ PP 1.3: Single cell analysis reveals molecular signatures of HIV latency in primary cell models

Author(s): S. Telwatte [1,2,*], M. Montano [3], R. Resop [4], E. Battivelli [5], S. Morón-López [1], E. Verdin [5], W. Greene [3], A. Bosque [4], J. Wong [2], S. Yukl [2]
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▶ PP 1.4: Evaluation of IAP/SMAC Mimetics as Latency Reversal Agents in Primary Cells and Cytokine induction in In Vivo Models Predictive of Cytokine Release

Author(s): B. Howell 1[,*], W. Shipe [1], G. Adam [1], S. Quan [1], L. Li [2], C.N.A. Sim [2], R. Dunham [3,] D. Margolis [4], B. Henry [2], D. Hazuda [1]
[1]Merck & Co., Inc - West Point (USA), [2]MSD - Singapore (Singapour), [3]Viiv - Chapel Hill (USA), [4]UNC - Chapel Hill (USA)

▶ PP 1.5: Live-Track of HIV genome in the nuclear space

Author(s): F. Di Nunzio [1,*], V. Scoca [1], G. Blanco-Rodriguez [1], D. Ershov [2], J.Y. Tinevez [2]
[1]Department of Virology, Institut Pasteur - Paris (FRA), [2]Image Analysis Hub/ C2RT, Institut Pasteur - Paris (FRA)

▶ PP 1.6: Genome-wide RNAi screen identifies MAPK-RPK required for HIV-1 proviral silencing in non-T cell reservoir cell-line model

Author(s): H. Takeuchi [1,*], T. Ishida [2], Y. Satou [3], J. Gohda [2], H. Kitamura [1], S. Gan [1], K. Takahashi [1,] Shoji Yamaoka[4],
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[4] Department of Molecular Virology, Tokyo Medical and Dental University, Tokyo, Japan
*authors contributed equally

▶ PP 1.7: Intact HIV Genomes are Enriched in Memory T-cells with Short Half-lives

Author(s): V. Morcilla [1,*], C. Bacchus-Souffan [2], T. Schlub [3], M. Fitch [4], R. Hoh [5], S. Deeks [5], M. Hellerstein [4], J. Mccune [6], P. Hunt [2], S. Palmer [1]
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▶ PP 1.8: HBV-related inflammation is linked to the level of genetically intact HIV proviruses

Author(s): X. Wang [1,2,*], J.M. Zerbato [3], A. Avihingsanon [4], A. Rhodes [3], J. Audsley [3], K. Singh [3], W. Zhao [3], M. Crane [3], S. Lewin [3], S. Palmer [3]
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▶ PP 1.9: Intact Proviruses from Naive and Effector Memory T-Cells Match Persistent Viremia

Author(s): K. Fisher [1,*], B. Hiener [1], T.E. Schlub [2], E. Lee [1], J.M. Milush [3], R. Hoh [3], R. Fromentin [4], N. Chomont [4], S.G. Deeks [3], S. Palmer [1]
[1]Westmead Institute for Medical Research - Westmead (AUS), [2]University of Sydney - Sydney (AUS), [3]University of California San Francisco - San Francisco (USA), [4]Universite de Montreal - Montreal (CAN)

▶ PP 1.10: Global mapping of the macrophage transcriptome upon CCL2 neutralization reveals an association between activation of innate immune pathways and HIV-1 restriction
Author(s): D.A. Covino [1,*], L. Fantuzzi [1,*], J. Lu [2], M.V. Chiantore [3], G. Fiorucci [4], C. Purificato [1], L. Catapano [1], C.M. Galluzzo [1], R. Amici [1], M. Pellegrini [2]
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▶ PP 1.11 - 00078
HIV-1 Replication is Metabolically Regulated in an Ex vivo Human Tonsil Histoculture Model of Infection.
Author(s): R. Furler [1,*], K. Newcombe [1], D. Nixon [1]
[1]Weill Cornell Medicine - New York (USA)

▶ PP 1.12: Histone deacetylase inhibitors induce transcription of unspliced but not multiply spliced HIV-1 RNA from proviral genomes during latency reversal, affecting antigen presentation and detection by CD8 + T cells
Author(s): T. Mota [1,*], C. Mccann [1], S.H. Huang [1], M. Dean [1], R. Yanqin [1], R. Thomas [2], K. Colin [3], H. David [4], S. Jeffery [5], J. Brad [5]
[1]Weill Cornell Medicine - Ny (USA), [2]GWU - Washington (USA), [3]Maple Leaf Clinic - Toronto (CAN), [4]Whitman-Walker Health - Washington (USA), [5]NantBioScience Inc./NantKwest LLC - Culver City (USA)

▶ PP 1.13: Distinct HIV reservoir measures correlate with defective but not intact pro-viral DNA
Author(s): E. Papasavvas [1,*], L. Azzoni [1], P. Tebas [2], K. Mounzer [3], J.R. Kostman [4], D. Richman [5], N. Chomont [6], B. Howell [7], L.J. Montaner [1]
[1]The Wistar Institute - Philadelphia (USA), [2]University of Pennsylvania - Philadelphia (USA), [3]Jonathan Lax Immune Disorders Treatment Center, Philadelphia Field Initiating Group for HIV-1 Trials - Philadelphia (USA), [4]John Bell Health Center, Philadelphia Field Initiating Group for HIV-1 Trials - Philadelphia (USA), [5]VA San Diego Healthcare System and the University of California - San Diego (USA), [6]University of Montreal - Montreal (CAN), [7]Merck, Inc. - West Point (USA)

▶ PP 1.14: HIV integration site selection in the 3D genome: impact on viral and host gene expression
Author(s): M. Benkirane [1,*]
IGH. CNRS-University of Montpellier - Montpellier (FRA)

▶ PP 1.15: Protein crotonylation sensitizes SMACm disruption of latent HIV by modulating the ncNF-κB signaling pathway at the step of p100 cleavage into p52
Author(s): G. Jiang [1,*], D. Li [1,*], S. Falcinelli [2], L. Wong [1], C. Garrido [1], C. Galardi [3], R. Dunham [3], E. Brown [1], N. Archin [1], D. Margolis [1]
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▶ PP 1.16: Interactions with Pathogenic Bacteria Induce HIV-1 Latency in Macrophages through Altered Transcription Factor Recruitment to the LTR
Author(s): T. Hanley [1,*], V. Planelles [1], G. Viglianti [2]
[1]University of Utah Health - Salt Lake City (USA), [2]Boston University School of Medicine - Boston (USA)

▶ PP 1.17: Low-level Persistent/Latent HIV-1 Infection of Macrophages Corresponds to Decreased NF-kB Activity
Author(s): T. Hanley [1,*], L. Dickey [1], V. Planelles [1,*]
University of Utah Health - Salt Lake City (USA)

▶ PP 1.18: Cell Proliferation Contributes to the Increase of Genetically Intact HIV Over Time
Author(s): S. Palmer [1,*], B. Horsburgh [1], B. Hiener [1], K. Fisher [1], E. Lee [1], J. Milush [2], R. Hoh [2], R. Fromentin [3], N. Chomont [3], S. Deeks [2]
[1]Westmead Millennium Institute and University of Sydney - Westmead (AUS), [2]Department of Medicine, University of California San Francisco - San Francisco (USA), [3]Université de Montréal - Montréal (CAN)

▶ PP 1.19: Intra- and Inter-individual HIV Diversity Limits the Application of the Intact Proviral Detection Assay (IPDA)
Author(s): N. Kinloch[1,2*], Y. Ren[3]*, W. Conce Alberto[3], W. Dong[2], S. Han Huang[3], A. Wilson[4], T. M. Mota[3], D. Kikby[2], P. M. Del Rio Estrada[5], C. J. Brumme[2,6], G. Q. Lee[3], R. M. Lynch[4], Z. L. Brumme [1,2*], R. Brad Jones[3,4*]
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[3]Division of Infectious Diseases, Weill Cornell Medical College, New York(USA)
[4]School of Medicine and Health Sciences, George Washington University, Washington DC (USA)
[5]Departmento de Investigacion en Enfermedades Infecciosas, Instituto Nacional de Enfermedades Respiratorias, Mexico City (MEX)
[6]Faculty of Medicine, University of British Columbia, Vancouver (CAN)

▶ PP 1.20: Exploring histone loading on unintegrated HIV-1 DNA reveals the chromatin dynamics between unintegrated and integrated viral genome.
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▶ PP 1.21: A novel, ultra-sensitive technology for quantifying the HIV unintegrated linear DNA responsible for pre-integrative latency
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▶ PP 1.22: A novel, ultra-sensitive technology for quantifying the HIV unintegrated linear DNA responsible for pre-integrative latency
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▶ PP 1.23: A delicate balance between the number of RBEIII and NF-□B motifs impacts latency kinetics in HIV-1
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▶ PP 1.24: Epigenomic characterization of a primary cell model of HIV latency.
Author(s): E. Browne [1,*], B. Pace [1], D. Margolis [1], B. Strahl [1], R. Dronamraju [1], S. Jefferys [1], J. Parker [1]
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▶ PP 1.25: Proteasomal degradation of PML protein is a stress response to HIV-1 replication and reactivation
Author(s): I. Shytaj [1, 2,*], B. Lucic [1], C. Penzo [1], S. Bicciato [3], M. Forcato [3], A. Savarino [4], M. Lusic [1]
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▶ PP 1.26: Expression of CircRNAs in HIV-1 latently infected cells from an in vitro model
Author(s): L. Iniguez [1,*], D.C. Copertino Jr [1], D.F. Nixon [1], M. De Mulder Rougvie [1]
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▶ PP 1.27: Cleavage And Polyadenylation Specific Factor 6 is required for HIV latency reversal
Author(s): Y. Zheng [1,*], A. Nau [2], V. Achuthan [3], A. Engelman [3], V. Planelles [1]
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▶ PP 1.28: Using Single-cell Analysis and a Primary Model of HIV to study Latency Establishment and Reactivation
Author(s): L. De Armas [1,*], S. Williams [1], L. Pan [1], S. Rinaldi [1], S. Pallikkuth [1], R. Pahwa [1], S. Pahwa [1]
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▶ PP 1.29: Degradation of the XPB subunit of TFIIH by Spironolactone reduces HIV-[1] reactivation from latency
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▶ PP 1.30: Updates on Two Public Databases for Studies of HIV Persistence; the Retrovirus Integration Database (RID) and HIV Proviral Sequence Database (PSD)
Author(s): W. Shao [1,*], J. Shan [1], W.S. Hu [2], E. Halvas [3], J. Mellors [3], J. Coffin [4], M. Kearney [2]
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▶ PP 1.31: Specificity of Bivalent Chemical Degraders Targeted to the BET Proteins
Author(s): A-M. Turner [1,*], F. Potjewyd [2], A. Keller [3], L. James [2], D. Margolis [1]
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▶ PP 1.32: Utilizing Genetic Barcodes to Understand the Role of Silent Integration in HIV Latency
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▶ PP 1.33: Factors Associated with Viral Control after Structured Treatment Interruptions
Author(s): N. Jilg [1,*], B. Etemad [2], R. Dele-Oni [2], C. Wong [2], E. Aga [3], R. Bosch [3], D. Kuritzkes [2], I. Frank [4], J. Jacobson [5], J. Li [5]
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▶ PP 1.34: Visualization of HIV Reactivation from Latency in Primary Resting Memory T-cells
Author(s): F. Kizito [1,*], J. Karn [1,*], U. Mbonye [1], C. Dobrowolski [1], S. Valadkhan [1]
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▶ PP 1.35: An Unbiased Platform to Identify Regulators of HIV Latency in Infected Primary Human CD4+ T Cells
Author(s): U. Rathore [1, 2,*], J. Hiatt [1], D.A. Cavero [1], A. Marson [1,*]
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▶ PP 1.36: HIV-1 genomes cluster in nuclear niches of human macrophages
F. Di Nunzio [1],* Francesca Di Nunzio[1], Elena Rensen[1,2], Florian Mueller[2], Viviana Scoca[1], Jyotsana Parmar[2], Phillippe Souque[1], Christophe Zimmer[2],
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SESSION 2: IN VITRO AND ANIMAL MODELS STUDIES OF HIV PERSISTENCE

▶ PP 2.1: Elimination of HIV-1/SHIV infected cells by combinations of bispecific HIV x CD3 DART® molecules
Author(s): M. Tuyishime [1,*], J. Pickeral [1], N. Jeffrey [2], C. Ann [3], S. Guido [4], M. David [5], F. Guido [1]
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▶ PP 2.2: Subtype and tropism can influence the establishment and inducibility of latent HIV-1 in primary CD4 T cells
Author(s): I. Sarabia [1,*], S.H. Huang [2], A.R. Ward [2], R.B. Jones [2], A. Bosque [1]
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▶ PP 2.3: Biomarkers to predict reactivation from latency in SIV infection
Author(s): M. Pinkevych [1,*], M. Davenport [1,*], C. Fennessey [2], C. Trubey [2], K. Brandon [2]
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▶ PP 2.4: The Effect of Natural Killer Cells on Viral Rebound in HIV-1-infected Humanized Mice
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▶ PP 2.5: Cell-associated provirus size decreases in the xenografted CD4 + T cells from chronically infected natural host in a novel simianized mice model
Author(s): Z. Yuan [1,*], S. Lai [2], K. Portion [2], R. Fast [3], I. Ourmanov [2], A. Buckler-White [2], J. Lifson [3], J. Brenchley [3], L. Montaner [1], V. Hirsch [2]
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▶ PP 2.6: μ-Lat: A High-Throughput Humanized Mouse Model of Latent HIV Infection
Author(s): H. Sperber [1,*], P.P. Togarrati [1], K. Raymond [1], M.S. Bouzidi [1], R. Gilfanova [1], M.O. Muench [1], S.K. Pillai [1]
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▶ PP 2.7: Donor T cell chimerism correlates with viral reservoir clearance following allogeneic stem cell transplantation in fully cART-suppressed Mauritian cynomolgus macaques
Author(s): H. L. Wu[1], W. Weber[1], S. A. Abdulhaqq[1], C. Shriver-Munsch[2], T. Swanson[2], M. Northrup[1,2], K. Armantrout[2], H. Price[2], M. Robertson-LeVay[2], J. S. Reed1, K. B. Bateman[1], B. N. Bimber[2], S. L. Junell[4], Rhonda MacAllister[2], A. W. Legasse[2], M. K. Axthelm[2], C. Moats[2], J. Smedley[2], T. R. Hobbs[2], L. D. Martin[2], G. Meyers[3], R. T. Maziarz[3], B. J. Burwitz[1], J. Stanton[2], J. B. Sacha[1,2]
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▶ PP 2.8: Unprimed CD8 + lymphocytes promote the establishment of HIV latency in CD4 + T cells
Author(s): L. Franchitti [1,*], Z. Zhang [2], J. Yoon [2], M. Paiardini [1], G. Silvestri [1], D.A. Kulpa [2,*]
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▶ PP 2.9: Origin of Rebound Virus in Chronically SIV-Infected Monkeys Following Treatment Discontinuation
Author(s): D. Barouch [1,*], P-T. Liu [1,*], B. Keele [2], P. Abbink [1], N. Mercado [1], R. Geleziunas [3]
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▶ PP 2.10: Barcoded HIV reveals effects of PKC modulation on viral reservoir
Author(s): J. Zack [1,*], M. Marsden [1,*], T.H. Zhang [1], Y. Du [1], M. Dimapasoc [1], X. Wu [1], P. Wender [2], R. Sun [1]
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▶ PP 2.11: IL-17A Imprints Intestinal Epithelial Cells with the Ability to Promote HIV-1 Dissemination/ Outgrowth in CD4 + T-Cells
Author(s): T. Wiche Salinas [1,*], A. Gosselin [2], B. Mariana [3], H. Touil [1], Y. Zhang [2], J.P. Routy [4], É.A. Cohen [3], C.L. Tremblay [1], P. Ancuta [1]
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▶ PP 2.12: Evaluating latency reactivation synergies between the bromodomain inhibitor iBET-151 and the SMAC mimetic AZD5582 in SIV-infected macaques on ART

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▶ PP 2.13: Next Generation Sequencing in a direct infection model reveals important parallels to in vivo reservoir dynamics

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▶ PP 2.14 : Treatment of SHIV-infected, ART-suppressed rhesus macaques with bispecific HIVxCD3 DART® molecules

Author(s): D. M. Gorman[1], M.-T. Lai[2], C. McHale[2], M. Lu[2], D. Graham[2], J. Strizki[2], Y. Zheng[1], S. Ma[1], S. Moltagh[1], M. Bailly[1], S. Hseih[1], G. Azadi[1], Yaoli Song[1], F. Ugarte[1], R. Riener[1], W. Blumenschein[1], D. Hazuda[2], J. Nordstrom[3], B. Howell[2]

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▶ PP 2.15: Single-cell transcriptome of in vivo SIV-infected rhesus macaque CD4 T cells

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▶ PP 2.16: Novel SHIVs encoding transmitted/founder Envs for latency and cure research

Author(s): A. Bauer [1,*], E. Lindemuth [1], L. Kuri-Cervantes [1], H. Li [1], M. Watkins [2], W. Ziani [2], H. Xu [2], R. Veazey [2], G. Shaw [1], K. Bar [1]

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SESSION 3: VIROLOGY OF HIV PERSISTENCE

▶ PP 3.1: Automated high-throughput quantification of persistent HIV-1 plasma viremia in individuals on ART
Author(s): J. Jacobs [1,*], M. Tosiano [1], D. Koontz [1], A. Worlock [2], K. Harrington [2], K. Shutt [1], S. Bakkour [3], M. Busch [3], J. Mellors [1]
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▶ PP 3.2: Proviral Landscape In Children Parallels Adults And Enables Reservoir Reconstruction
Author(s): J. Hasson [1,*], M.G. Katusiime [2], S. Smith [3], M. Cotton [2], E. Boritz [3], J. Coffin [4], J. Mellors [5], S. Patro [1], G. Van Zyl [2], M. Kearney [1]
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▶ PP 3.3: The dynamics of HIV-1 quasispecies diversity circulating in the plasma RNA and cellular DNA of patients with ART
Author(s): M. Liying [3,*], Z. Yuanyuan [1,*], Y. Qianqian [1], N. Ming [2], L. Tingting [3], W. Chen [1], D. Yibo [1], L. Lingjie [1], X. Hui [1], C. Chen [3]
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▶ PP 3.4: High-Throughput Sequencing of Integrated HIV-1 Reveals Novel Proviral Structures
Author(s): K. Joseph [1,*], E. Halvas [1], L. Brandt [1], S. Patro [2], J. Rausch [3], M. Kearney [2], J. Coffin [4], J. Mellors [1]
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▶ PP 3.5: nHIV-Infected Cells that Survive Co-culture with HIV-specific CTL Exhibit Distinctive Viral Messenger RNA Transcript Profiles
Author(s): R.B. Jones [1,*], G. Lee [1,*], T. Klevorn [1], Y. Ren [1]
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▶ PP 3.6: HIV Proviruses with Identical Sequences Arise from Cell Expansion and Infection by a Common Ancestor Virus
Author(s): S. Patro [1,*], A. Niyongabo [1], S. Guo [2], X. Wu [2], E. Boritz [3], S. Deeks [4], F. Maldarelli [1], S. Hughes [1], J. Coffin [5], M. Kearney [1]
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▶ PP 3.7: Diversity of the replication-competent HIV reservoir in treated patients
Author(s): A. Nicolas [1,2,*], J. Migraine [1], J. Dutrieux [1], M. Salmona [1,3], A. Tauzin [4], A. Hachiya [5], J.M. Molina [3], F. Clavel [3], A. Hance [1], F. Mammano [4,*]
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▶ PP 3.8: Peripheral blood SIV/HIV originates from infected cells in tissues
Author(s): M. Betts [1,*], L. Kuri Cervantes [1,*], M.B. Pampena [1], S. Samer [2], D. Khoury [3], I. Frank [1], M. Paiardini [2], M. Davenport [3], K. Bar [1], R. Veazey [4]
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▶ PP 3.9: Ultradeep Analysis of Pretherapy HIV Predicts Large and Genetically Complex Reservoirs During Antiretroviral Therapy
Author(s): K. Huik [1,*], J. Hattori [1], V. Boltz [1], J. Rausch [1], W. Shao [2], M. Kearney [1], J. Coffin [3], F. Maldarelli [1]
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▶ PP 3.10: In Vivo Analysis of HIV From an Occupational Exposure to Laboratory Adapted HIV-IIIB With Twenty Year Follow-Up: Implications for Reservoir Formation
Author(s): C. Lange [1,*], N. Lindo [2], R. Little [2], T. Uldrick [3], S. Hill [1], J. Bell [2], K. Lurain [2], R. Ramaswami [2], R. Yarchoan [2], F. Maldarelli [2]
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▶ PP 3.11: Post-ATI viremia in a hyperacute subject comprises macrophage-tropic viral variants
Author(s): V. Machado [1,*], M. Sharkey [1], T. Cordeiro [1], L. Barrios [1], T. Henrich [2], M. Stevenson [1]
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▶ PP 3.12: Long-term persistence of HIV-infected cell clones in early treated children
Author(s): M. Bale [1,*], M.G. Katusiime [2], D. Wells [3], X. Wu [3], J. Coffin [4], M. Cotton [5], S. Hughes [1], J. Mellors [6], G. Van Zyl [2], M. Kearney [2]
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▶ PP 3.13: CXCR4-usage HIV-1 strains isolated from blood and cerebrospinal fluid in subjects on suppressive antiretroviral therapy
Author(s): A. Nath [1,*], G. Li [1,*], L. Henderson [1], B. Smith [1], L. Reoma [1], X. Jiao [2], U. Santamaria [1], H. Imamichi [2], C. Lane [3]
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▶ PP 3.14: Marked variation in the susceptibility of HIV-1 to type 1 interferon inhibition during early, late and rebound infection
Author(s): M. Gondim [1,*], S. Sherrill-Mix [1], M. Saag [2], M. Nussenzweig [3], J. Silicano [4], P. Sharp [5], P. Borrow [6], L. Montaner [7], K. Bar [1], B. Hahn [1,*]
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▶ PP 3.15: Single-cell multiplexed RNA flow-FISH analysis of primary human samples reveals distinct VR reactivation profiles among LRA classes and curtailed VR transcriptional and translational reactivation patterns by HDAC inhibitors
Author(s): D. Kaufmann [1,*], G. Sannier [1,*], M. Dubé [1], N. Brassard [1], G.G. Delgado [1], A. Baxter [1], J.P. Routy [2], N. Chomont [1]
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▶ PP 3.16: HIV-1 sequence compartmentalization and evolution in CNS and immune tissue
Author(s): M. Gonzalez-Perez [1,*], R. Rose [2], D.J. Nolan [2], S.L. Lamers [2], P.R. Clapham [1], K. Luzuriaga [1]
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▶ PP 3.17: Intact and replication-competent reservoir virus populations differ from each other and rebound plasma viruses
Author(s): K. Bar [1,*], F. Mampe [1], M.A. Monroy [1], E. Lindemuth [1], L. Kuri Cervantes [1], F. Bibollet-Ruche [1], B. Hahn [1], D.B. Salantes [1]
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▶ PP 3.18: Longitudinal Sequencing Reveals Multiphasic Decay of HIV Reservoir
Author(s): L. Cannon [1,*], M. Pinzone [1], E. Venanzi-Rullo [1], U. O'doherty [1]
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SESSION 4: IMMUNOLOGY OF HIV PERSISTENCE

▶ PP 4.1: Baseline inducible HIV P24 is associated with viral control during interferon-α monotherapy with ART interruption
Author(s): L.J. Montaner [1,*], L. Azzoni [1,*], E. Papasavvas [1], P. Tebas [2], K. Mounzer [3], B. Howell [4], D. Holder [5], N. Chomont [6], L. Kuri Cervantes [2], M. Betts [2]
[1]The Wistar Institute - Philadelphia (USA), [2]University of PA - Philadelphia (USA), [3]Philadelphia FIGHT - Philadelphia (USA), [4]Merck, inc. - West Point (USA), [5]Merck, Inc. - West Point (USA), 6Universite` de Montreal - Montreal (CAN)

▶ PP 4.2: Enhancement of antiviral CD8+ T-cell responses and complete remission of metastatic melanoma in an HIV-1 infected subject treated with pembrolizumab
Author(s): O. Blanch-Lombarte [1,*], C. Gálvez [1], B. Revollo [2], E. Jiménez-Moyano [1], J. M Llibre [2], J. Dalmau [1], D. E. Speiser [3], B. Clotet [2], J. G Prado [1], J. Martinez-Picado [1]
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▶ PP 4.3: Characterizing antibody responses in ART-treated individuals
Author(s): A. Wilson [1,*], Y. Ren [2], E. Stevenson [2], R.B. Jones [2], R. Lynch [1]
[1]George Washington University - Washington (USA), [2]Weill Cornell School of Medicine - New York (USA)

▶ PP 4.4: Th2 cytokines are associated with higher levels of intact proviruses on ART
Author(s): J. Cyktor [1,*], H. Mar [2], G. Laird [3], R. Bosch [2], A. Martin [3], J. Eron [4], B. Macatangay [1], D. Mcmahon [1], R. Gandhi [5], J. Mellors [1]
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▶ PP 4.5: Marker of gut damage REG3α and microbial translocation are associated with integrated HIV DNA in CD4 T-cells during early HIV infection
Author(s): S. Isnard [1,*], F.P. Dupuy [1], J. Lin [1], B. Fombuena [1], R. Ramendra [1], J. Ouyang [1], B. Lebouché [1], C. Costiniuk [1], C. Tremblay [2], J.P. Routy [1]
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▶ PP 4.6: BCL-2 Antagonism Sensitizes CTL-Resistant HIV Reservoirs to Elimination Ex Vivo
Author(s): R.B. Jones [1,3*], Y. Ren [1#], S.H. Huang [1#], S. Patel [2], W.C. Alberto [1], D. Magat [1], D. Ahimovic [1], A.B. Macedo [3], A. Bosque [3], C.M. Bollard [2]
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▶ PP 4.7: PD-1+ CD4 T cells are associated with HIV reservoir size and impaired function of T follicular helper cells in children and young adults on long-term viral control
Author(s): S. Rinaldi [1,*], V. Dinh [1], S. Pallikkuth [1], L. De Armas [1], R. Pahwa [1], N. Cotugno [2], E. Nastouli [3], C. Foster [4], P. Palma [2], S. Pahwa [1]
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▶ PP 4.8: Restriction Factor Expression in HIV-1 Vertically Infected Children
Author(s): D. Copertino Jr [1,*], M. Bortlik [2], B. Phillip [2], G. Beckerle [1], C. Ormsby [3], M. Rosenberg [4], R.A.S. Raposo [2], D. Nixon [1], M. De Mulder Rougvie [1]
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▶ PP 4.9: HIV-infected macrophages evade NK cell-mediated killing while driving inflammation
Author(s): K. Clayton [1,*], H. Stuart [1], G. Mylvaganam [1], A. Villasmil Ocando [1], M. Maus [2], B. Walker [1]
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▶ PP 4.10 : A Modified TZM-bl Assay (MoCo-TZA) Documents Replication-Competent HIV in Circulating Monocytes Despite 2 years of Antiretroviral Therapy Initiated Early During Acute Infection
Author(s): B. Mitchell [1,*], E. Laws [1], R. Paul [2], S. Vasan [3], E. Kroon [3], V. Valcour [4], S. Spudich [5], C. Shikuma [1], J. Ananworanich [3], L. Ndhlovu [1]
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▶ PP 4.11: B Cells Mediate R5-Tropic HIV Infection of CCR5neg Naive CD4+ T Cells
Author(s): A. Gerberick [1,*], N. Sluis-Cremer [1], P. Piazza [1], D. Delucia [1], C. Rinaldo [1], G. Rappocciolo [1]
University of Pittsburgh - Pittsburgh (USA)

▶ PP 4.12: Harnessing the specialized effector function of FcR NK cells to control HIV-1 infection
Author(s): R. Anderko [1,*], C. Rinaldo [1], R. Mailliard [1]
University of Pittsburgh - Pittsburgh (USA)

SESSION 5 AND 7: HUMAN STUDIES AND DRUG DEVELOPMENT I & II

▶ PP 5.7.1: From Reservoirs to the Real World: A Framework for Integrating Behavioral and Social Sciences Research into Biomedical HIV Cure-Related Research
Author(s): K. Dube [1,*], J.D. Auerbach [2], M.J. Stirratt [3], P. Gaist [4]
[1]UNC Gillings School of Global Public Health - Chapel Hil, (USA), School of Medicine, University of California San Francisco - San Francisco (USA), [3]Division of AIDS Research (DAR), National Institute of Mental Health (NIMH), National Institutes of Health (NIH) - Bethesda (USA), [4]Office of AIDS Research, Division of Program Coordination, Planning, and Strategic Initiatives, Office of the Director, NIH - Bethesda (USA)

▶ PP 5.7.2: Permanent control of HIV-1 pathogenesis in exceptional elite controllers: a model of spontaneous cure
Author(s): C. Gálvez [1,*], C. Casado [2], M. Pernas [2], L. Tarancón-Diez [3], C. Rodríguez [4], R. Lorenzo-Redondo [5], E. Ruiz-Mateos [3], M. Salgado [1], C. Lopez-Galindez [2], J. Martinez-Picado [1]
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▶ PP 5.7.3: Awareness of HIV cure-directed research among HIV clinic patients in Philadelphia
Author(s): L.J. Montaner [1,*], B. Peterson [1], C. White [2,*], W. Freshwater [2], M. Lefae [3], C. Roebuck [4], N. Jones [5], D. Robinson [2], S. Johnson [6], E. Burton [6]
[1]The Wistar Institute - Philadelphia (USA), [2]BEAT-HIV CAB - Philadelphia (USA), [3]AIDS Law Project - Philadelphia (USA), [4]Cornell University - Ithaca (USA), [5]Temple University - Philadelphia (USA), [6]Philadelphia FIGHT - Philadelphia (USA)

▶ PP 5.7.4: Collaboration in Community Education: BEAT-HIV Community Engagement Group (CEG) and the HIV Cure Research Education Video Series
Author(s): L.J. Montaner [1,*], B. Peterson [1,*], W. Freshwater [2], C. White [2], M. Lefae [3], C. Roebuck [4], N. Jones [5], J. Shull [6], D.S. Metzger [7], J.L. Riley [7]
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▶ PP 5.7.5: Behind the Scenes: Clinical and Rapid Autopsy Staff Members' Experiences and Perceptions of HIV Reservoir Research at the End of Life
Author(s): K. Perry [2,*], J. Taylor [1,*], S. Concha-Garcia [3], S. Javadi [4], H. Patel [2], A. Kaytes [3], S. Little [3], D. Smith [3], S. Gianella [3], K. Dubé [2]
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▶ PP 5.7.6: Virological impact of HCV elimination with DAAs in the HIV reservoir in HIV/HCV patients
Author(s): M. Coiras [1], P. Martínez-Román [1,*], C. Crespo-Bermejo [1], A. Fernández-Rodríguez [1], V. Briz [1]
Institute of Health Carlos III - Majadahonda (SPA)

▶ PP 5.7.7: HIV Particles Expressed in Semen under INSTI-based Suppressive Therapy are Largely Myeloid Cell-Derived and Exhibit Widely Diverse Genotypes
Author(s): J. Johnson [1,*], D. Anderson [2], J.F. Li [1], A. Santos Tino [3], J. Politch [2], J. Lipscomb [1], J. Defelice [4], M. Gelman [4], K. Mayer [4]
[1]CDC - Atlanta (USA), [2]BU School of Medicine - Boston (USA), [3]The DESA Group - Atlanta (USA), [4]The Fenway Institute - Boston (USA)

▶ PP 5.7.8: Rapid ART in blood donors with Acute and Recent HIV clade C infection in South Africa
Author(s): E. Murphy [3,*], K. Van Den Berg [1,*], M. Vermeulen [1], S. Bakkour [2], M. Busch
[1]South African National Blood Service - Johannesburg (ZAF), [2]Vitalant Research Institute - San Francisco (USA), [3]UCSF and Vitalant Research Institute - San Francisco (USA)

▶ PP 5.7.9: HIV-1 in the Latent Reservoir Is Largely Sensitive To Circulating T Cells
Author(s): J. Warren [1,*], S. Zhou [1], Y. Xu [1], M. Moeser [1], J. Kuruc [1], C. Gay [1], D. Margolis [1], N. Archin [1], R. Swanstrom [1], N. Goonetilleke [1]
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▶ PP 5.7.10: Analytical treatment interruption and rearrangement of HIV-1 drug resistance mutations in peripheral reservoir
Author(s): E. Bruzzesi [1,*], R. Scutari [2], M.C. Bellocchi [2], V. Spagnuolo [3], L. Galli [4], L. Carioti [2], M.M. Santoro [2], C. Alteri [2], F. Ceccherini-Silberstein [2], A. Castagna [1]
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▶ PP 5.7.11: Persistent HIV reservoir suppression by (-)-hopeaphenol, a plant-derived stilbenoid
Author(s): I. Tietjen [1, 2,*], Z. Haq [2], M. Naidu [2], J. Rivera-Ortiz [1], Y. Cai [1], K. Beattie [3], T. Rali [4], Z. Brumme [2], L. Montaner [1], R. Davis [3]
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▶ PP 5.7.12: Phorbol esters isolated from Croton megalobotrys reverse HIV latency ex vivo
Author(s): I. Tietjen [1, 2,*], K. Richard [2], D. Williams [3], J. Rivera-Ortiz [1], Y. Cai [1], A. Pagliuzza [4], N. Chomont [4], R. Andersen [3], L. Montaner [1], K. Andrae-Marobela [5]
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▶ PP 5.7.13: Targeting HIV-1-driven aberrant transcription and proliferation
Author(s): Y-C. Ho [1,*], Y.H. Yeh [1], K. Jenike [2]
[1]Yale University - New Haven (USA), [2]Johns Hopkins University - Baltimore (USA)

▶ PP 5.7.14: A Mechanistic Modeling Platform for HIV Cure Drug Development
Author(s): Y. Cao [1,*], D. Rosenbloom [1,*], M. Ahamadi [1], S. Bae [1], R. Vargo [1]
Merck & Co., Inc. - Kenilworth, Nj (USA)

▶ PP 5.7.15: In vitro demonstration of a potential role for STING agonist in HIV cure
Author(s): A. Koblansky [1, 2,*], S. Raines [2], J. Schawalder [1], D. Irlbeck [1], C. Galardi [1], J. Brehm [1], J. Ramanjulu [3], D. Margolis [2], H. Madsen [1]
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▶ PP 5.7.16: Enhancing antiretroviral drug penetration into lymph nodes through intramuscular and subcutaneous routes of administration in BALB/c mice
Author(s): S. Dyavar [1,*]
UNMC - Nebraska (USA)

SESSION 6 AND 8: NEW THERAPEUTIC APPROACHES I & II

▶ PP 6.8.1: Targeting lncRNA SAF to induce apoptosis in HIV-1 infected macrophages
Author(s): S. Boliar [1,*], D.W. Gludish [1], K.C. Jambo [2], H.C. Mwandumba [2], D.G. Russell [1]
[1]Cornell University - Ithaca (USA), [2]University of Malawi - Blantyre (Malawi)

▶ PP 6.8.2: Blocking TIM-3 reinvigorates exhausted CD8 T cells with no impact on NK cell function in ART-treated HIV-infected patients
Author(s): C. Gutiérrez [1,*], M. Sanz [1], N. Madrid-Elena [1], S. Serrano-Villar [1], S. Moreno [1,*]
Infectious Diseases Department, Ramón y Cajal Hospital - Madrid (SPA)

▶ PP 6.8.3: Isolation of monoclonal antibodies targeting HLA-E/HIV-1 and SIV peptide complexes
Author(s): D. Li [1,*], S. Brackenridge [2], M. Tuyishime [3], D. Cain [1], Z. Mu [1], B. Mattia [1], G. Ferrari [3], G. Geraldine [2], A. Mcmichael [2], B. Haynes [1]
[1]Duke Human Vaccine Institute, Duke University - Durham (USA), [2]Nuffield Department of Medicine, University of Oxford - Oxford (United Kingdom), [3]Department of Surgery, , Duke University - Durham (USA)

▶ PP 6.8.4: Improved Killing of HIV-infected Cells by a Combination of Three Antibodies: implications for clearing persistent infection
Author(s): M. Tuyishime [1,*], C. Garrido [2], S. Jha [1], D. Mielke [1], M. Moeser [3], B. Haynes [4], S. Joseph [3], D. Margolis [5], G. Ferrari [1]
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▶ PP 6.8.5: Maraviroc reactivates HIV with a potency similar to that of other latency reversing drugs without inducing toxicity in CD8 T cells
Author(s): S. Moreno [1,*], M. López Huertas [1,*], L. Jiménez Tormo [1], N. Madrid Elena [1], C. Gutierrez [1], M.J. Vivancos [1], L. Luna [1]
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▶ PP 6.8.6: Modulated Production of Endogenous Anti-HIV Broadly Neutralizing Antibodies
Author(s): Y. Gao [1,*], D. Patel [2], C. Ding [1], Y. Ma [2], W. Li [1], R. Dekoter [2]
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▶ PP 6.8.7: CD4+ T cells from patients with chronic myeloid leukemia are resistant to HIV-1 proviral integration and transcription after prolonged withdrawal of treatment with tyrosine kinase inhibitors
Author(s): M. Coiras [1,*], L. Vigón [1], S. Rodríguez-Mora [1], V. García-Gutierrez [2], J. Ambrosioni [3], J. Alcamí [1, 3], J.L. Steegmann [6], J.M. Miró [3], V. Planelles [7], M.R. López-Huertas [1], E. Mateos[1], V. García[2], N. Climent[4], G. Bautista[5], M. Plana[4],
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▶ PP 6.8.8: Antagonism of PPAR for Th17 Mucosal Immunity Restoration and HIV Reservoir Purging
Author(s): D. Planas [1,*], A. Fert [1,*], Y. Zhang [1], M.J. Ruiz [1], J.P. Goulet [2], T.R. Wiche Salinas [1], E.A. Cohen [3], J.P. Routy [4], N. Chomont [1], P. Ancuta [1]
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▶ PP 6.8.9: Targeting STAT SUMOylation to enhance NK cell cytotoxicity
Author(s): A. Macedo [1,*], C. Levinger [1], A. C. Hernandez Santini [2], N. Bonan [1], B. Nguyen [1], K. Crandall [1], R. Lynch [1], A. Bosque [1]
[1]George Washington University - Washington (USA), [2]University of Puerto Rico - Ponce (PRI)

▶ PP 6.8.10: Broad-spectrum gRNAs abolish HIV-1 LTR-mediated transcription in cells that receive CRISPR/Cas9 therapy
Author(s): B. Wigdahl [1,*], A. Allen [1,*], S. Worell [1], G. Nwaozo [1], R. Madrid [1], W. Dampier [1], M. Nonnemacher
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▶ PP 6.8.11: CRISPR/Cas9 editing of HIV-1 transcription factor binding sites on the 5' long terminal repeats to permanently inactivate latent provirus
Author(s): B. Wigdahl [1,*] , C-H. Chung [1,*], A.G. Allen [1], A.J. Atkins [1], R. Costello [1], N.T. Sullivan [1], M.R. Nonnemacher [1], W.N. Dampier [1]
Drexel University - Philadelphia (USA)

▶ PP 6.8.12: AsCpf1/crRNA-array Excises HIV-1 Proviral Genome More Efficiently Than SaCas9/multiplexed-sgRNAs
Author(s): W. Hu [1,*], Y. Zhu [1,*], E. Bouikidis [1], F. Li [1], Y. Lin [1], Y. Cai [2], H. Wang [1], L. Montaner [2], W. Ho [1], S. Turville [3]
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▶ PP 6.8.13: Block and kill: a new approach to a prevent HIV reactivation, reduce immnue activation, induce apoptosis of infected cells
Author(s):A. Garzino Demo [1,*], S. Lingling [2], C. Cairo [3], T.W. Chun [4], M.K. Lafferty [3]
[1,2,3]Institute of Human Virology, University of Maryland School of Medicine - Baltimore (USA), [4]National Institute of Allergy and Infectious Diseases, National Institutes of Health - Bethesda (USA)

▶ PP 6.8.14: HIV-1 diversity considerations for clinical studies of passively transferred broadly neutralizing antibodies
Author(s): K. Wagh [1,*], K. Stephenson [2], D. Barouch [2], B. Korber [1]
[1]Theoretical Biology & Biophysics, Los Alamos National Laboratory - Los Alamos (USA), [2]Center for Virology and Vaccine Research, Beth Israel Deaconess Medical Center - Boston (USA)

▶ PP 6.8.15: Cleaving HIV-1 Provirus from ART-Suppressed Patient-derived Resting CD4 + T Cells Using Cpf1/crRNA-array Ribonucleotide Protein Packaged by CD4-targeting Lentivirus-like Particle
Author(s):W. Hu [2,*] , Y. Cai [1], Y. Zhu [2], F. Li [2], A.O. Stella [3], P. Tebas [4], K. Mounzer [5], J. Kostman [5], S. Turville [3], L. Montaner [1]
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▶ PP 6.8.16: A bispecific antibody that simultaneously recognizes the V2- and V3-glycan epitopes of the HIV-1 envelope glycoprotein
Author(s): M. Davis-Gardner [1,*], M. Gardner [1], M. Farzan [1]
The Scripps Research Institute - Jupiter (USA)

▶ PP 6.8.17: Exploring Sequence Specific Silencing of Latent HIV Using CRISPR Interference
Author(s): R. Schwarzer [1,*], M. Montano [1], W.C. Greene [1]
Gladstone Center for HIV Cure Research - San Francisco (USA)

▶ PP 6.8.18: Enhancement of antibody-dependent cellular phagocytosis is essential to the clearance of HIV-1 reservoirs in lymphoid organs
Author(s): L. Shan [1,*]
Washington University - St. Louis (USA)

▶ PP 6.8.19: Tat inhibition by didehydro-Cortistatin A promotes heterochromatin formation at the HIV-1 Long Terminal repeat
Author(s): C. Li [1,*], S. Valente [1,*], G. Mousseau [1]
The Scripps research Institute - Jupiter (USA)

▶ PP 6.8.20: Resistance to the Tat inhibitor didehydro-Cortistatin A is mediated by heightened basal HIV-1 transcription
Author(s): S. Mediouni [1,*], S. Valente [1]
The Scripps research Institute - Jupiter (USA)

▶ PP 6.8.21: HLA-E-presented peptides as novel targets for HIV-1 therapy
Author(s): S. Brackenridge [1,*], H. Yang [1], D. Li [2], G. Gillespie [1], B. Haynes [2], A. Mcmichael [1]
[1]University of Oxford - Oxford (United Kingdom), [2]Duke Universiity - Durham (USA)

▶ PP 6.8.22: Development of anti-PD-1 chimeric antigen receptor T cells to target a PD-1 + CD4 T cell population enriched in HIV provirus
Author(s): K. Eichholz [1,*], F. Haeseleer [2], L. Corey [3]
[1]VIDD, Fred Hutchinson Cancer Research Center - Seattle (USA), [2]Departments of Laboratory Medicine and Medicine, University of Washington - Seattle (USA), [3]Departments of Laboratory Medicine and Medicine, University of Washington, VIDD, Fred Hutchinson Cancer Research Center - Seattle (USA)

▶ PP 6.8.23: Conditions for post-rebound SHIV control in autologous hematopoietic-stem cell transplantation
Author(s): F. Cardozo [1,*], E. Duke [1], C. Peterson [1], D. Reeves [1], B. Mayer [1], H.P. Kiem [1,2], J. Schiffer [3]
[1]Fred Hutchinson Cancer Research Center - Seattle, Wa (USA), [2]University of Washington - Seattle, WA (USA), [3]Fred Hutchinson Cancer Research Center/University of Washington - Seattle, WA (USA)

POSTER AREA

Poster presenters are asked to stand next to their poster during the wine & cheese tasting (times indicated below):

Wednesday, December 11: 4:00 – 7:00 PM

Thursday, December 12: 4:00 – 7:00 PM

POSTER TOPICS

Basic science of HIV latency	PP 1.1 ▶ PP 1.36
In vitro and animal models studies of the persistence	PP 2.1 ▶ PP 2.16
Virology of HIV persistence	PP 3.1 ▶ PP 3.18
Immunology of HIV persistence	PP 4.1 ▶ PP 4.12
Human studies and drug development I & II	PP 5.7.1 ▶ PP 5.7.16
New therapeutic approaches I & II	PP 6.8.1 ▶ PP 6.8.23

The selected abstracts will benefit from a high visibility thanks to their presentation into the open access scientific Journal of Virus Eradication from December 10, 2019.

Please connect to www.viruseradication.com to read the abstracts

COFFEE BREAKS

Tuesday, December 10: 3:30 – 4:00 PM

Wednesday, December 11: 10:00 – 10:30 AM

Thursday, December 12: 10:00 – 10:30 AM

Friday, December 13: 10:00 – 10:30 AM

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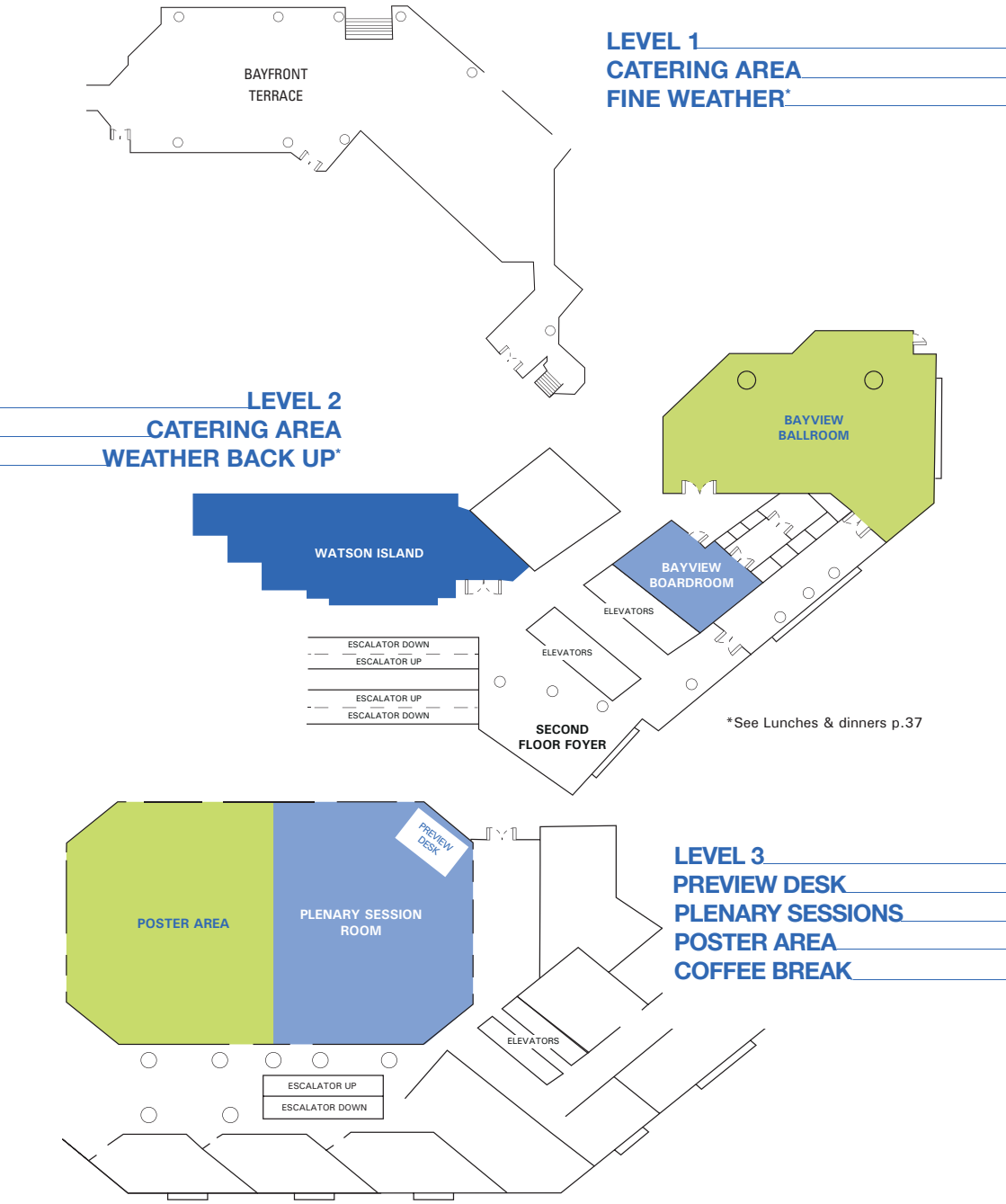
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FINE WEATHER*
LEVEL 2
CATERING AREA
WEATHER BACK UP*
BAYVIEW
BALLROOM
WATSON ISLAND
BAYVIEW
BOARDROOM
ELEVATORS
ESCALATOR DOWN
ESCALATOR UP
ESCALATOR UP
ESCALATOR DOWN
ELEVATORS
SECOND
FLOOR FOYER
*See Lunches & dinners p.37
PREVIEW
DESK
POSTER AREA
PLENARY SESSION
ROOM
LEVEL 3
PREVIEW DESK
PLENARY SESSIONS
POSTER AREA
COFFEE BREAK
ELEVATORS
ESCALATOR UP
ESCALATOR DOWN

GENERAL INFORMATION

LOGISTIC ORGANIZATION & REGISTRATION

OVERCOME: 13-15 rue des Sablons, 75116 Paris, France
Tel: +33 (0)1 40 88 97 97 - Email: hivpersistence@overcome.fr

CONGRESS VENUE

MARRIOTT BISCAYNE BAY HOTEL
1633 North Bayshore Drive, Miami, FL 33132, Florida, United States of America
Phone: +1 305-374-3900

WORKSHOP OPENING HOURS

- Tuesday, December 10: 8:00 AM - 7:30 PM
- Wednesday, December 11: 7:45 AM - 7:00 PM
- Thursday, December 12: 7:45 AM - 7:00 PM
- Friday, December 13: 7:45 AM - 2:00 PM

WORKSHOP OBJECTIVES

Provide an opportunity for scientist experts on HIV reservoirs to share ideas and debate in order to develop and increase knowledge to help for future researche:

- 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 research on reservoirs and latency to find a cure

BADGES & CERTIFICATE OF ATTENDANCE

- **Certificate of attendance**

  Certificate of attendance will be sent by email after the week after the workshop.

- **Badges**

  The name badges 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.

LANGUAGE

All sessions will be held in English

COFFEE BREAKS

Coffee will be served free of charge in the catering area of the workshop on level 3 to all registrated delegates during the following times:

- Tuesday, December 10: 3:30 - 4:00 PM
- Wednesday, December 11: 10:00 - 10:30 AM
- Thursday, December 12: 10:00 - 10:30 AM
- Friday, December 13: 10:00 - 10:30 AM

LUNCH & DINNER

Lunch will be served free of charge in a 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:

Lunch:

- Wednesday, December 10: 4.00 - 7.00 PM
- Thursday December 11: 4.00 - 7.00 PM

WELCOME DINNER:

- Tuesday, December 10: 7:30 - 11:30 PM

At Briza on the Bay, 1717 N.
Bayshore Drive Suite #115,
Miami, FL 33132
One minute walk - 20 steps from the Marriott!
Meeting point: Marriott Biscayne bay hotel's lobby at 7:30 PM. Prior registration is required.

ABSTRACT BOOK

All accepted abstracts will be published in the online abstract book. It will be available on the Journal of Virus Eradication website: www.viruseradication.com

POSTER AREA

Poster area is located in level 3, close to the conference room.

Poster authors will be asked to be present next to their poster during the poster viewing session during at the following times:

- Wednesday, December 10: 4:00 - 7:00 PM
- Thursday, December 11: 4:00 - 7:00 PM

PREVIEW FOR SPEAKERS AND ORAL PRESENTERS

Invited speakers and oral abstract presenters must report to the Preview desk situated at the back of the plenary room at least 3 hours prior to their presentation to upload and check their presentation. For a morning presentation, please report to preview desk the day before until 6:00 PM.

TRANSPORTATION

The airlines of SkyTeam, Official Alliance Network offer attractive airfares for participants (subject to conditions). To book your electronic ticket, visit: http://globalmeetings.airfranceklm.com/Search/promoDefault.aspx?vendor=AFR&promocode=32284AF&currentculture=fr-FR

Event ID: 34206AF

Validity: from December 8, 2019 to December 18, 2019.

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- Open-access journal entering its sixth year
- Online portal for abstract supplements – find published supplements on PMC
- Readership: growing international community involved in the prevention and management of viral infections
- Partnership with Australasian Society for HIV, Viral Hepatitis and Sexual Health (ASHM)

Issue	Copy date
6.1	16th October 2019
6.2	10th January 2020
6.3	10th April 2020
6.4	10th July 2020

SAVE THE DATES!

The National Institute of Allergy and Infectious Diseases (NIAID) will host the fifth biennial *Strategies for an HIV Cure meeting* at the NIH main campus in Bethesda, MD on *November 16-18, 2020.* The goal of the meeting is to highlight state-of-the-art research in the field and facilitate communication and collaboration among NIAID-funded researchers, the broader HIV cure research community, and community stakeholders. The meeting will serve as the joint meeting of the Martin Delaney Collaboratories for 2020. Registration is free, and poster abstracts are encouraged.

Information on the 2018 meeting, as well as video links to presentations can be found at:
https://www.cvent.com/events/strategies-for-an-hiv-cure-2018/event-summary-67d64ae8621247079e009b4757f45c9e.aspx

NIAID will also convene researchers supported by its *Understanding HIV Rebound* program for a one-day workshop in Rockville, MD on *Monday, April 20th, 2020*. Registration for this workshop will also be free and open to the public.
We look forward to seeing you next year in Maryland!

Diane Lawrence
David McDonald
Leia Novak
Eric Refsland
Karl Salzwedel

NIH National Institute of Allergy and Infectious Diseases

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