

11<sup>TH</sup> EDITION

DECEMBER 10 - 13, 2024

# HIV PERSISTENCE<sup>TM</sup> DURING THERAPY

Reservoirs & Eradication Strategies Workshop

*Final Program*



[HIV-persistence.com](http://HIV-persistence.com)



# ImmunityBio is honored to support efforts in **HIV cure research**

In 2023, nearly 40 million people globally  
were living with HIV\*

\*Source: <https://www.unaids.org/en/resources/fact-sheet>

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our HIV studies

**11<sup>TH</sup> EDITION** DECEMBER 10 - 13, 2024  
**HIV PERSISTENCE<sup>™</sup>**  
**DURING THERAPY**  
Reservoirs & Eradication Strategies Workshop

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# COMMITTEES

## STEERING COMMITTEE

Ann Chahroudi, Atlanta - USA  
Mary Kearney, Frederick - USA  
Alain Lafeuillade, Toulon - FRA  
David Margolis, Chapel Hill - USA  
Karl Salzwedel, Bethesda - USA  
Mario Stevenson, Miami - USA

## SCIENTIFIC COMMITTEE

|   |   |
|---|---|
| Nancie Archin, Chapel Hill – USA          | Javier Martinez-Picado, Barcelona – ESP |
| Katharine Bar, Philadelphia – USA         | Michaela Muller-Trutwin, Paris – FRA    |
| Paula Cannon, Los Angeles – USA           | Thumbi Ndung'u, Durban – ZAF            |
| Marina Caskey, New York – USA             | Monique Nijhuis, Utrecht – NLD          |
| Victor Garcia-Martinez, Chapel Hill – USA | Una O'Doherty, Pennsylvania – USA       |
| Nicolas Chomont, Montreal – CAN           | Afam Okoye, Beaverton – USA             |
| Janice Clements, Baltimore – USA          | Sarah Palmer, Sydney – AUS              |
| Michael Farzan, San Diego – USA           | Deborah Persaud, Baltimore – USA        |
| Bradley Jones, New York – USA             | Vicente Planelles, Salt Lake City – USA |
| Romas Geleziunas, Foster City – USA       | Maria Salgado, Barcelona – ESP          |
| Ya-Chi Ho, New Haven – USA                | Asier Sáez-Ciri6n, Paris – FRA          |
| Bonnie Howell, Kenilworth – USA           | Sereti Irini, Maryland – USA            |
| Jonathan Karn, Cleveland – USA            | Susana Valente, Jupiter – USA           |
| Sharon Lewin, Melbourne – AUS             | Carine Van Lint, Brussels – BEL         |
| Mathias Lichterfeld, Boston – USA         | Linos Vandekerckhove, Ghent – BEL       |



## WELCOME ADDRESS

Dear Friends and Colleagues,

We are pleased to welcome you to the 11th International Workshop on HIV Persistence during Therapy, taking place in Fort Lauderdale, FL, from December 10-13, 2024.

This year, we are especially thrilled to announce that the quality of abstract submissions has reached new heights, reflecting both the depth of expertise and the diversity of perspectives in the field. This diversity not only enriches our discussions but also strengthens our collective efforts to tackle the complex challenges of HIV reservoirs and eradication strategies.

We are also pleased to welcome two colleagues, Drs Ann Chahroudi and Mary Kearny who have been a part of our community for many years, to the Steering Committee. Their invaluable expertise and dedication exemplify the inclusive and collaborative spirit that defines our workshop.

Since our first meeting in 2003, this workshop has become the definitive forum for presenting and discussing cutting-edge, unpublished research on HIV persistence. The 2024 program promises to uphold this legacy, featuring rigorous scientific presentations, expert panel discussions, and a dynamic environment for collaboration.

We understand and respect the concerns about returning to Florida, particularly in light of issues affecting LGBTQIA+, Black, and reproductive rights' communities. However, Fort Lauderdale's welcoming and inclusive atmosphere, underscored by its vibrant history of advocacy and diversity, remains a fitting backdrop for this important meeting. The city's ongoing commitment to HIV awareness, exemplified by institutions like the Stonewall National Museum & Archives and the World AIDS Museum, aligns closely with our mission.

Thank you for being part of this unique gathering. Your participation is vital to advancing our shared goals, and we look forward to another inspiring and impactful workshop.

The Steering Committee,

***Ann Chahroudi, Mary Kearney, Alain Lafeuillade, David Margolis,  
Karl Salzwedel, Mario Stevenson***

# PROGRAM AT A GLANCE

|                      | TUESDAY<br>DECEMBER 10   | WEDNESDAY<br>DECEMBER 11                                       | THURSDAY<br>DECEMBER 12   | FRIDAY<br>DECEMBER 13                                  |
|----------------------|--|--|---|--|
| 08:00 AM<br>10:00 AM |  | <b>SESSION 1:</b><br>Basic Science of HIV Latency              | <b>SESSION 4:</b><br>Immunology of HIV Persistence                      | <b>SESSION 7:</b><br>Human Studies                     |
|                      |  | <b>COFFEE BREAK</b>  | <b>COFFEE BREAK</b>   | <b>COFFEE BREAK</b>                                    |
| 10:30 AM<br>12:30 PM |  | <b>SESSION 2:</b><br>Virology of HIV Persistence               | <b>SESSION 5:</b><br>In vitro & Animal Model Studies of HIV Persistence | <b>SESSION 8:</b><br>Antibody & Immune based therapies |
| 12:30 PM<br>02:00 PM | 01:00PM-03:00PM<br><b>Satellite Session</b><br>Translating Science | <b>LUNCH</b>   | <b>LUNCH</b>  | 12:30PM - 01:00PM<br><b>CLOSING REMARKS</b>            |
| 02:00 PM<br>04:00 PM | 03:30PM-05:00PM<br><b>Satellite Session</b><br>NIMH Funded Studies | <b>SESSION 3:</b><br>Drug Discovery Development & Pharmacology | <b>SESSION 6:</b><br>Cell & Gene Therapies                              |  |
| 04:00 PM<br>05:00 PM |  | Highlighted Short Talks I                                      | Highlighted Short Talks II  |  |
| 05:00 PM<br>06:30 PM |  | Poster Session I   | Poster Session II   |  |
| 06:30 PM<br>07:30 PM | <b>OPENING LECTURE</b>   |  |   |  |
| 07:30 PM<br>10:30 PM | <b>WELCOME DINNER</b>  |  |   |  |

# SCIENTIFIC PROGRAM

TUESDAY, DECEMBER 10, 2024

Intracostal Ballroom

01:00PM **Satellite Workshop - Translating Science: A Training Workshop**  
03:00PM **to Support Communicating Cure Science**

This is geared toward early stage investigators, community partners, and anyone interested in growing their ability to share research across different stakeholders. The workshop will provide tools and templates for sharing research with lay audiences and utilize interactive training methods to improve communication and engagement skills.

**Jessica Salzwedel**, *New York - USA*

**Marc Franke (The Düsseldorf Patient)**, *Velen - GER*

Intracostal Ballroom

03:30PM **Satellite Workshop - Research outcomes from NIMH funded Studies**  
05:30PM **Leveraging Host Cellular Pathways for Targeting HIV CNS/Myeloid Reservoirs**

**Co-Chairs:** **Kiera Clayton**, *University of Massachusetts, Worcester, MA, USA*  
**Mario Stevenson**, *University of Miami, Miami, FL, USA*

03:30PM Welcome Remarks and Meeting Goals **Jeymohan Joseph**, *NIMH, Rockville, MD, USA*  
03:35PM

03:35PM Metabolic strategies to eliminate CNS Myeloid Viral Reservoirs  
03:55PM **Eliseo Eugenin**, *University of Texas, Galveston, TX, USA*

03:55PM Strategies for Depletion of HIV reservoir by activation of ISR Signaling  
04:10PM **Guochun Jiang**, *University of North Carolina, Chapel Hill, NC, USA*

04:10PM Targeting HIV Myeloid Reservoirs in the CNS by IAP and TREM1 Inhibition  
04:25PM **Grant Campbell**, *University of South Dakota, Vermillion, SD, USA*

04:25PM Targeting the HIV-1 Reservoir in Myeloid Cells using the SECH approach  
04:40PM **Jin Wang**, *Methodist Hospital Research Institute, Houston, TX, USA*

04:40PM Modulation of HIV reservoir dynamics in brain pericytes  
04:55PM **Michal Toborek**, *University of Miami School of Medicine, Miami, FL*

04:55PM Repurposing BCL-2 and Jak 1/2 inhibitors for targeting myeloid reservoirs  
05:10PM **Boghuma Kabisen Titanji**, *Emory University, Atlanta, GA, USA*

05:10PM Research Gaps and Future Research Areas Discussion  
05:30PM **Kiera Clayton**, *University of Massachusetts, Worcester, MA, USA*  
**Mario Stevenson**, *University of Miami, Miami, FL, USA*

**TUESDAY, DECEMBER 10, 2024**

Intracostal Ballroom

06:30PM **OPENING SESSION**

07:30PM **Welcoming remarks by the Steering Committee**

Ann Chahroudi - Emory University, Atlanta, Georgia, United States

Mary Kearny - HIV Dynamics and Replication Program, National Cancer Institute, Frederick, MD, USA

David Margolis - University of North Carolina at Chapel Hill, USA

Karl Salzwedel - NIAID, Bethesda, USA

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

06:40PM **Overall cure landscape from the NIH perspective**

07:05PM Carl Dieffenbach, National Institute of Allergy and Infectious Diseases, Aids Division, Bethesda, USA

07:05PM **Community Voice: Living on ART and Why a Cure is Necessary**

07:30PM Antoinette Jones, Dandelion, INC., Atlanta, USA

**07:30PM WELCOME DINNER IN THE GRAND BALLROOM**

**WEDNESDAY, DECEMBER 11, 2024**

Intracostal Ballroom

08:00AM **Session 1: Basic Science of HIV Persistence**

10:00AM Chairperson: Una O'Doherty - Emory University School of Medicine, Atlanta, USA

**1.0 Proviral gene expression and quantitation of the latent HIV-1 reservoir**

Tokameh Mahmoudi, Erasmus University Medical Center, Departments of Pathology, Urology, Biochemistry, Rotterdam, NED

**Oral Presentations:**

**1.1 - 0003 Longitudinal analysis in early treated individuals reveals alteration in the HIV-1 integration site landscape and composition of the inducible reservoir**

T. Struyve<sup>1</sup>, M. Pardons<sup>1</sup>, J. De Clercq<sup>1</sup>, L. Termote<sup>1</sup>, L. Lambrechts<sup>1</sup>, Y. Noppe<sup>1</sup>, M. Lichterfeld<sup>2</sup>, S. Rutsaert<sup>1</sup>, L. Vandekerckhove<sup>1</sup>

<sup>1</sup>HIV Cure Research Center, Department of Internal Medicine and Pediatrics, Ghent University Hospital, Ghent University - Ghent, Belgium; <sup>2</sup>Infectious Disease Division, Brigham and Women's Hospital, Ragon Institute of MGH, MIT and Harvard, Boston, United States

**1.2 - 0005 Blood and tissue HIV-1 reservoirs display cellular plasticity and lack of compartmentalization in virally suppressed people**

M. Pardons<sup>1</sup>, L. Lambrechts<sup>1</sup>, Y. Noppe<sup>1</sup>, L. Termote<sup>1</sup>, S. De Braekeleer<sup>1</sup>, J. Vega<sup>2</sup>, E. Van Gulck<sup>3</sup>, S. Gerlo<sup>1</sup>, L. Vandekerckhove<sup>1</sup>

<sup>1</sup>Hiv Cure Research Center - Ghent, Belgium; <sup>2</sup>Arcturus Therapeutics, San Diego, United States; <sup>3</sup>Janssen Pharmaceutica Nv - Beerse, Belgium

**1.3 - 00084 Persistence of HIV genomes in bacteria-specific CD4+ T cells during ART**

A. Espinosa Ortiz<sup>1,2</sup>, R. Fromentin<sup>1,2</sup>, S. G. Deeks<sup>3</sup>, J.P. Routy<sup>4</sup>, N. Chomont<sup>1,2</sup>

<sup>1</sup>Département De Microbiologie, Infectiologie Et Immunologie, Faculté De Médecine, Université De Montréal - Montréal, Canada; <sup>2</sup>Centre De Recherche Du Chum - Montréal; <sup>3</sup>Department of Medicine, University of California, San Francisco, California, United States; <sup>4</sup>Division of Hematology & Chronic Viral Illness Service, McGill University Health Centre - Montréal, Canada



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#### **1.4 – 00111 Identification of the cellular transcription factor KLF16 (Krüppel-like factor 16) as a new HIV-1 silencing factor**

M. Santangelo<sup>1</sup>, M. Bendoumou<sup>1</sup>, A. Dutilleul<sup>1</sup>, L. Nestola<sup>1</sup>, M. Dieu<sup>2</sup>, P. Renard<sup>2</sup>, C. Van Lint<sup>1</sup>

<sup>1</sup>University of Brussels (ULB), Service of Molecular Virology - Brussels, Belgium; <sup>2</sup>Laboratory of Biochemistry and Cell Biology (URBC), Namur Research Institute for Life Sciences (NARILIS), University of Namur - Namur, Belgium

#### **1.5 – 00118 Intact Proviruses Persist in Expressed Genes in People with HIV-1 on Long-term ART** S. Patro<sup>1</sup>, J. Gluck<sup>2</sup>, E. Halvas<sup>3</sup>, K. Joseph<sup>3</sup>, N. Mckenna<sup>3</sup>, S. Guo<sup>1</sup>, S. Parvez<sup>2</sup>, J. Rausch<sup>2</sup>, X. Wu<sup>1</sup>, J. Mellors<sup>3</sup>, S. Hughes<sup>2</sup>, M. Kearney<sup>2</sup>

<sup>1</sup>Leidos Biomedical Research, Inc., Frederick National Laboratory for Cancer Research - Frederick, MD, United States; <sup>2</sup>National Cancer Institute - Frederick, MD, United States; <sup>3</sup>University of Pittsburgh - Pittsburgh, PA, United States

#### **1.6 – 00161 HIV-1 Antisense Transcripts are frequent in FOXP3-negative Treglike cells expressing markers of persistence in vivo during acute HIV- 1 infection**

M. Hale<sup>1,2</sup>, G. Kundu<sup>1,2</sup>, A. Geretz<sup>1,2</sup>, P. Ehrenberg<sup>1</sup>, R. Clifford<sup>1,2</sup>, M. Robb<sup>1,2</sup>, C. Sacdalan<sup>3,4</sup>, S. Sriplienchan<sup>3,4</sup>, N. Phanuphak<sup>5</sup>, S. Vasan<sup>1,2</sup>, R. Thomas<sup>1</sup>, RV254 study team

<sup>1</sup>US Military HIV Research Program, Walter Reed Army Institute of Research - Silver Spring, MD, United States; <sup>2</sup>Henry M. Jackson Foundation for the Advancement of Military Medicine, Inc. - Bethesda, MD, United States; <sup>3</sup>SEARCH Research Foundation - Bangkok, Thailand; <sup>4</sup>Research Affairs, Faculty of Medicine, Chulalongkorn University - Bangkok, Thailand; <sup>5</sup>Institute of HIV Research and Innovation - Bangkok, Thailand

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### 10:00AM - 10:30AM COFFEE BREAK

10:30AM **Session 2: Virology of HIV Persistence**

12:30PM Chairperson: Monique Nijhuis - University Medical Center Utrecht, NED

#### **2.0 Persistence of clonally expanded proviruses**

Joel Blankson, Johns Hopkins University School of Medicine, Baltimore, USA

#### **Oral Presentations:**

#### **2.1 – 00040 Lenacapavir impairs gag proteins expression by HIV-infected cells**

C. Faua<sup>1</sup>, S. Bernacchi<sup>2</sup>, A. Ursenbach<sup>3</sup>, M. Negroni<sup>2</sup>, P. Gantner<sup>1,4</sup>

<sup>1</sup>INSERM UMR\_S1109, Strasbourg University, Strasbourg, France; <sup>2</sup>Architecture et Réactivité de l'ARN-UPR 9002, IBMC, CNRS, Université de Strasbourg, Strasbourg, France; <sup>3</sup>Le Trait d'Union, HIV-Infection Care Center, Strasbourg University Hospital, Strasbourg, France; <sup>4</sup>Clinical Virology Laboratory, Strasbourg University Hospital, Strasbourg, France

## 2.2 – 00058 Role of HIV integration site on clonal expansion of infected cells and maintenance of latency in vivo

V. Pal<sup>1,\*</sup>, M. Frauke<sup>2</sup>, A. Danesh<sup>3</sup>, M. Canis<sup>1</sup>, T. Dilling<sup>3</sup>, I. Miller<sup>3</sup>, T. Huynh<sup>3</sup>, T. Hatzioannou<sup>1</sup>, R.B. Jones<sup>3</sup>, G.Q. Lee<sup>3</sup>, P.D. Bieniasz<sup>1,4</sup>

<sup>1</sup>The Rockefeller University - New York, United States; <sup>2</sup>Heidelberg University - Heidelberg, Germany; <sup>3</sup>Weill Cornell Medical College - New York, United States; <sup>4</sup>Howard Hughes Medical Institute, The Rockefeller University, New York, United States

## 2.3 - 00078 Detection of HIV-1 antisense transcripts in donor samples before and during ART

A. Capoferri<sup>1</sup>, T.O. Famuyiwa<sup>1</sup>, R. Sklutuis<sup>1</sup>, S. Pathak<sup>1</sup>, J.L. Groebner<sup>1</sup>, R. Li<sup>2</sup>, J.W. Rausch<sup>1</sup>, S.G. Deeks<sup>3</sup>, J.W. Mellors<sup>4</sup>, J.M. Coffin<sup>5</sup>, F. Romero<sup>2</sup>, M.F. Kearney<sup>1</sup>

<sup>1</sup>HIV Dynamics and Replication Program, National Cancer Institute, Frederick, MD, United States; <sup>2</sup>Department of Molecular and Comparative Pathobiology, The Johns Hopkins University School of Medicine, Baltimore, MD, United States; <sup>3</sup>Department of Medicine, University of California, San Francisco, CA, United States; <sup>4</sup>Department of Infectious Diseases, University of Pittsburgh, Pittsburgh, PA, United States; <sup>5</sup>Department of Molecular Biology and Microbiology, Tufts University, Boston, MA, United States

## 2.4 - 00143 Selective export of HIV mRNAs is regulated by compartmentalized interactions with Sam68, PTB and m6A RNA methylation in reactivated latently infected T-cells

F. Kizito<sup>1</sup>, E. Honeycutt<sup>1</sup>, F. Ye<sup>1</sup>, T. Sweet<sup>2</sup>, A. Agaponova<sup>1</sup>, J. Karn<sup>1</sup>

<sup>1</sup>Department of Molecular Biology and Microbiology; <sup>2</sup>Department of Nutrition, School of Medicine, Case Western Reserve University, Cleveland, Ohio, USA

## 2.5 – 00074 Propagation of HIV reservoir clones reveals functional heterogeneity, suggesting diverse mechanisms of persistence

L. Ferreira<sup>1,\*</sup>, A. Herrera<sup>1</sup>, T.T. Huynh<sup>1</sup>, E. Stone<sup>1</sup>, N. Linden<sup>1</sup>, C. Bittar Oliva<sup>2</sup>, M. Caskey<sup>2</sup>, M. Nussenzweig<sup>2</sup>, R.B. Jones<sup>1</sup>

<sup>1</sup>Division of Infectious Diseases, Weill Cornell Medicine, New York, USA; <sup>2</sup>Laboratory of Molecular Immunology, The Rockefeller University, New York, USA

## 2.6 – 00158 Doubling dolutegravir dosage reduces the viral reservoir in ART- treated people with HIV

A. Pasternak<sup>1,\*</sup>, C. Fombellida-Lopez<sup>2</sup>, A. Cicilionyté<sup>1</sup>, L. Winchester<sup>3</sup>, M. Maes<sup>4</sup>, P. Dellot<sup>5</sup>, C. Vanwinge<sup>6</sup>, A. Ladang<sup>7</sup>, E. Cavalier<sup>7</sup>, F. Susin<sup>8</sup>, D. Vaira<sup>8</sup>, M.P. Hayette<sup>8</sup>, C. Reenaers<sup>9</sup>, M. Moutschen<sup>2</sup>, C. Fletcher<sup>3</sup>, G. Darcis<sup>2</sup>

<sup>1</sup>Laboratory of Experimental Virology, Department of Medical Microbiology, Amsterdam Umc - Amsterdam, Netherlands; <sup>2</sup>Laboratory of Immunology and Infectious Diseases, Giga-Institute, University of Liège - Liège, Belgium; <sup>3</sup>Antiviral Pharmacology Laboratory, University of Nebraska Medical Center - Omaha, United States; <sup>4</sup>Department of Biostatistics and Medico-Economic Information, University Hospital of Liège - Liège, Belgium; <sup>5</sup>Department of General Internal Medicine and Infectious Diseases, University Hospital of Liège - Liège, Belgium; <sup>6</sup>Giga Flow Cytometry Platform, University of Liège - Liège, Belgium; <sup>7</sup>Department of Clinical Chemistry, University Hospital of Liège - Liège, Belgium; <sup>8</sup>Laboratory of Clinical Microbiology, University Hospital of Liège - Liège, Belgium; <sup>9</sup>Department of Gastroenterology, University Hospital of Liège - Liège, Belgium



02:00PM  
04:00PM

### Session 3: Drug Discovery & Development, Pharmacology, Novel approaches

Chairperson: Devi SenGupta - Gilead, Foster City, USA

#### 3.0 Targeted Activator of Cell Kill (TACK)

Bonnie Howell, Merck, West Point, USA

##### Oral Presentations:

#### 3.1 – 00145 Exploring novel HIV Tat inhibitors

S.M. Jablonski<sup>1</sup>, J.A. Jablonski<sup>1</sup>, L. Shuang<sup>1</sup>, L. Ling<sup>2</sup>, A. T. McAuley<sup>1</sup>, R. Ronald, Jr.<sup>3</sup>, P. Espinoza-Gonzales<sup>1</sup>, B. MacTavish<sup>1</sup>, Q. Gibault<sup>1</sup>, S. Zhang<sup>4</sup>, T. Bannister<sup>3</sup>, S. M. Schader<sup>5</sup>, R. Ptak<sup>4</sup>, V. Garcia<sup>2</sup>, C. Augelli-Szafran<sup>4</sup>, S. T. Valente<sup>1</sup>

<sup>1</sup>Department of Immunology and Microbiology, The Herbert Wertheim UF Scripps Institute for Biomedical Innovation & Technology, Jupiter, Florida, USA; <sup>2</sup>Department of Microbiology, The University of Alabama, Birmingham, Alabama, USA; <sup>3</sup>Department of Molecular Medicine, The Herbert Wertheim UF Scripps Institute for Biomedical Innovation & Technology, 130 Scripps Way, 2A1, Jupiter, Florida, USA; <sup>4</sup>Drug Discovery Division, Chemistry Department, Southern Research, Birmingham, Alabama, USA; <sup>5</sup>ViiV Healthcare, 410 Blackwell Street, Durham, NC 27701, USA.

#### 3.2 – 00080 New PKC Modulator Latency Reversing Agents for depleting persistent HIV reservoirs

J. Moran<sup>1</sup>, T. Chou<sup>1</sup>, Z.O. Gentry<sup>2</sup>, O.D. Mcateer<sup>2</sup>, J.L. Hamad<sup>2</sup>, J.T. Kim<sup>3</sup>, P. A. Wender<sup>2</sup>, J.A. Zack<sup>3</sup>, M.D. Marsden<sup>1</sup>, <sup>1</sup>University of California - Irvine, United States; <sup>2</sup>Stanford University - Stanford, United States; <sup>3</sup>University of California - Los Angeles, United States

#### 3.3 – 00093 RasGRP1 agonists induce cyclin T1 translation to reverse HIV-1 latency in primary CD4+ T cells

U. Mbonye<sup>1</sup>, A. Bellomo<sup>2,3</sup>, E. Elhalem<sup>2,3</sup>, L. Gandolfi Donadio<sup>2,3</sup>, M. Julieta Comin<sup>2,3</sup>, J. Karn<sup>1</sup>  
<sup>1</sup>Department of Molecular Biology & Microbiology, Case Western Reserve University School of Medicine - Cleveland, United States; <sup>2</sup>Department of Active Ingredients and Biorefineries, National Institute of Industrial Technology - Buenos Aires, Argentina; <sup>3</sup>National Scientific and Technical Research Council, Argentina

#### 3.4 – 00150 Unbiased Genome-Wide CRISPR Screens in Primary Human CD4+ T Cells Identify Novel Proviral and Anti-viral HIV Host Factors

U. Rathore<sup>1</sup>, E. Dugan<sup>1</sup>, N.J. Krogan<sup>1</sup>, A. Marson<sup>1</sup>

<sup>1</sup>Gladstone Institutes, University of California, San Francisco - San Francisco, United States

#### 3.5 – 00053 Monovalent SMAC mimetics enhance proliferation of HIV-specific CD8 T cells

K. Tanaka<sup>1</sup>, Y. Kim<sup>1</sup>, H. King<sup>1</sup>, M. Roche<sup>1</sup>, S.R. Lewin<sup>1,2,3</sup>

<sup>1</sup>Department of Infectious Diseases, The University of Melbourne At The Peter Doherty Institute For Infection and Immunity - Melbourne, Australia; <sup>2</sup>The Alfred Hospital and Monash University <sup>3</sup>The Royal Melbourne Hospital at the Peter Doherty Institute for Infection and Immunity

#### 3.6 – 00159 Clinical and virologic outcomes of an art interruption in treated controllers and non-controllers

M. Peluso<sup>1</sup>, A. Deitchman<sup>1</sup>, I. Avila-Vargas<sup>1</sup>, A. Rodriguez<sup>1</sup>, T. Figueroa<sup>1</sup>, T. Dalhuisen<sup>1</sup>, M. Williams<sup>1</sup>, R. Hoh<sup>1</sup>, R. Rutishauser<sup>1</sup>, S. Deeks<sup>1</sup>, L. Cohn<sup>2</sup>

<sup>1</sup>UCSF - San Francisco, United States; <sup>2</sup>Fred Hutch Cancer Center - Seattle, United States

04:00PM  
05:00PM

### Highlighted Short talks of interest I

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

#### ST1.0 Block and Lock strategy for HIV cure

Susana Valente, The Herbert Wertheim UF Scripps Institute for Biomedical Innovation & Technology, Jupiter, USA

#### Oral Presentations:

#### ST1.1 – 00095 Single cell transcriptomic characterization of the gastrointestinal HIV reservoir

E. Browne<sup>1</sup>, J. Peterson<sup>1</sup>, E. Bennett<sup>1</sup>, C. White<sup>2</sup>, S. Chandel<sup>1</sup>, K. James<sup>1</sup>, B. Allard<sup>1</sup>, M. Clohosey<sup>1</sup>, T. Whitaker<sup>1</sup>, C. Baker<sup>1</sup>, S. Pedersen<sup>1</sup>, A. Peery<sup>1</sup>, C. Gay<sup>1</sup>, D. Margolis<sup>1</sup>, N. Archin<sup>1</sup>

<sup>1</sup>Unc Chapel Hill - Chapel Hill (United States); <sup>2</sup>Merck - Cambridge (United States)

#### ST1.2 - 00105 Characterization of the molecular mechanisms involved in the CD8+ T cell-mediated non-cytolytic silencing of HIV-1 transcription

M. Bendoumou<sup>1</sup>, A. Dutilleul<sup>1</sup>, L. Nestola<sup>1</sup>, M. Paiardini<sup>2</sup>, D. Kulpa<sup>2</sup>, G. Silvestri<sup>2</sup>, C. Van Lint<sup>1</sup>

<sup>1</sup>Université Libre de Bruxelles (ULB), Service of Molecular Virology, Brussels, Belgium; <sup>2</sup>Division of Microbiology and Immunology, Emory National Primate Research Center, Emory University, Atlanta, GA, USA

#### ST1.3 – 00171 Venetoclax decreases intact proviral DNA frequency in SIV-infected, ART-suppressed Rhesus Macaques

S. N. Bergstresser<sup>1</sup>, T. Wiches-Salinas<sup>1</sup>, D. Carnathan<sup>1</sup>, H. Wang<sup>1</sup>, Y. Abraham<sup>1</sup>, G. Pavlakas<sup>3</sup>, B. Felber<sup>4</sup>, M. Roeder<sup>5</sup>, C. Fennessey<sup>5</sup>, B. Keele<sup>6</sup>, M. Paiardini<sup>1,2</sup>, D. A. Kulpa<sup>1,2</sup>, G. Silvestri<sup>1,2</sup>

<sup>1</sup>Emory University, National Primate Research Center, Atlanta, GA, United States of America; <sup>2</sup>Emory University, School of Medicine, Department of Pathology and Laboratory Medicine, Atlanta, GA, United States of America; <sup>3</sup>Human Retrovirus Section, Vaccine Branch, Center for Cancer Research, National Cancer Institute at Frederick, Frederick, MD, United States of America; <sup>4</sup>Human Retrovirus Pathogenesis Section, Vaccine Branch, Center for Cancer Research, National Cancer Institute at Frederick, Frederick, MD, United States of America; <sup>5</sup>Vaccine Research Center, National Institute of Allergy and Infectious Diseases, National Institutes of Health, Bethesda, MD, USA; <sup>6</sup>AIDS and Cancer Virus Program, Frederick National Laboratory, Frederick, MD, United States of America

#### ST1.4 - 00008 Persistent HIV-1 unintegrated linear DNA can integrate and lead to viral replication after integrase inhibitor treatment removal

M. Maisch<sup>1</sup>, S. Figueiredo<sup>1</sup>, B. Charmeteau-De Muylder<sup>2</sup>, H. Roux<sup>3</sup>, A. Couëdel-Courteille<sup>2</sup>, R. Cheynier<sup>2</sup>, J. Dutrioux<sup>1</sup>

<sup>1</sup>Université Paris Cité, Cnrs, Inserm, Institut Cochin, The Dynavir Network, GdrCnrs 210 - Paris (France); <sup>2</sup>Université Paris Cité, Cnrs, Inserm, Institut Cochin - Paris (France); <sup>3</sup>Département De Microbiologie, Infectiologie Et Immunologie, Université De Montréal, Centre De Recherche Du Chum - Montréal (Canada)



05:00PM - 07:30PM POSTER VIEWINGS  
WITH CHEESE & WINE



08:00AM  
10:00PM

**Session 4: Immunology of HIV Persistence**

Chairperson: Michaela Muller-Trutwin - Institut Pasteur, Paris, FRA

**4.0 Understanding the landscape of lymph node HIV reservoirs during ART through single cell analysis**

Michael Betts, University of Pennsylvania, Philadelphia, USA

**Oral Presentations:**

**4.1 – 00057 Tissue resident memory programs of intestinal CD4+ and CD8+ T cells facilitate HIV-1 persistence**

Y. Wei<sup>1,\*</sup>, H.K. Ma<sup>1</sup>, M.E. Wong<sup>1</sup>, L. Konnikova<sup>2</sup>, P. Tebas<sup>3</sup>, R. Morgenstern<sup>4</sup>, E. Pappasavvas<sup>5</sup>, L.J. Montaner<sup>5</sup>, Y.C. Ho<sup>1</sup>

<sup>1</sup>Department of Microbial Pathogenesis, Yale University School of Medicine - New Haven, United States; <sup>2</sup>Department of Pediatrics and Obstetrics, Yale University School of Medicine - New Haven, United States; <sup>3</sup>Presbyterian Hospital-University of Pennsylvania Hospital - Philadelphia, United States; <sup>4</sup>Division of Gastroenterology, University of Pennsylvania Perelman School of Medicine - Philadelphia, United States; <sup>5</sup>Wistar Institute - Philadelphia, United States

**4.2 – 00027 Secondary cytotoxicity of memory CD8+ T cells targeting autologous HIV during treated chronic infection is associated with suppression of provirus and of recrudescing viremia**

D. R. Collins<sup>1,\*</sup>, M. J. Olatotse<sup>1</sup>, E. Mazzola<sup>2</sup>, M. Sagar<sup>3</sup>, B. D. Walker<sup>1</sup>, A. Tsimbris<sup>4</sup>

<sup>1</sup>Ragon Institute of Mass General, MIT and Harvard – Cambridge, United States; <sup>2</sup>Department of Biostatistics and Computational Biology, Dana-Farber Cancer Institute – Boston, United States; <sup>3</sup>Departments of Medicine and Virology, Boston University Chobanian & Avedisian School of Medicine – Boston, United States; <sup>4</sup>Division of Infectious Diseases, Brigham and Women's Hospital – Boston, United States

**4.3 – 00124 HIV infection induces T cell quiescence, leading to proviral latency**

L. M. Plasek<sup>1</sup>, L. S. Gunawardane<sup>1</sup>, F. Niazi<sup>1</sup>, U. Mbonye<sup>1</sup>, K. Leskov<sup>1</sup>, G. Perez<sup>2</sup>, C. Dobrowolski<sup>3</sup>, M. Shukla<sup>1</sup>, W. S. Nutt<sup>4</sup>, J. Karn<sup>1</sup>, S. Valadkhan<sup>1</sup>

<sup>1</sup>Department of Molecular Biology and Microbiology, Case Western Reserve University School of Medicine, Cleveland, Ohio, USA; <sup>2</sup>Section of Molecular Neurogenetics, Medical Genetics Branch, National Human Genome Research Institute, National Institutes of Health, Bethesda, MD, USA; <sup>3</sup>Department of Biomedical Engineering, Georgia Institute of Technology, Atlanta, GA, USA; <sup>4</sup>Molecular & Cellular Biology Program, University of Washington, Seattle, Washington, USA

**4.4 – 00091 Molecular Drivers of HIV-Induced Immune Modulation and CD8+ T Cell Dysfunction in Lymph Node Follicles during ART-Suppressed Subtype C Infection**

Z. Ndhlovu<sup>1,3,4,\*</sup>, A. Papadopoulos<sup>1</sup>, T. Khaba<sup>1</sup>, T. Ngubane<sup>2</sup>, <sup>1</sup>Africa Health Research Institute - Durban, South Africa; <sup>2</sup>Hiv Pathogenesis Programme, University of Kwazulu Natal - Durban, South Africa; <sup>3</sup>Ragon Institute of MGH, MIT and Harvard, Cambridge, USA; <sup>4</sup>University of Kwazulu Natal, Durban, South Africa

**4.5 – 00020 Control of HIV infection is associated with enhanced CD8T cell functionality during consecutive analytical treatment interruptions**

G. Duette<sup>1,2,\*</sup>, J. Marin-Rojas<sup>1</sup>, S. Cronin<sup>1,2</sup>, S. G. Deeks<sup>3</sup>, A. D. Kelleher<sup>4</sup>, S. Palmer<sup>1,2</sup>

<sup>1</sup>The Westmead Institute for Medical Research, Centre for Virus Research, Westmead, Australia; <sup>2</sup>The University of Sydney, Faculty of Medicine and Health, Sydney, Australia; <sup>3</sup>University of California, San Francisco, Department of Medicine, San Francisco, United States; <sup>4</sup>The Kirby Institute, University of New South Wales, Sydney, Australia

#### 4.6 – 00114 Transcriptomic profile of gut T follicular helper cells during persistent HIV infection

F. Cossarini<sup>1,2</sup>, A. Krek<sup>3</sup>, D. D'souza<sup>2,4</sup>, Z. Chen<sup>2,4</sup>, S. Kim-Schulze<sup>2,4</sup>, B. K. Chen<sup>1,2</sup>, F. Petralia<sup>3</sup>, S. Mehandru<sup>2,5</sup>

<sup>1</sup>Division of Infectious Diseases, Department of Medicine, Icahn School of Medicine at Mount Sinai, New York, United States; <sup>2</sup>Marc and Jennifer Lipschultz Precision Immunology Institute, Icahn School of Medicine at Mount Sinai, New York, United States; <sup>3</sup>Department of Genetics and Genomic Sciences, Icahn School of Medicine at Mount Sinai, New York, United States; <sup>4</sup>Human Immune Monitoring Center, Icahn School of Medicine at Mount Sinai, New York, United States; <sup>5</sup>Division of Gastroenterology, Department of Medicine, Icahn School of Medicine at Mount Sinai, New York, United States



10:00AM - 10:30AM COFFEE BREAK



10:30AM  
12:30PM

#### Session 5: In Vitro and Animal Model Studies of HIV Persistence

Chairperson: J. Victor Garcia-Martinez - The University of Alabama at Birmingham, Birmingham, USA

#### 5.0 Targeting Anti-apoptotic Molecules to Eliminate the SIV Reservoir

Mirko Paiardini, Emory University - Atlanta, USA

##### Oral Presentations:

#### 5.1 – 00136 Plasma SIVmac239M clonotypes in rebound viremia correspond to those induced by AZD5582 during ART

V.V.C. Edara<sup>1</sup>, B. Ukhueduan<sup>1</sup>, L. Lampros<sup>1</sup>, C. M. Fennessey<sup>2</sup>, J. D. Lifson<sup>2</sup>, B. F. Keele<sup>2</sup>, A. Chahroudi<sup>1,3,4</sup>

<sup>1</sup>Department of Pediatrics, Emory School of Medicine, Atlanta, GA, USA; <sup>2</sup>AIDS and Cancer Virus Program, Frederick National Laboratory for Cancer Research, Frederick, MD, USA; <sup>3</sup>Emory National Primate Research Center, Emory University, Atlanta, GA, USA; <sup>4</sup>Center for Childhood Infections and Vaccines, Emory University and Children's Healthcare of Atlanta, Atlanta, GA, USA

#### 5.2 – 00120 Well-seeded reservoirs in gut are associated with tertiary lymphoid organs and stress response activation

R. Lorenzo-Redondo<sup>1,5</sup>, M. Arif<sup>2</sup>, C.T. Thuruthiyil<sup>2</sup>, S.S. Pascoe<sup>2</sup>, M.A. Shaaban<sup>1</sup>, Y.S.G. Thomas<sup>2</sup>, J.M. Hasson<sup>1</sup>, S. Samer<sup>2</sup>, M.R. Haque<sup>2</sup>, F.A. Engelmann<sup>2</sup>, I. Clerc<sup>3</sup>, M.D. Mcraven<sup>2</sup>, M. Arainga<sup>4</sup>, E. Martinelli<sup>3</sup>, F.J. Villinger<sup>4</sup>, T.J. Hope<sup>2</sup>

<sup>1</sup>Northwestern University, Feinberg School of Medicine, Department of Medicine (infectious Diseases) - Chicago, United States; <sup>2</sup>Department of Cell and Developmental Biology, Northwestern University - Chicago, United States; <sup>3</sup>Northwestern University Feinberg School of Medicine, Department of Medicine (infectious Diseases) - Chicago, United States; <sup>4</sup>University of Louisiana At Lafayette, New Iberia Research Center - New Iberia, United States; <sup>5</sup>Center for Pathogen Genomics and Microbial Evolution, Northwestern University Robert J. Havey, MD Institute for Global Health, Chicago, United States

#### 5.3 – 00106 Macrophage-tropic TF SHIV D infected NHP model of reservoir persistence, decay and pathogenesis on suppressive anti-retroviral therapy

S. Mallick<sup>1</sup>, R. Krause<sup>1</sup>, A. G. McFarland<sup>1</sup>, H. Schrader<sup>1</sup>, G. D. Whitehill<sup>1</sup>, F. E. Marino<sup>1</sup>, R. Podgorski<sup>2</sup>, E. Lewis<sup>1</sup>, G. M. Shaw<sup>1</sup>, T. Burdo<sup>2,3</sup>, Katharine J. Bar<sup>1</sup>

<sup>1</sup>Perelman School of Medicine, University of Pennsylvania, Philadelphia, PA, USA; <sup>2</sup>Temple University, Philadelphia, PA, USA; <sup>3</sup>Rutgers Institute for Translational Medicine and Science, New Brunswick, NJ, USA

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#### 5.4 – 00148 Targeting Wnt/ $\beta$ -catenin signaling pathway during latency reversal in ART-suppressed SIV-infected rhesus macaques

R. A. Hamid<sup>1</sup>, S. Z. Pour<sup>\*</sup>, I. Ruiz-Salinas<sup>1</sup>, N. Schoof<sup>1</sup>, A. Colvin<sup>1</sup>, J. Lifson<sup>2</sup>, B. Keele<sup>2</sup>, G. Silvestri<sup>1</sup>, A. Chahroudi<sup>1</sup>, M. Mavigner<sup>1</sup>,

<sup>1</sup>Emory University, Atlanta, Georgia, United States; <sup>2</sup>Frederick National Laboratory for Cancer Research, Frederick, Maryland, United States

#### 5.5 – 00117 HIV-Tocky system in primary CD4+T cells joined with transcriptomic and epigenomic analysis to discover mechanism involves in the establishment of latency during acute infection

W. Sakhor<sup>1</sup>, K. Sugata<sup>1</sup>, B. T. J. Yang<sup>1</sup>, K. Niimura<sup>1</sup>, K. Monde<sup>2</sup>, C. Motozono<sup>1</sup>, R. Kariya<sup>1</sup>, O. Reda<sup>1,3</sup>, A. Rahman<sup>1</sup>, S. N. Sithi<sup>1</sup>, H. Nakamura<sup>4</sup>, S. Okada<sup>1</sup>, T. Ueno<sup>1</sup>, Y. Sagara<sup>4</sup>, H. Takeuchi<sup>5</sup>, M. Ono<sup>6</sup>, K. Maeda<sup>7</sup>, Y. Satou<sup>1</sup>

<sup>1</sup>Joint Research Center for Human Retrovirus Infection, Kumamoto University, Japan; <sup>2</sup>Department of Microbiology, Faculty of Life Sciences, Kumamoto University, Japan; <sup>3</sup>Microbiology Department, High Institute of Public Health, Alexandria University, Egypt; <sup>4</sup>Department of Quality, Japanese Red Cross Kyushu Block Blood Center, Chikushino, Japan; <sup>5</sup>Department of Molecular Virology, Tokyo Medical and Dental University, Tokyo, Japan; <sup>6</sup>Department of Life Sciences, Imperial College London, United Kingdom; <sup>7</sup>Division of Antiviral Therapy, Joint Research Center for Human Retrovirus Infection, Kagoshima University, Japan

#### 5.6 – 00133 Suppression of viral rebound by a Rev-dependent lentiviral particle in SIV-infected rhesus macaques

B. Hetrick<sup>1</sup>, S. Siddiqui<sup>2</sup>, M. Spear<sup>1</sup>, J. Guo<sup>1</sup>, H. Liang<sup>1</sup>, Y. Fu<sup>1</sup>, Z. Yang<sup>1</sup>, L. Doyle-Meyers<sup>2</sup>, B. Pahar<sup>2,3</sup>, R.S. Veazey<sup>2</sup>, J. Dufour<sup>2</sup>, A. Andalibi<sup>1</sup>, B. Ling<sup>2,4</sup>, Y. Wu<sup>1</sup>

<sup>1</sup>Center for Infectious Disease Research, George Mason University, Manassas, VA, USA; <sup>2</sup>Tulane National Primate Research Center, Tulane University School of Medicine, Covington, LA, USA; <sup>3</sup>Integrated Research Facility at Fort Detrick, National Institute of Allergy and Infectious Diseases, National Institutes of Health, Fort Detrick, Frederick, MD, USA; <sup>4</sup>Host-Pathogen Interaction Program, Texas Biomedical Research Institute, 8715 W Military Dr., San Antonio, TX, USA



12:30PM - 02:00PM LUNCH



02:00PM  
04:00PM

#### Session 6: Cell & Gene Therapies

Chairperson: Priti Kumar - Yale School of Medicine, New Haven, USA

#### 6.0 Cell and gene therapy for sickle cell disease, insights into HIV gene therapy

John Tisdale - NHLBI, Bethesda, USA

#### Oral Presentations:

#### 6.1 – 00142 Durable Viral Load Remission in SHIV-infected Macaques after Vectored Delivery of Monoclonal Antibodies

J. M. Martinez-Navio<sup>1</sup>, S. P. Fuchs<sup>1</sup>, P. G. Mondragon<sup>1</sup>, R. Zabizhin<sup>1</sup>, D. E. Mendes<sup>1</sup>, C. P. R. Muniz<sup>1</sup>, K. Weisgrau<sup>2</sup>, J. Furlott<sup>2</sup>, E. Alexander<sup>2</sup>, E. G. Rakasz<sup>2</sup>, G. Gao<sup>3</sup>, J. D. Lifson<sup>4</sup>, R. C. Desrosiers<sup>1</sup>

<sup>1</sup>Department of Pathology, Miller School of Medicine, University of Miami, Miami, FL, USA; <sup>2</sup>Wisconsin National Primate Research Center, University of Wisconsin, Madison, WI, USA; <sup>3</sup>Horae Gene Therapy Center, University of Massachusetts Medical School, Worcester, MA, USA;

<sup>4</sup>AIDS and Cancer Virus Program, Frederick National Laboratory for Cancer Research, Frederick, MD, USA

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## **6.2 – 00049 Multivalent CAR T Cell Therapy Shows Superior Potency in Controlling HIV Escape and Replication in BLT Humanized Mice**

F. Severi<sup>1,2</sup>, D. Bercow<sup>1</sup>, K. Stallings<sup>1,3</sup>, A. Criswell<sup>1,4</sup>, F. Pennino<sup>1,3</sup>, R. Acosta<sup>1,3</sup>, T. Yang<sup>1</sup>, D. Claiborne<sup>1</sup>

<sup>1</sup>The Wistar Institute, Philadelphia, PA, United States; <sup>2</sup>University of Bologna, Bologna, Italy;

<sup>3</sup>University of Pennsylvania, Philadelphia, PA, United States; <sup>4</sup>Drexel University, Philadelphia, PA, United States

## **6.3 – 00019 AAV Delivery of the CCR5-blocking monoclonal antibody Leronlimab yields long-term expression and ART-free remission from SHIV viremia**

H. L. Wu<sup>1,\*</sup>, G. M. Webb<sup>1</sup>, J. Zikos<sup>2</sup>, D.M. Magnani<sup>2</sup>, S. P. Fuchs<sup>3</sup>, R. C. Desrosiers<sup>3</sup>, J. B. Sacha<sup>1</sup>

<sup>1</sup>Oregon National Primate Research Center, Oregon Health & Science University - Beaverton, United States;

<sup>2</sup>Nonhuman Primate Reagent Resource, University of Massachusetts Chan Medical School - Boston, United States; <sup>3</sup>Miller School of Medicine, University of Miami - Miami, United States

## **6.4 – 00112 Overcoming immune responses directed toward AAV-delivered bNAbs**

M. Kuipa<sup>1</sup>, P. Koroma<sup>1</sup>, I. Leguizamo<sup>1</sup>, P. Dhole<sup>1</sup>, M.R. Gardner<sup>1,2</sup>,

<sup>1</sup>Division of Microbiology and Immunology, Emory National Primate Research Center, Atlanta, GA;

<sup>2</sup>Department of Medicine, Division of Infectious Diseases, Emory University, Atlanta, GA

## **6.5 – 00173 A single-infusion of CCR5 modified stem-like CD4 T cells to limit HIV/SIV persistence during ART and promote control of viremia upon ATI**

A. A. Sharma<sup>1</sup>, J. Zeidan<sup>1</sup>, M. Islam<sup>1</sup>, J. Harper<sup>2</sup>, A. B. Enriquez<sup>1</sup>, G. Lee<sup>3</sup>, K. Nguyen<sup>2</sup>, J. Auger<sup>2</sup>, H. Flores<sup>2</sup>, R. Fromentin<sup>4,5</sup>, G. P. Sanchez<sup>6</sup>, J. L. C. De Azeved<sup>1</sup>, F. A. Procopio<sup>7</sup>, R. Balderas<sup>8</sup>, J. P. Lalezari<sup>9</sup>, N. Chomont<sup>4,5</sup>, D. Ando<sup>3</sup>, A. Wilkes<sup>2</sup>, R. Stammen<sup>2</sup>, M. Paiardini<sup>1,2</sup>, S. G. Deeks<sup>10</sup>, R.P. Sekaly<sup>1</sup>

<sup>1</sup>Emory University, Atlanta, GA, USA; <sup>2</sup>Emory National Primate Research Center, Emory University, Atlanta, GA, USA; <sup>3</sup>Sangamo Therapeutics, Richmond, CA, USA; <sup>4</sup>Université de Montréal, Faculty of Medicine, Department of Microbiology, Infectiology, and Immunology, Montréal, Québec, Canada; <sup>5</sup>Université de Montréal, Centre de Recherche du CHUM, Montréal, Québec, Canada; <sup>6</sup>University of California, Irvine, CA, USA; <sup>7</sup>Lausanne University Hospital (CHUV), Lausanne, Switzerland; <sup>8</sup>BD Biosciences, San Jose, CA, USA; <sup>9</sup>Quest Clinical Research, San Francisco, CA, USA; <sup>10</sup>University of California, San Francisco and San Francisco General Hospital, San Francisco, CA, US

## **6.6 – 00176 CAR/CCR9 T cell immunotherapy shows promise in localization of SIV-specific CAR T cells to the gastrointestinal tract of rhesus macaques**

P. Skinner<sup>1</sup>, Z. Quinn<sup>1</sup>, I. Gorrell-Brown<sup>1</sup>, M. Rollins<sup>2</sup>, L. Thron<sup>1</sup>, A. Acharya<sup>3</sup>, E. Sempek<sup>3</sup>, D. Dawn<sup>4</sup>, M. Reynolds<sup>4</sup>, S. Byrareddy<sup>3</sup>, L. Ndhlovu<sup>5</sup>, V. Vezys<sup>2</sup>, M. Pampusch<sup>1</sup>

<sup>1</sup>Department of Veterinary and Biomedical Sciences, University of Minnesota, St. Paul, MN, United States; <sup>2</sup>Department of Microbiology and Immunology, University of Minnesota, Minneapolis, MN, United States; <sup>3</sup>Department of Pharmacology, University of Nebraska Medical Center, Omaha, NE, United States; <sup>4</sup>Wisconsin National Primate Research Center, University of Wisconsin, Madison, WI, United States; <sup>5</sup>Immunology in Medicine, Weill Cornell Medicine, New York, NY, United States



04:00PM  
05:00PM

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## Highlighted Short talks of interest II

Chairpersons: Ann Chahroudi, Emory University, Atlanta, Georgia, United States; Mary Kearny, HIV Dynamics and Replication Program, National Cancer Institute, Frederick, MD, USA

### ST2.0 Distinct features of HIV persistence in children

Katherine Luzuriaga, Molecular Medicine, University of Massachusetts Chan School of Medicine, Worcester, MA, USA

#### Oral Presentations:

### ST2.1 – 00087 A Novel HIV-1 Immune Evasion Strategy: How Softer HIV-1 Infected cells Preferentially Resist Cytotoxic T Lymphocytes (CTLs)

L. Leyre<sup>1</sup>, F. Mustapha<sup>2</sup>, A. Herrera<sup>1</sup>, M. Huse<sup>2</sup>, R.B. Jones<sup>1</sup>

<sup>1</sup>Weill Cornell Medicine - New York (United States); <sup>2</sup>Memorial Sloan Kettering Cancer Center - New York (United States)

### ST2.2 – 00065 Models and correlates of intact and defective HIV DNA decay in Kenyan children over 8 years of ART

D. Reeves<sup>1</sup>, M. Litchford<sup>2</sup>, C. Fish<sup>2</sup>, A. Farrell-Sherman<sup>1</sup>, N. Ahmed<sup>1</sup>, M. Poindexter<sup>2</sup>, N. Cassidy<sup>2</sup>, J. Neary<sup>3</sup>, D. Wamalwa<sup>4</sup>, A. Langat<sup>4</sup>, D. Chebet<sup>4</sup>, H. Moraa<sup>4</sup>, J. Slyker<sup>3</sup>, S. Benki-Nugent<sup>3</sup>, L. Cohn<sup>1</sup>, J. Schiffer<sup>1</sup>, J. Overbaugh<sup>1</sup>, G. John-Stewart<sup>3</sup>, D. Lehman<sup>11</sup>Fred Hutchinson Cancer Center, University of Washington - Seattle (United States); <sup>2</sup>Fred Hutchinson Cancer Center - Seattle (United States); <sup>3</sup>University of Washington - Seattle (United States); <sup>4</sup>University of Nairobi - Nairobi (Kenya)

### ST2.3 – 00128 Targeting Myeloid Reservoirs Harboring Replication-Competent HIV

J. Wang<sup>1</sup>, M. Li<sup>1</sup>, B. Sun<sup>1</sup>, M. Laurie<sup>1</sup>, E. Graviss<sup>1</sup>, M. Vasquez<sup>1</sup>, H. Zhao<sup>1</sup>, M. Chen<sup>2</sup>

<sup>1</sup>Houston Methodist Research Institute - Houston (United States); <sup>2</sup>Baylor College of Medicine (United States)

### ST2.4 – 00035 Bach2 controls seeding of HIV reservoirs in memory CD4+ T cells

L. Shan<sup>1</sup>

<sup>1</sup>Washington University in St. Louis - St. Louis (United States)

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05:00PM - 07:30PM POSTER VIEWINGS  
WITH CHEESE & WINE

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08:00AM **Session 7: Human Studies**

10:00AM Chairperson: Nancie Archin - Unc Chapel Hill - Chapel Hill, USA

**7.0 Diversity in clinical studies: identifying and overcoming barriers**

Esper Kallás - University of Sao Paulo & Butantan Institute, São Paulo, Brazil

**Oral Presentations:**

**7.1 – 00113 Safety and PD-1 receptor occupancy with low dose Nivolumab in adults living with HIV on antiretroviral therapy: NIVO-LD**

J. H. McMahon<sup>1</sup>, J. SY Lau<sup>1,2,3</sup>, L. Wallace<sup>2</sup>, M. Kaiser<sup>1</sup>, J. Chang<sup>2</sup>, A. Solomon<sup>2</sup>, B. Scher<sup>2</sup>, P. Beech<sup>4</sup>, D. Price<sup>2</sup>, T. A. Rasmussen<sup>2,5</sup>, S. R. Lewin<sup>1,2,3</sup>

<sup>1</sup>Department of Infectious Diseases, Alfred Health and School of Translational Medicine, Monash University, Melbourne, Victoria, Australia; <sup>2</sup>Department of Infectious Diseases, University of Melbourne at the Peter Doherty Institute for Infection and Immunity, Melbourne, Victoria, Australia; <sup>3</sup>Victorian Infectious Disease Service, Royal Melbourne Hospital at the Peter Doherty Institute for Infection and Immunity, Melbourne, Victoria, Australia; <sup>4</sup>Department of Radiology, Alfred Health, Melbourne, Victoria, Australia; <sup>5</sup>Aarhus University Hospital, Aarhus, Denmark

**7.2 – 00123 Peptide-induced apoptosis of latently infected cells and reduction of the HIV reservoir in people living with HIV: preliminary results of a clinical trial**

R. Sobhie Diaz<sup>1</sup>, M. Schechter<sup>1,2</sup>, D. Elbirt<sup>4</sup>, E. Naftali<sup>3</sup>, J. T. Maricato<sup>1</sup>, M.V. de Almeida Baptista<sup>1</sup>, J. Galinskas<sup>1</sup>, D. Dias<sup>1</sup>, A. Bassini<sup>1</sup>, N. Lisovoder<sup>4</sup>, J. R. Hunter<sup>1</sup>, E. Finkelshtein<sup>3</sup>

<sup>1</sup>Laboratório de Retrovirologia, Escola Paulista de Medicina, Universidade Federal de São Paulo; <sup>2</sup>Departamento de Doenças Infecciosas e Parasitárias, Faculdade de Medicina, Universidade Federal do Rio de Janeiro; <sup>3</sup>Code Pharma, The Netherlands (R&D based in Israel); <sup>4</sup>Clinical Immunology, Allergy and AIDS Center Kaplan Medical Center, Affiliated with Hadassah-Hebrew University Medical School Jerusalem, Rehovot, Israel

**7.3 – 00050 Profound reduction of HIV-1 reservoir cells over three decades of antiretroviral therapy started in early infancy**

K. Ruiz-de-Luzuriaga<sup>1</sup>, L. Vela<sup>2,3</sup>, C. Naasz<sup>2,3</sup>, S. Kalavacherla<sup>2,3</sup>, L. de Armas<sup>4</sup>, C. Gao<sup>2</sup>, X.G. Yu<sup>2,3</sup>, S. Pahwa<sup>4</sup>, M. Lichterfeld<sup>2,3</sup>

<sup>1</sup>Molecular Medicine, University of Massachusetts Chan School of Medicine, Worcester, MA, USA; <sup>2</sup>Ragon Institute of MGH, MIT and Harvard, Cambridge, MA, USA; <sup>3</sup>Infectious Disease Division, Brigham and Women's Hospital, Boston, MA, USA; <sup>4</sup>Microbiology and Immunology, University of Miami Miller School of Medicine, Miami, FL, USA

**7.4 – 00119 Anatomic distribution of HIV-infected clones in tissues after long-term antiretroviral therapy**

F. Maldarelli<sup>1</sup>, A. Glassey<sup>1</sup>, T. Nguyen<sup>1</sup>, R. Gorelick<sup>2</sup>, L. Adams<sup>1</sup>, M. Zipparo<sup>1</sup>, A. Rahman<sup>1</sup>, S. Hewitt<sup>3</sup>, K. Lurain<sup>4</sup>, R. Ramiswami<sup>4</sup>, C.Y. Lau<sup>1</sup>

<sup>1</sup>HIV Dynamics and Replication Program, NCI Frederick, NIH, Frederick MD, 21702 USA; <sup>2</sup>HIV Molecular Monitoring Core, LEIDOS, Frederick MD, 21702 USA; <sup>3</sup>Department of Pathology, NCI, NIH, Bethesda MD, 20892, United States; <sup>4</sup>HIV and AIDS Malignancy Branch, NCI, NIH, Bethesda MD, 20892, United States

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## 7.5 – 0009 Postmortem analyses of the central nervous system in individuals with HIV demonstrate that infection of microglia contributes to inflammatory pathways despite viral suppression

M. Nühn<sup>1</sup>, N. Sabet<sup>2</sup>, K. Van Abeelen<sup>3</sup>, P. Schipper<sup>1</sup>, A. Basson<sup>4</sup>, A. Wensing<sup>5</sup>, L. De Witte<sup>6</sup>, M. Papathanasopoulos<sup>4</sup>, M. Nijhuis<sup>1</sup>, J. Symons<sup>1</sup>, Justine T. Blonk<sup>1</sup>, Nanouk Zuidmeer<sup>1</sup>

<sup>1</sup>Translational Virology, Department of Medical Microbiology, University Medical Center Utrecht, 3584 Cx Utrecht, Netherlands; <sup>2</sup>Perinatal HIV Research Unit, University of The Witwatersrand, Johannesburg; Department of Internal Medicine, Klerksdorp-Tshepong Hospital Complex, Klerksdorp, South Africa; <sup>3</sup>Department of Internal Medicine, Radboud University Medical Center, 6525 Aj Nijmegen, The Netherlands; <sup>4</sup>HIV Pathogenesis Research Unit, Faculty of Health Sciences, University of The Witwatersrand Medical School, Private Bag 3, Wits, 2050, South Africa; <sup>5</sup>Translational Virology, Department of Global Public Health & Bioethics, University Medical Center Utrecht, 3584 Cx Utrecht, The Netherlands, Netherlands; <sup>6</sup>Department of Psychiatry, Icahn School of Medicine At Mount Sinai, New York, Ny 10029, United States

## 7.6 – 0052 The Tuberculosis Associated Microenvironment Reduces CD8+ T- Cell Control of HIV at the Site of the Coinfection

S. Cronin<sup>1,2</sup>, A. P. Casanova<sup>2</sup>, Z. Vahlas<sup>3</sup>, E. Lee<sup>1,2</sup>, K. Fisher<sup>2</sup>, A. de Vries-Egan<sup>2</sup>, M. Sharabas<sup>2</sup>, A. Kelleher<sup>4</sup>, C. Vérollet<sup>3</sup>, L. Balboa<sup>5</sup>, S. Palmer<sup>1,2</sup>, G. Duette<sup>1,2</sup>

<sup>1</sup>The University of Sydney, Faculty of Medicine and Health, Sydney, Australia; <sup>2</sup>The Westmead Institute for Medical Research, Centre for Virus Research, Sydney, Australia; <sup>3</sup>Université de Toulouse, Institut de Pharmacologie et Biologie Structurale, Toulouse, France; <sup>4</sup>The Kirby Institute, UNSW, Sydney, Australia; <sup>5</sup>Instituto de Medicina Experimental-CONICET, Buenos Aires, Argentina



10:00AM - 10:30AM COFFEE BREAK



10:30AM  
12:30PM

## Session 8: Antibody & Immune based Therapies

Chairperson: Marina Caskey - Rockefeller University, New York - USA

### 8.0 Development of multispecific antibodies for HIV

John Mascola - ModeX Therapeutics, Weston, MA, USA

#### Oral Presentations:

### 8.1 – 0022 Short-term Combination Immunotherapy with bNABs and CCR5 Blockade Mediates ART-Free Viral Control in Infant Rhesus Macaques

N. L. Haigwood<sup>1</sup>, T. Ordonez<sup>1</sup>, S. Pandey<sup>1</sup>, J. Reed<sup>1</sup>, G. M. Webb<sup>1</sup>, A. J. Hessel<sup>1</sup>, K. K. A. Van Rompay<sup>2</sup>, J. K. Watanabe<sup>2</sup>, J. L. Usachenko<sup>2</sup>, J. Sacha<sup>1</sup>

<sup>1</sup>Oregon National Primate Research Center, Oregon Health & Science University, Portland, OR, USA;

<sup>2</sup>California National Primate Research Center, Univ. of California, Davis, CA, USA

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## **8.2 – 00072 Early intervention with an indoline CD4-mimetic compound that sensitizes HIV-1-infected cells to ADCC favors post-treatment HIV control in humanized mice**

L. Zhu<sup>1</sup>, H. Kim<sup>1</sup>, J. Richard<sup>2,3</sup>, L. Marchitto<sup>2,3</sup>, C. J. Fritsch<sup>4</sup>, D. Yang<sup>4</sup>, S. L. T. Boodapati<sup>1</sup>, Y. Sun<sup>1</sup>, H-C. Chen<sup>4</sup>, G. Beaudoin-Bussièrès<sup>2,3</sup>, M. Benlarbi<sup>2,3</sup>, É. Bélanger<sup>2,3</sup>, K. Dionne<sup>2,3</sup>, D. Chatterjee<sup>2</sup>, C. Bourassa<sup>2</sup>, H. Medjahed<sup>2</sup>, F. Gaudette<sup>2,3</sup>, M. A. Brehm<sup>5</sup>, D. L. Greiner<sup>5</sup>, L. D. Shultz<sup>6</sup>, J. G. Sodroski<sup>7</sup>, A.B. Smith III<sup>4</sup>, A. Finzi<sup>2,3</sup>, P. Kumar<sup>1</sup>

<sup>1</sup>Section of Infectious Diseases, Department of Internal Medicine, Yale University School of Medicine, New Haven, CT, USA; <sup>2</sup>Centre de Recherche du CHUM, Montreal, QC, Canada; <sup>3</sup>Département de Microbiologie, Infectiologie et Immunologie, Université de Montréal, Montreal, QC, Canada; <sup>4</sup>Department of Chemistry, School of Arts and Sciences, University of Pennsylvania, Philadelphia, PA, USA; <sup>5</sup>Program in Molecular Medicine, Diabetes Center of Excellence, University of Massachusetts Chan Medical School, Worcester, Massachusetts, USA; <sup>6</sup>Department of Cancer Immunology and Virology, Dana-Farber Cancer Institute, and Department of Microbiology and Immunobiology, Division of AIDS, Harvard Medical School, Boston, MA, USA; <sup>7</sup>Department of Immunology and Infectious Diseases, Harvard School of Public Health, Boston, MA, USA

## **8.3 – 00088 Epitope-Driven Effector Functions of Broadly Neutralizing Antibodies Across Diverse HIV Isolates: Insights for Next-Generation Therapeutics**

C. Li<sup>1</sup>, M. Phelps<sup>1</sup>, J.M. Brady<sup>1</sup>, A.D. Nitido<sup>1</sup>, V. Okonko<sup>1</sup>, D. Lingwood<sup>1</sup>, A.B. Balazs<sup>1</sup>

<sup>1</sup>Ragon Institute of Mass General, Mit, and Harvard - Cambridge, Massachusetts, United States

## **8.4 – 00081 IL-15/IL-15RA Therapy Enhances Control of Viral Rebound in SIV- Infected Macaques**

S. Govindaraj<sup>1</sup>, H. Babu<sup>1</sup>, S. Ali<sup>2</sup>, S.A. Rahman<sup>3</sup>, S.P. Ribeiro<sup>3</sup>, J. Tomalka<sup>3</sup>, A. Sharma<sup>3</sup>, R.P. Sekaly<sup>3</sup>, F. Villinger<sup>2</sup>, R.R. Amara<sup>1</sup>, V. Velu<sup>1</sup>

<sup>1</sup>Department of Pathology and Laboratory Medicine, Emory University School of Medicine, Atlanta, GA 30322, USA; <sup>2</sup>Division of Microbiology and Immunology, Emory Vaccine Center, Emory National Primate Research Center, Emory University, Atlanta, GA 30329, USA; <sup>3</sup>New Iberia Research Center, University of Louisiana at Lafayette, New Iberia, Louisiana, USA

## **8.5 – 00015 Changes in the composition of HIV-1 reservoir of PWH on ART and dasatinib**

M. Manzanares<sup>1,2</sup>, G. Casado-Fernández<sup>1,3</sup>, A. Simón-Rueda<sup>1,2</sup>, M. Torres<sup>1,4</sup>, M. Coiras<sup>1,4</sup>

<sup>1</sup>Immunopathology and Viral Reservoirs Unit, National Center of Microbiology, Instituto De Salud Carlos III - Majadahonda, Spain; <sup>2</sup>PhD Program in Biomedical Sciences and Public Health, Universidad Nacional de Educación a Distancia (UNED), Madrid, Spain; <sup>3</sup>Faculty of Sciences, Universidad de Alcalá, Madrid, Spain; <sup>4</sup>Biomedical Research Center Network in Infectious Diseases (CIBERINFEC), Instituto de Salud Carlos III, Majadahonda, Madrid, Spain

## **8.6 – 00097 Increased HIV-1 proviral reactivation and reservoir size in people with HIV on anticancer treatment**

L. Perez-Blazquez<sup>1,2,5</sup>, E. Valencia<sup>3</sup>, L. Martin-Carbonero<sup>3</sup>, E. Mateos<sup>1,4</sup>, M. Coiras<sup>1,4</sup>

<sup>1</sup>Immunopathology Unit, National Center of Microbiology, Instituto de Salud Carlos III, Majadahonda, Madrid, Spain; <sup>2</sup>Faculty of Biomedical and Health Sciences, Universidad Europea de Madrid, Spain; <sup>3</sup>Infectious Diseases Service. Hospital Carlos III, Madrid, Spain; <sup>4</sup>Biomedical Research Center Network in Infectious Diseases (CIBERINFEC), Instituto de Salud Carlos III, Majadahonda, Madrid, Spain; <sup>5</sup>PhD Program in Biomedical Sciences and Public Health, Universidad Nacional de Educación a Distancia (UNED), Madrid, Spain

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12:30 PM **Closing Remarks**

01:00 PM **The Steering Committee:**

Ann Chahroudi - Emory University, Atlanta, Georgia, United States;

Mary Kearny - HIV Dynamics and Replication Program, National Cancer Institute, Frederick, MD, USA

Alain Lafeuillade - Toulon, FRA

David Margolis - University of North Carolina at Chapel Hill, USA

Karl Salzwedel - NIAID, Bethesda, USA

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

## POSTER PRESENTATIONS

The poster sessions will take place in the Grand Ballroom and presenters are requested to stand next to their posters during the cheese and wine attended poster sessions:

- **Wednesday, December 11: 05:00PM - 07:30PM**
- **Thursday, December 12: 05:00PM - 07:30PM**

## POSTER THEMES

|   | <i>Poster Numbers</i> | <i>Pages</i> |
|---|-----------------------|--------------|
| <b>Basic Science of HIV Persistence</b>                                 | PP1.1 - PP1.21        | 22 - 25      |
| <b>Virology of HIV Persistence</b>                                      | PP2.1 - PP2.11        | 25 - 27      |
| <b>Drug Discovery &amp; Development, Pharmacology, Novel approaches</b> | PP3.1 - PP3.7         | 27 - 28      |
| <b>Immunology of HIV Persistence</b>                                    | PP4.1 - PP4.16        | 28- 31       |
| <b>In Vitro and Animal Model Studies of HIV Persistence</b>             | PP5.1 - 5.11          | 31 - 33      |
| <b>Cell and Gene Therapies</b>  | PP6.1 - PP6.8         | 33 - 34      |
| <b>Human Studies</b>  | PP7.1 - PP7.10        | 34 - 36      |
| <b>Antibody &amp; Immune - Based Therapies</b>                          | PP8.1 - PP8.9         | 36 - 38      |

All abstracts presented at this year's HIV Persistence Workshop will be published as an online supplement to the Journal of Virus Eradication,

**1: BASIC SCIENCE OF HIV PERSISTENCE**

**PP1.1 – 00164 Nuclear retention of unspliced HIV-1 RNA as a novel reversible posttranscriptional block in latency**

A. Dorman<sup>1,2,♯</sup>, M. Bendoumou<sup>3,♯</sup>, A. Valaitiene<sup>4,¶</sup>, J. Wadas<sup>1,2,¶</sup>, H. Ali<sup>1,2</sup>, A. Dutilleul<sup>3</sup>, P. Maiuri<sup>5</sup>, L. Nestola<sup>3</sup>, M. Bociaga-Jasik<sup>6</sup>, G. Mchantaf<sup>7,8,9</sup>, V. Avettand-Fenoël<sup>7,8,9</sup>, A. Marcello<sup>10</sup>, K. Pyrc<sup>11\*</sup>, A. O. Pasternak<sup>4\*,§</sup>, C. V. Lint<sup>3\*,§</sup>, A. Kula-Pacurar<sup>1\*,§</sup>

<sup>1</sup> Laboratory of Molecular Virology, Malopolska Centre 9of Biotechnology, Jagiellonian University, Krakow, Poland; <sup>2</sup> Doctoral School of Exact and Natural Sciences, Jagiellonian University, Lojasiewicza 11, 30-348, Krakow, Poland; <sup>3</sup> Service of Molecular Virology, Institut de Biologie et de Médecine Moléculaires (IBMM), Université Libre de Bruxelles (ULB), Gosselies, Belgium; <sup>4</sup> Laboratory of Experimental Virology, Department of Medical Microbiology, Amsterdam UMC, University of Amsterdam, Amsterdam, Netherlands; <sup>5</sup> Dept of Molecular Medicine and Medical Biotechnology, Università degli Studi di Napoli “Federico II”, Naples, Italy; <sup>6</sup> Department of Infectious Diseases, Jagiellonian University Medical College, Krakow, Poland; <sup>7</sup> Université Paris Cité, INSERM U1016, CNRS UMR8104, Institut Cochin, Paris, France; <sup>8</sup> CHU d’Orléans, France; <sup>9</sup> Université d’Orléans, France; <sup>10</sup> Laboratory of Molecular Virology, The International Centre for Genetic Engineering and Biotechnology (ICGEB), Trieste, Italy; <sup>11</sup> Virogenetics Laboratory of Virology, Malopolska Centre of Biotechnology, Jagiellonian University, Krakow, Poland

\*Corresponding author (s)

♯ These authors contributed equally to this work, ¶ These authors contributed equally to this work, § These authors contributed equally to this work (co-senior authors)

**PP1.2 – 00165 Inhibition of ARP2/3 by HIV Nef Leads to Impaired CD4+ T Cell Function & Dysregulation of Immunity within Progressors but not all HIV Controllers**

D. Dunn<sup>1</sup>, J. Malgady<sup>1</sup>, B. Lima<sup>1</sup>, J. M. Crater<sup>2</sup>, P. M. Del Río Estrada<sup>3</sup>, M.F. Torres-Ruiz<sup>3</sup>, Y. A. Luna-Villalobos<sup>3</sup>, M. González-Navarro<sup>3</sup>, C. Kovacs<sup>4</sup>, C. Kang<sup>5</sup>, D. Mullins<sup>6,7</sup>, P. Jolicoeur<sup>8</sup>, S. Ávila-Ríos<sup>3</sup>, D. F. Nixon<sup>1,2</sup>, R. L. Furler O’Brien<sup>1,2,9,\*</sup>

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**PP1.3 – 00155 Robust proviral transcription but complete restriction of HIV virion production in fetal liver macrophages: a new model for viral persistence in tissue-resident macrophages**

D. Gludish<sup>1,\*</sup>, J. Choi<sup>1</sup>

<sup>1</sup> Department of Microbiology and Immunology Cornell University, College of Veterinary Medicine Ithaca, NY

**PP1.4 - 00138 SIV and HIV Infection of Mast Cells**

K. L. Walker<sup>1,\*</sup>, Y. Thomas<sup>1</sup>, S. Arif<sup>1</sup>, S. Samer<sup>1</sup>, C.<sup>1</sup>, Rebecca Krier<sup>1</sup>, J. A. O’Sullivan<sup>1</sup>, R. L. Redondo<sup>1</sup>, A. M. Carias, Thatianne Russo, Michael McRaven, Edward Allen, Christopher Thomas Thuruthiyil, Flora Engleman, E. Martinelli<sup>1</sup>, F. Villinger<sup>2</sup>, B. Bochner<sup>1</sup>, T. J. Hope<sup>1</sup>

<sup>1</sup> Northwestern University - Chicago, United States, <sup>2</sup> New Iberia Research Center, University of Louisiana Lafayette, United States

**PP1.5 – 00132 Tunneling Nanotubes are essential for the propagation of HIV infection at early stages of infection and reactivation**

S. Valdebenito-Silva<sup>1\*</sup>, E. Eugenin<sup>2</sup>, A. Ono<sup>3</sup>

<sup>1</sup>Department of Neurobiology, University of Texas Medical Branch (UTMB), Galveston, TX, USA; <sup>2</sup>Department of Neurobiology, University of Texas Medical Branch (UTMB), Galveston, TX, USA; <sup>3</sup>Department of Microbiology & Immunology, University of Michigan Medical School, Ann Arbor, MI, USA

**PP1.6 – 00127 ETS1 Regulates Differential Control of HIV latency and Viral Transcription in CD4 T Cells**

A. Manickam<sup>1,2</sup>, T.L. Hafer<sup>3,4</sup>, A. Felton<sup>3,4</sup>, N.M. Archin<sup>1,2</sup>, D.M. Margolis<sup>1,2,5</sup>, M. Emerman<sup>3,4</sup>, E.P. Browne<sup>1,2,5</sup>

<sup>1</sup>Department of Medicine, University of North Carolina at Chapel Hill, Chapel Hill, NC 27599, USA; <sup>2</sup>UNC HIV Cure Center, University of North Carolina at Chapel Hill, Chapel Hill, NC 27599, USA; <sup>3</sup>Division of Basic Sciences, Fred Hutchinson Cancer Center, Seattle, Washington, United States of America; <sup>4</sup>Division of Human Biology, Fred Hutchinson Cancer Center, Seattle, Washington, United States of America; <sup>5</sup>Department of Microbiology and Immunology, University of North Carolina at Chapel Hill, Chapel Hill, NC 27599, USA

**PP1.7 - 00104 Identification of a new role for the E3-ubiquitin ligase activity of UHRF1 promoting HIV-1 transcriptional silencing**

M. Bendoumou<sup>1</sup>, L. Nestola<sup>1</sup>, A. Dutilleul<sup>1</sup>, A. Ait-Ammar<sup>1</sup>, E. Plant<sup>1</sup>, P.I. Vervlimmeren<sup>1</sup>, C. Van Lint<sup>1</sup>

<sup>1</sup>University of Brussels (ULB), Service of Molecular Virology, Brussels, Belgium

**PP1.8 – 00103 Role of the cellular transcription factor Yin-Yang 1 (YY1) in the transcriptional activity of the HIV-1 intragenic cis-regulatory region (IRR)**

A. Dutilleul<sup>1\*</sup>, L. Stiernon<sup>1</sup>, T. Marray<sup>1</sup>, B. Maryam<sup>1</sup>, O. Hernalsteens<sup>1</sup>,

L. Nestola<sup>1</sup>, C. Vanhulle<sup>1</sup>, C. Van Lint<sup>1</sup>

<sup>1</sup>Université Libre De Bruxelles, Service of Molecular Virology - Bruxelles, Belgium

**PP1.9 – 00102 Targeting Latent HIV Reservoirs: Effectiveness of Combination Therapy with HDAC and PARP Inhibitors**

A. McGraw<sup>1</sup>, H. Tibebe<sup>1</sup>, D. Marquez<sup>1</sup>, S. Gagliardi<sup>1</sup>, G. Hillmer<sup>1</sup>,

C. Sullivan<sup>1</sup>, H. Haidery<sup>1</sup>, T. Hotchikin<sup>1</sup>, A. Keating<sup>1</sup>, C. Izumi<sup>1</sup>, C. Cropp<sup>1</sup>, T. Izumi<sup>1,2</sup>

<sup>1</sup>Department of Biology, American University, Washington D.C. 20016, USA; <sup>2</sup>District of Columbia Center for AIDS Research, Washington D.C. 20052, USA

**PP1.10 – 00098 Gene expression dynamics following dasatinib treatment and discontinuation in people with HIV-1: case report**

M. Remesal González<sup>1\*</sup>, S. Rodriguez-Mora<sup>2,3</sup>, R. González-Soltero<sup>1</sup>, M. Torres<sup>2,3</sup>, M. Coiras<sup>2,3\*</sup>

<sup>1</sup>Department of Health Sciences, Faculty of Biomedical and Health Sciences, European University of Madrid, Madrid, Spain; <sup>2</sup>Immunopathology and Viral Reservoir Unit, National Center of Microbiology, Instituto de Salud Carlos III, Madrid, Spain; <sup>3</sup>Biomedical Research Center Network in Infectious Diseases (CIBERINFEC), Instituto de Salud Carlos III, Madrid, Spain

**PP1.11 – 00021 Impact of HIV-1 Tat and TAR Sequence Diversity on Clinical and Reservoir Characteristics**

M. R. Arikatla<sup>1</sup>, N. Sonela<sup>1</sup>, P. Khadka<sup>1</sup>, Z. Tang<sup>1</sup>, E. Benko<sup>2</sup>, C. Kovacs<sup>2</sup>, M. Caskey<sup>3</sup>, R.M. Galiwango<sup>4</sup>, T. Kityamuweesi<sup>4</sup>, P. Buule<sup>4</sup>, S. Tomusange<sup>4</sup>, A. Anok<sup>4</sup>, S. J. Reynolds<sup>5,6</sup>, T. C. Quinn<sup>5,6</sup>, J. L. Prodder<sup>7</sup>, A. D. Redd<sup>5,6</sup>, C. Muzoora<sup>8</sup>, J.E. Haber<sup>9</sup>, J. N. Martin<sup>10</sup>, D. R. Bangsberg<sup>11</sup>, T. Wilkin<sup>1</sup>, R. B. Jones<sup>1</sup>, G.Q. Lee<sup>1</sup>

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**PP1.12 – 00061 Nanopore sequencing enables capturing of long HIV-1 reads for multi-omic analysis of HIV-1-infected cells**

Y. Qi<sup>1,2,3</sup>, H. Courtney<sup>2,3,4</sup>, A. Courtney<sup>2,5</sup>, T. Lu<sup>2,6</sup>, L. Vella<sup>2,3,6</sup>

<sup>1</sup>School of Engineering and Applied Science, University of Pennsylvania, Philadelphia, PA, USA; <sup>2</sup>Division of Infectious Diseases, Children's Hospital of Philadelphia, Philadelphia, PA, USA; <sup>3</sup>Center for AIDS Research, University of Pennsylvania, Philadelphia, PA, USA; <sup>4</sup>Department of Chemistry, University of Pennsylvania, Philadelphia, PA, USA; <sup>5</sup>Department of Molecular Biology, Cell Biology, and Biochemistry, Brown University, Providence, RI, USA; <sup>6</sup>Perelman School of Medicine, University of Pennsylvania, Philadelphia, PA, USA

**PP1.13 – 00083 The lysine methyltransferase SMYD5 methylates HIV-1 Tat K28/K29**

D. Boehm<sup>1</sup>, S. Weirich<sup>2</sup>, M. Schnolzer<sup>3</sup>, A. Jeltsch<sup>2</sup>, M. Ott<sup>1,4,5</sup>

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**PP1.14 – 00005 Q4ddPCR - A New High-Throughput Multicolor Droplet Digital PCR Assay for Precise Intact Reservoir Quantification**

R. Scheck<sup>1</sup>, T. T. Huynh<sup>2</sup>, M. Melzer<sup>3</sup>, G. Gladkov<sup>2</sup>, L. Buchauer<sup>3</sup>, R. B. Jones<sup>2</sup>, C. Gaebler<sup>1</sup>

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**PP1.15 – 00056 Transcriptional analysis of clonal cultures of CD4+ T cells harboring real intact provirus from people living with HIV**

C. Bittar<sup>1</sup>, A. R. Teixeira<sup>1</sup>, T. Y. Oliveira<sup>1</sup>, M. J. Fumagalli<sup>1</sup>, G. S. Santos<sup>1</sup>, G.H.J. Weymar<sup>1</sup>, N. Linden<sup>2</sup>, I. A.T.M. Ferreira<sup>2</sup>, R.B. Jones<sup>3</sup>, M. Caskey<sup>1</sup>, M. Jankovic<sup>1</sup>, M. C. Nussenzweig<sup>1,3</sup>

<sup>1</sup>Laboratory of Molecular Immunology, The Rockefeller University, New York, NY, USA; <sup>2</sup>Division of Infectious Diseases, Department of Medicine, Weill Cornell Medicine, New York, NY, USA; <sup>3</sup>Howard Hughes Medical Institute, Chevy Chase, MD, USA

**PP1.16 – 00059 Identification of solo-LTR HIV provirus in vitro**

F. Li<sup>1,\*</sup>, G. Li<sup>1</sup>, R. Gorelick<sup>1</sup>, L. Kelly<sup>1</sup>, F. Maldarelli<sup>1,\*</sup>

<sup>1</sup>Drug Resistance Program, National Cancer Institute, The National Institutes of Health - Frederick, United States



**PP1.17 – 00054 Optimizing Detection of HIV-1 Infected Cells: A Novel Bioinformatics Pipeline Leveraging Kraken2 for Single-Cell Multiomics Datasets**

L. Garrido-Sanz<sup>1,\*</sup>, L.B. Soriaga<sup>2</sup>, E. Wong<sup>2</sup>, M. C. Puertas<sup>1,3</sup>, J. Dalmau<sup>1</sup>, P. Coll<sup>1,3,4,5</sup>, B. Mothe<sup>1,3,5,6</sup>, B. Clotet<sup>1,3,6</sup>, A. Telenti<sup>2</sup>, J. Martinez-Picado<sup>1,3,6,7,\*</sup>, S. Morón-López<sup>1,3,\*</sup>

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J.M-P and S.M-L contributed equally to this work and are both corresponding/main authors.

**PP1.18 – 00043 Blockade of m6A machinery in HIV latently infected primary CD4+ T cells enhances HIV-1 transcription, RNA export and protein translation, and sensitizes cells for apoptosis**

E. Honeycutt<sup>1,\*</sup>, F. Ye<sup>1</sup>, F. Kizito<sup>1</sup>, T. Sweet<sup>1</sup>, J. Karn<sup>1</sup>

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**PP1.19 – 00036 Unexpected Redundancy of the TNF/NF-κB Axis in HIV-1 Restriction and Latency Reversal in Primary Human MDM Polarized to M1 Cells**

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**PP1.20 – 00032 A chemical screen of chromatin targeting compounds identifies TAF1 as a novel regulator of HIV latency**

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**PP1.21 – 00006 PU.1 inhibition and HIV-1 reactivation: A novel approach to the eradication of HIV-1 latently infected non-T cell reservoirs**

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**2: VIROLOGY OF HIV PERSISTENCE**

**PP2.1 – 00175 HIV genome derived from the brain microglia isolated from PWH on ART**

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## PP2.2 – 00177 Late Increases in Intact Proviral DNA Reveal Variable HIV-1 Reservoir Dynamics

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## PP2.3 – 00168 Blocks to HIV transcriptional initiation, elongation, and splicing contribute differentially to inefficient virus reactivation across authentic reservoir-harboring CD4+ T-cell clones

T. Huynh<sup>1,\*</sup>, I. Ferreira<sup>1</sup>, A. Herreira<sup>1</sup>, E. Stone<sup>1</sup>, N. Linden<sup>1</sup>, M. Caskey<sup>2</sup>, C. Bittar<sup>2</sup>, M.C. Nussenzweig<sup>2</sup>, B. Jones<sup>1</sup>

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## PP2.4 – 00157 Development of a Virology Quality Assurance Program to Assess Inter-lab Reproducibility of HIV-1 Reservoir Assays

B. Maria<sup>1,\*</sup>, D. Weed<sup>1</sup>, S. Scianna<sup>1</sup>, B. Hora<sup>1</sup>, T. Thane<sup>1</sup>, M. Carper<sup>1</sup>, R. Louzao<sup>1</sup>, W. Rountree<sup>1</sup>, M.s Stone<sup>2</sup>, M. Busch<sup>2</sup>, E. R. Wonderlich<sup>3</sup>, K. W. Crawford<sup>3</sup>, T. N. Denny<sup>1</sup>

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## PP2.5 – 00122 The role of Vpr in the epigenetic regulation of HIV-1 latency

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## PP2.6 – 00048 The HIV reservoir can be established in either quiescent or senescent CD4 T cells

R. Matus Nicodemos<sup>1,\*</sup>, D. Ambrozak<sup>1</sup>, D. Douek<sup>1</sup>, R. Koup<sup>1</sup>

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## PP2.7 – 00034 The Cross-Subtype Intact Proviral DNA Assay Detects >97% of Proviral Sequences from Diverse HIV Clades

M. Litchford<sup>1,\*</sup>, S. Fish<sup>1</sup>, A.J. Cassidy<sup>1</sup>, A. Langat<sup>2</sup>, D. Chebet<sup>2</sup>, H. Moraa<sup>2</sup>, S. Benki-Nugent<sup>3</sup>, J. Slyker<sup>3</sup>, D.B. Reeves<sup>1</sup>, E. Maleche-Obimbo<sup>2</sup>, G. John-Stewart<sup>3</sup>, D. Wamalwa<sup>2</sup>, J. Overbaugh<sup>1</sup>, D.A. Lehman<sup>1,\*</sup>

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## PP2.8 – 00051 Full-length sequencing of HIV-1 proviruses in large infected cell clones in PWH on ART reveals a predominance of solo-LTRs

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**PP2.9 – 00007 HIV-PULSE as a new platform to unveil HIV-1 reservoir composition: intactness, drug resistance, tropism and immune therapy predictions**

S. De Braekeleer<sup>1,\*</sup>, L. Termote<sup>1</sup>, S. Rutsaert<sup>1</sup>, L. Lambrechts<sup>1</sup>, W.A. Vos<sup>2,3</sup>, A. Groenendijk<sup>4</sup>, L. Van Eekeren<sup>3</sup>, M. Blaauw<sup>3,5</sup>, J. Stalenoef<sup>2</sup>, A. Verbon<sup>4,6</sup>, M. Berrevoets<sup>5</sup>, E. Blomme<sup>1</sup>, M. Netea<sup>3,7</sup>, A.J. Van Der Ven<sup>4</sup>, S. Gerlo<sup>1</sup>, L. Vandekerckhove<sup>1,8</sup>

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**PP2.10 – 00029 Chromatin regulator p400 complex promotes HIV-1 latency by suppressing HIV-1 locus transcriptional elongation and promoting a host CD4+ T cell state unfavorable for viral amplification**

C. Li<sup>1</sup>, L. P. Mori<sup>1,2</sup>, Y. Ma<sup>1</sup>, T.T. Venables<sup>1</sup>, A.T. McAuley<sup>2</sup>, R.R. Milione<sup>1</sup>, M.E. Pipkin<sup>1,2</sup>, S.T. Valente<sup>1,2,\*</sup>

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**PP2.11 – 00011 The cellular factors BRD4 and HSF1 are critical initiators of P-TEFb-dependent HIV-1 latency reversal in primary T cells**

M. Yang<sup>1,\*</sup>, U. Mbye<sup>1</sup>, S. Wu<sup>2</sup>, C.M. Chang<sup>2</sup>, J. Karn<sup>1</sup>

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**3. DRUG DISCOVERY & DEVELOPMENT, PHARMACOLOGY, NOVEL APPROACHES**

**PP3.1 – 00160 Macrophage Training Reactivates Latent HIV-1 from HAART- suppressed PBMCs of PLWH**

S. John<sup>1,\*</sup>, H. James<sup>1</sup>, C. Perritano<sup>1</sup>, I. Fraser<sup>1</sup>

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**PP3.2 – 00156 Endogenous Cytokine Reporter Macrophages Facilitate Identification of Novel Training Compounds that can Reactivate and Initiate Clearance of Latent HIV**

S. P. John<sup>1</sup>, D. Dabral<sup>2</sup>, C. M. Perritano<sup>1</sup>, H. James<sup>1</sup>, J. Marugan<sup>2</sup>, M. Henderson<sup>2</sup>, I. D. C. Fraser<sup>1</sup>

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**PP3.3 – 00121 Exploring the Effects of Benzodiazepines on a Novel Mechanism of Control in HIV-1 Infected Human Monocyte Derived Macrophages**

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## PP3.4 – 00100 Retinoids enhance NK effector functions against HIV infected CD4 T cells

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## PP3.5 – 00089 Investigating novel designed and synthesized PKC modulators for use in “kick and kill” HIV cure strategies

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## PP3.6 – 00064 Novel synthesized protein kinase C modulators show enhanced HIV latency reversal properties and synergize with a BET bromodomain inhibitor

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## PP3.7 – 00002 Towards a functional cure for HIV-1 infection: BRD4 modulator ZL0580 and LEDGINS additively block and lock HIV-1 transcription

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## 4. IMMUNOLOGY OF HIV PERSISTENCE

### PP4.1 – 00179 Distinct Immunity Signatures Uncover Diverse Profiles Among Elite HIV Controllers

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### PP4.2 – 00163 Aging immune system alters HIV/SIV reservoirs

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### PP4.4 – 00151 Trained immunity as an exacerbating factor in Chronic HIV and HIV-Associated Neurocognitive Disorders

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**PP4.5 – 00144 Unveiling Cellular Phenotypes and Transcriptional Dynamics in Early Treated Acute HIV Infection**

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**PP4.6 – 00115 Disruption of intestinal germinal centers during HIV infection**

F. Cossarini<sup>1,2,\*</sup>, A. Krek<sup>1,3</sup>, P. Canales-Herrerias<sup>2,4</sup>, M. Tankelevich<sup>2,4</sup>, B. Chen<sup>1,2</sup>, J. Aberg<sup>1,2</sup>, F. Petralia<sup>3</sup>, A. Polydorides<sup>4,5</sup>, S. Mehandru<sup>2,4</sup>

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**PP4.7 – 00101 Immunotolerance during recent HIV infection and rapid disease progression**

M. B. Diaz<sup>1,2</sup>, B. Scarpelini<sup>2</sup>, J. R. Hunter<sup>2</sup>, I. D. Silva<sup>2</sup>, J. B. Pesqueiro<sup>2</sup>, M. Schechter<sup>3</sup>, R. S. Diaz<sup>2</sup>

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**PP4.8 – 00099 Activation of Immune Effector Responses in Newborns with Perinatal HIV Infection**

L. De Armas<sup>1\*</sup>, A. Iyer<sup>1</sup>, V. Dinh<sup>1</sup>, S. Pallikkuth<sup>1</sup>, R. Pahwa<sup>1</sup>, P. Vaz<sup>2</sup>, M.G. Lain<sup>2</sup>, S. Pahwa<sup>1\*</sup>

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**PP4.9 – 00090 Changes in CPSF6 and SC35 expression and subcellular localization induced by dasatinib and ponatinib as mechanism to interfere with HIV-1 proviral integration in macrophages**

C. Sánchez Menéndez<sup>1\*</sup>, M. Manzaneres<sup>1</sup>, E. Mateos<sup>1</sup>, V. Planelles<sup>2</sup>, M. Coiras<sup>1\*</sup>

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**PP4.10 – 00082 Simultaneous measurement of HIV proviral DNA and cell associated RNA in CSF cells of PWH using single-cell Multiomics**

B. Orlinick<sup>1\*</sup>, S. Mehta<sup>1</sup>, C. Lu<sup>1</sup>, A. Pang<sup>2</sup>, B. Das<sup>1</sup>, S. Spudich<sup>1</sup>, Y. Kluger<sup>1</sup>, M. Corley<sup>2</sup>, S. Farhadian<sup>1\*</sup>

<sup>1</sup>Yale School of Medicine - New Haven (United States); <sup>2</sup>Weill Cornell Medicine - New York (United States)

**PP4.11 – 00077 Long-term antiretroviral treatment reduces the reactivation capacity of HIV-1 reservoir**

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**PP4.12 – 00068 Persistence and Maturation of B Cell Lineages during ART initiation in Chronic SHIV-infected Juvenile Rhesus Macaques**

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**PP4.13 – 00012 Distinct CD4 tissue-resident memory (TRM) depletion and CD8 TRM function between the small and large intestine indicate region-specific mechanisms for gut pathology in people with HIV (PWH)**

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**PP4.14 – 00024 HIV RNA+ cells from ART-suppressed PWH exhibit transcriptional profiles distinct from those during active viremia**

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**PP4.15 – 00030 Circulating Acyl-CoA-Binding Protein perturbs metabolism and inhibits T-cell function in people living with HIV**

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**PP4.16 – 00014 Reduction of HIV-1 reservoir following mpox infection**

G. Casado Fernández<sup>1,3,\*</sup>, O. De La Calle-Jiménez<sup>1,2</sup>, V. Estrada<sup>2,4</sup>, M. Torres<sup>1,4</sup>, M. Coiras<sup>1,4</sup>

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**PP4.17 – 00063 Distinct immune profiles in children living with HIV based on timing and duration of suppressive antiretroviral treatment**

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**5. IN VITRO AND ANIMAL MODEL STUDIES OF HIV PERSISTENCE**

**PP5.1 – 00178 Impact of Methamphetamine use disorder on CNS reservoirs and beyond in SIV-infected rhesusmacaques on antiretroviral therapy**

B. Ling<sup>1</sup>, W. Ortiz<sup>1,\*</sup>, A. Solis-Leal<sup>1</sup>, N. Bobby<sup>1</sup>, G. De La Torre<sup>1</sup>, K. Sayers<sup>1</sup>, H. Nevill<sup>1</sup>, B. Ling<sup>1,\*</sup>

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**PP5.2 – 00170 Plasma levels of Galectin-3 and -9 correlate with gut microbial dysregulation and residual mucosal SIV in Rhesus Macaques**

S. T. Yeung<sup>1,\*</sup>, T. A. Premeaux<sup>1</sup>, S.D. Johnson<sup>2</sup>, S. N. Byrareddy<sup>2</sup>, L. C. Ndhlovu<sup>1</sup>

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**PP5.3 – 00166 Treatment with AZD5582 + het-IL15 transiently disrupts the reservoir establishment in SIV-infected macaques**

M. Statzu<sup>1,\*</sup>, C. Micali<sup>1</sup>, T. R. Wiche Salinas<sup>1</sup>, C. Gurley<sup>1</sup>, B. Healy<sup>1</sup>, D. G. Carnathan<sup>1</sup>, B. K. Felber<sup>2</sup>, G. N. Pavlakis<sup>2</sup>, B. Keele<sup>2</sup>, J. D. Lifson<sup>2</sup>, G. M. Laird<sup>3</sup>, D. M. Margolis<sup>4</sup>, M. Paiardini<sup>1</sup>, G. Silvestri<sup>1</sup>

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**PP5.4 – 00017**

**Barcoded HIV-1 reveals proviruses associated with cell clonal proliferation or viremia have distinct chromatin patterns**

T.-H. Zhang<sup>1,9</sup>, Y. Shi<sup>2,9</sup>, N. L. Komarova<sup>3</sup>, D. Wordaz<sup>4</sup>, M. Kostelny<sup>5</sup>, M. Dimapasoc<sup>5</sup>, A. Gonzales<sup>7</sup>, G. Bresson-Tan<sup>7</sup>, H. Chen<sup>5</sup>, C. Carmona<sup>5</sup>, C. Oh<sup>6</sup>, W. Harvey<sup>6</sup>, I. Abbaali<sup>6</sup>, C. Seet<sup>7</sup>, Y. Du<sup>8</sup>, R. Sun<sup>9</sup>, J. A. Zack<sup>5,7</sup>, J. T. Kim<sup>6</sup>

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**PP5.5 – 00152 IL-15, Type I interferon, and amino acid pathways are correlated with SIV reservoir size and magnitude of viral rebound post-ATI in SIV-infected infant rhesus macaques**

T. T. Chinunga<sup>1,2</sup>, G. X. Medeiros<sup>1</sup>, F. Bruno<sup>1</sup>, K. M. Bricker<sup>2</sup>, A. Chahroudi<sup>2,4</sup>, S. P. Ribeiro<sup>1,3,4,\*</sup>

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**PP5.6 – 00141 HIV-infected CD4+ T cells that survive NK cell interactions exhibit a TNF/IFN signature and have higher MHC-I expression**

P. E. Grasberger<sup>1,\*</sup>, A. R. Sondrini<sup>1,\*</sup>, A. Kucukural<sup>1,2</sup>, L. Leyre<sup>3</sup>, B. Jones<sup>3</sup>, K. L. Clayton<sup>1</sup>

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**PP5.7 – 00047 Assessing the Impact of Macrophage-Tropism on Fitness of SHIV in vivo**

M. Moezpoor<sup>1,\*</sup>, S. Houston<sup>1</sup>, H. Krupp<sup>1</sup>, G. Marshall<sup>1</sup>, T. Cordeiro Alvarado<sup>1</sup>, Jose Maria Martinez-Navio<sup>1</sup>, M. Stevenson<sup>1,2</sup>

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**PP5.8 – 00137 HIV-infected macrophages display lysosomal release upon targeting by NK cells**

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**PP5.9 – 00108 Tracking infected cell fate using a barcoded virus**

A. Ocegüera Cabrera<sup>1,\*</sup>, S. Weissman<sup>2</sup>, A. Ginda<sup>1</sup>, U. O'doherty<sup>1,\*</sup>

<sup>1</sup>Emory University - Atlanta (United States); <sup>2</sup>Yale University - New Haven (United States)

**PP5.10 – 00033 Ex vivo HIV DNA integration in STAT3 drives T cell persistence—A model of HIV-associated T cell lymphoma**

M. Rist<sup>1,\*</sup>, M. Kaku<sup>1</sup>, J. Coffin<sup>1</sup>

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**PP5.11 – 00071 A novel in vitro model for studying HIV infection and latency in microglia: SIV Vpx-treated EcoHIV-infected CHME5**

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## 6. CELL AND GENE THERAPIES

**PP6.1 – 00116 Generation of HIV-resistant CD4-based CAR T cells for enhanced immunotherapy**

R. Acosta<sup>1,2,\*</sup>, D. Bercow<sup>1</sup>, F. Severi<sup>1,3</sup>, M. Werts<sup>1</sup>, D. Claiborne<sup>1,2</sup>

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**PP6.2 – 00140 Avoiding unwanted host immune responses toward AAV-delivered anti-HIV antibodies**

S.P. Fuchs<sup>1</sup>, A. Zhen<sup>1</sup>, P. G. Mondragon<sup>1</sup>, R. Zabizhin<sup>1</sup>, K. Weisgrau<sup>3</sup>, J. Furlott<sup>3</sup>, J. Coonen<sup>3</sup>, E. Alexander<sup>3</sup>, J. Lifson<sup>4</sup>, E. Fray<sup>5</sup>, R. F. Siliciano<sup>5</sup>, G. Gao<sup>6</sup>, J. M. Martinez-Navio<sup>1</sup>, R.C. Desrosiers<sup>1</sup>

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**PP6.3 – 00073 Blocking HIV-1 replication by disrupting TAR-Tat-Cyclin T1 interactions using double-strand break- (DSB-) free CRISPR editing**

N. Salazar-Quiroz<sup>1,\*</sup>, Y. Sun<sup>1</sup>, R. Behrens<sup>2</sup>, H. Kim<sup>1</sup>, L. Zhu<sup>1</sup>, S.L.T. Boodapati<sup>1</sup>, J. Bruce<sup>2</sup>, N. Sherer<sup>2</sup>, P. Kumar<sup>1</sup>

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**PP6.4 – 00096 Therapeutic efficacy of AAV-delivered HIV-1 bNAbS to prevent SHIV rebound in Rhesus macaques**

P. Dhole<sup>1,\*</sup>, M. Michael Kuipa<sup>1</sup>, I. Isai Leguizamo<sup>1</sup>, N. Natalie Correa<sup>1</sup>, P. Peter Koroma<sup>1</sup>, M. Mathew R Gardner<sup>2,3</sup>

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**PP6.5 – 00086 Regulation of AAV transgene expression using nanoparticle- delivered Cre-recombinase**

N. Correa<sup>1,\*</sup>, M. R. Gardner<sup>1,2</sup>

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**PP6.6 – 00076 Target cell-specific nanobody-engineered AAV vectors for in vivo gene therapy approaches for HIV cure**

M.V. Hamann<sup>1</sup>, H. Jahnz<sup>1</sup>, Y. Sun<sup>2</sup>, H. Kim<sup>2</sup>, P. Kumar<sup>2</sup>, Ulrike C. Lange<sup>1,3,\*</sup>

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**PP6.7 – 00070 Blockade of HIV-1 Latency Reversal in CD4+ T Cells from ART- suppressed PLWH by the HIV-1 Antisense Transcript AST**

E. Romerio<sup>1,\*</sup>, R. Li<sup>1</sup>, K. Daneshvar<sup>2</sup>, M. Pleet<sup>3</sup>, X. Xi<sup>1</sup>, O. Padilla<sup>1</sup>, G. Igbinosun<sup>1</sup>, M.S. Iqbal<sup>1</sup>, F. Kashanchi<sup>3</sup>, A. Mullen<sup>2</sup>

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**PP6.8 – 00062 Evaluating the Combination Effect of Autophagy Induction and CAR T Cell Therapy on “Kick-and-Kill” HIV Reservoir Depletion**

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**7. HUMAN STUDIES**

**PP7.1-00174 Active HIV reservoir in jejunum exhibit distinct phenotypic features and evoke innate cell redistribution**

M. Calvet-Mirabent<sup>1,\*</sup>, M. Yuan<sup>1</sup>, X. Luo<sup>1</sup>, J. Frouard<sup>1,2</sup>, J. Neidleman<sup>1,2</sup>, A. George<sup>1</sup>, S. Tamaki<sup>3</sup>, A. Chaillon<sup>4</sup>, E. Hastie<sup>4</sup>, D. Smith<sup>4</sup>, C. Kieffer<sup>5</sup>, S. Gianella<sup>4</sup>, N.R. Roan<sup>1,2</sup>

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**PP7.2 – 00169 Longitudinal Persistence of HIV DNA in CSF Over 4 Years Despite Up to 20 Years of ART**

J. Cyktor<sup>1,\*</sup>, E. Aga<sup>2</sup>, A. Naqvi<sup>1</sup>, D. Hoeth<sup>1</sup>, R. Bosch<sup>2</sup>, B. Macatangay<sup>1</sup>, J.J. Eron<sup>3</sup>, S.L. Koletar<sup>4</sup>, C. Benson<sup>5</sup>, D. McMahon<sup>1</sup>, J. Mellors<sup>1</sup>, S. Spudich<sup>6</sup>, R. Gandhi<sup>7</sup>, for A5321 Team

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**PP7.3 – 00149 Ultra-sensitive secondary structure RNA quantification in the HIV Reservoir Assay Validation and Evaluation Network (RAVEN) using the BioSnap assay**

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**PP7.4 – 00075**

**Decoding HIV Suppression: Comprehensive Multi-Omics Analysis of Biomarkers and Gene Expression in Youth on Antiretroviral Therapy**

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**PP7.5 – 00038 Correlates of HIV Persistence and Expression Differ by Sex**

C-Y. Lau<sup>1,\*</sup>, T. Nguyen<sup>1</sup>, M. Adnan<sup>1</sup>, J. Earhart<sup>1</sup>, D. Konlian<sup>1</sup>, M. Zipparo<sup>1</sup>, L. Adams<sup>1</sup>, R. Dewar<sup>2</sup>, J. Higgins<sup>3</sup>, C. Rehm<sup>4</sup>, D. McMahon<sup>5</sup>, R. Gorelick<sup>6</sup>, B. Luke<sup>6</sup>, F. Maldarelli<sup>1</sup>

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**PP7.6 – 00039 Elevated Lymph Node Metabolic Activity During Long-Term Effective Anti-Retroviral Therapy**

C-Y. Lau<sup>1,\*</sup>, M. Khan<sup>1</sup>, J. Earhart<sup>1</sup>, G. Nair<sup>2</sup>, E. Mena<sup>3</sup>, F. Maldarelli<sup>1</sup>

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**PP7.7 – 00092 Single-Nucleus Multiomic Sequencing Uncovers Differential Chromatin Accessibility and Gene Regulation in Cerebrospinal Fluid Cells of PWH**

C. Lu<sup>1,\*</sup>, B. Orlinick<sup>2</sup>, B. Das<sup>2</sup>, P. Filippidis<sup>2</sup>, S. Mehta<sup>2</sup>, S. Spudich<sup>2</sup>, A. Pang<sup>3</sup>, Y. Kluger<sup>2</sup>, M. Corley<sup>3</sup>, S. Farhadian<sup>2</sup>

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**PP7.8 – 00085 Readiness for analytic treatment interruption trials among early treated children well-suppressed on antiretroviral therapy – willingness to participate, HIV-1 DNA levels and Western Blot**

**RESULTS: Oral**

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**PP7.9 – 00031 Memory B Cells in the CSF of People with HIV Exhibit Changes in Interferon Signaling and Antigen Presentation Capacity**

P. Filippidis<sup>1</sup>, M.J. Corley<sup>2</sup>, S. Spudich<sup>3</sup>, M. Wang<sup>4</sup>, S. H. Kleinstein<sup>1,4,5</sup>, S.F. Farhadian<sup>6</sup>

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**PP7.10 – 00018 The effects of P-glycoprotein, breast cancer resistance protein, and CYP3A4 modulators on the pharmacokinetic and pharmacodynamic responses of the TLR7 agonist vesatolimod in people living with HIV**

R. Omenge<sup>1,\*</sup>, L. Zhang<sup>1</sup>, M. Wire<sup>1</sup>, Y. Zheng<sup>1</sup>, S. Huang<sup>1</sup>, R. Palaparthi<sup>1</sup>, D. Sengupta<sup>1</sup>, J. Wallin<sup>1</sup>, C. De Vries<sup>1</sup>, Y. Cai<sup>1</sup>

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## 8. ANTIBODY & IMMUNE BASED THERAPIES

**PP8.1 – 00046 Safety, Viral Resuppression Dynamics, and Immunological Signatures of a PD-1 Inhibitor, B udigalimab, Among PWH During Analytical Treatment Interruption: Phase 1 Randomized Double- Blind Study**

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<sup>1</sup>Abbvie Inc. - North Chicago (United States); <sup>2</sup>Quest Clinical Research - San Francisco (United States); <sup>3</sup>Midway Immunology and Research Center - Fort Pierce (United States); <sup>4</sup>Mcgill University Health Centre - Montreal Canada)

**PP8.2 – 00162 Protective MHC-1 alleles extend time to SIV rebound following neutralizing antibody treatment at time of ART release**

M. Medina<sup>1,\*</sup>, B. Varco-Merth<sup>1</sup>, J. Coppola<sup>2</sup>, H. King<sup>3</sup>, O. Fadeyi<sup>1</sup>, S. Hoffmeister<sup>1</sup>, W. Goodwin<sup>1</sup>, D. Duell<sup>1</sup>, B. Keele<sup>4</sup>, J. Lifson<sup>4</sup>, M. Roederer<sup>3</sup>, D. Burton<sup>3</sup>, L. Picker<sup>1</sup>, A. Okoye<sup>1,\*</sup>

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**PP8.3 – 00167 Exploring Strategies to Enhance ADCC of HIV-infected cells by targeting the CD16 receptor**

C. Melo<sup>1,\*</sup>, T. Murphy<sup>1</sup>, C. Holmberg<sup>1</sup>, E. McMahon<sup>1</sup>, R. Lynch<sup>1</sup>, A. Bosque<sup>1</sup>

<sup>1</sup>Department of Microbiology, Immunology & Tropical Medicine, Washington, DC, USA, The George Washington University, Washington, DC, USA

**PP8.4 – 00154 Using Immunomodulatory Drug Pretreatment to Enhance AAV Delivery of Anti-HIV Broadly Neutralizing Monoclonal Antibodies**

J. Termini<sup>1,\*</sup>, S. Fuchs<sup>1</sup>, J.M. Martinez-Navio<sup>1</sup>, E.G. Rakasz<sup>2</sup>, P.G. Mondragon<sup>1</sup>, R. Zabizhin<sup>1</sup>, R.C. Desrosiers<sup>1</sup>

<sup>1</sup>Department of Pathology, Miller School of Medicine, University of Miami, Miami, Florida, USA; <sup>2</sup>Wisconsin National Primate Research Center, University of Wisconsin, Madison, WI, USA

**PP8.5 – 00044 Mapping in-vivo escape pathways from VRC01-class bNabs**

T. Destefanis<sup>1,\*</sup>, E. Boritz<sup>2</sup>, F. Belinky<sup>2</sup>, S.H. Ko<sup>2</sup>, E. Coates<sup>2</sup>, G. Chenn<sup>2</sup>, K. Bar<sup>3</sup>, P. Tebas<sup>3</sup>, R. Lynch<sup>4</sup>

<sup>1</sup>Department of Microbiology, Immunology, and Tropical Medicine, School of Medicine and Health Sciences, George Washington University - Washington (United States); <sup>2</sup>Vaccine Research Center, National Institute of Allergy and Infectious Diseases, National Institutes of Health - Bethesda (United States); <sup>3</sup>Department of Medicine, Division of Infectious Disease, University of Pennsylvania - Philadelphia (United States); <sup>4</sup>Department of Microbiology & Immunology, George Washington University - Washington (United States)

**PP8.6 – 00079 The asymmetric opening of HIV-1 Env by a potent indoline CD4 mimetic enables anti-Env coreceptor binding site antibodies to mediate ADCC**

J. Richard<sup>1,2,#,\*</sup>, A. Finzi<sup>1,2,\*</sup>, G. Michael<sup>3,#</sup>, N. Ling<sup>4,#</sup>, D.S. Marco<sup>5,#</sup>, Z. Li<sup>6,#</sup>, T. William<sup>4</sup>, M. Lorie<sup>1,2</sup>, Z. Fei<sup>7</sup>, K. Hongil<sup>6</sup>, B. Sri Lakshmi Tejaswi<sup>6</sup>, S. Yaping<sup>6</sup>, B. Catherine<sup>1</sup>, Y. Derek<sup>8</sup>, C. Ta Jung<sup>8</sup>, C. Hung-Ching<sup>8</sup>, B. Mehdi<sup>1,2</sup>, B.B. Guillaume<sup>1,2</sup>, G. Suneetha<sup>4</sup>, L. Wenwei<sup>3</sup>, D. Katrina<sup>1,2</sup>, B. Étienne<sup>1,2</sup>, C. Debashree<sup>1</sup>, M. Halima<sup>1</sup>, H. Wayne<sup>9,10</sup>, S. Joseph<sup>11,12</sup>, H. Rick<sup>13</sup>, M. Doreen<sup>7</sup>, S.A. Amos<sup>8</sup>, K. Priti<sup>6,\*</sup>, M. Walther<sup>3,\*</sup>, M. James<sup>5</sup>, P. Marzena<sup>4,\*</sup>

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#Co-first

**PP8.7 – 00066 Characterization and Optimization of AAV Transgene Cassettes Expressing HIV-1 Broadly Neutralizing Antibody 10-1074**

J. Leguizamo<sup>1</sup>, P. Koroma<sup>1,2</sup>, M. Gardner<sup>1,2</sup>

<sup>1</sup>Department of Medicine, Division of Infectious Diseases, Emory University School of Medicine, Atlanta, Georgia, USA; <sup>2</sup>Division of Microbiology and Immunology, Emory National Primate Research Center, Atlanta, Georgia, USA

**PP8.8 – 00060 Efficacy of HIV suppression by AAV-bNAb therapy is determined by antibody escapability**

N. Galvez<sup>1,\*</sup>, Y. Cao<sup>1</sup>, A. Nitido<sup>1</sup>, C. Deal<sup>1</sup>, A. Balazs<sup>1</sup>

<sup>1</sup>Ragon Institute of Massachusetts General Hospital, Massachusetts Institute of Technology and Harvard University, Cambridge, MA 02139, USA

**PP8.9 – 00016 T Cell Receptor Repertoire Profiling in Phase 1b Study with PD-1 Inhibitor, Bvdigalimab, in PLWH Undergoing Analytical Treatment Interruption**

P. Krishnan<sup>1,\*</sup>, R. Tripathi<sup>1</sup>, Y. Hu<sup>1</sup>, A. Vasanthakumar<sup>1</sup>, J. Degner<sup>1</sup>, S. Kadri<sup>1</sup>, A. Pires Dos Santos<sup>1</sup>, P. Dorr<sup>1</sup>

<sup>1</sup>Research & Development, AbbVie Inc., North Chicago, IL 60064, (United States)

# GENERAL INFORMATION

## LOGISTICAL ORGANIZATION, SCIENTIFIC SECRETARIAT & REGISTRATION

### OVERCOME

13-15 RUE DES SABLONS  
75116 PARIS - FRANCE  
TEL : +33 (0)1 40 88 97 97  
FAX : +33 (0)1 43 59 76 07  
hivpersistence@overcome.fr

## WORKSHOP INFORMATION

### HILTON FORT LAUDERDALE MARINA

T: +1 954-463-4000  
1881 SE 17th Street, Fort Lauderdale, FL 33316, United States

The registration desk will be open during the hours listed below.

Badges must be worn at all times during the workshop and are non-transferable. Access to the workshop will be denied without an official badge.

- Tuesday December 10, 2024: 12:30PM - 07:30PM
- Wednesday December 11, 2024: 07:15AM - 06:00PM
- Thursday December 12, 2024: 07:15AM - 06:00PM
- Friday December 13, 2024: 07:30AM - 13:00PM

All sessions will be held in English

Certificates of attendance will be sent by email after the workshop

## FOOD & BEVERAGES

### YOUR REGISTRATION INCLUDES THE FOLLOWING:

**Welcome Dinner:** The welcome dinner will take place in the Grand Ballroom on December 10, 2024 from 07:30PM

**Welcome Coffees:** Served in the Intracostal Foyer on December 11, 12 & 13 2024 between 06:00AM - 08:00AM

**Morning Coffee Breaks:** Served in the Intracostal Foyer on December 11, 12 & 13 2024 between 10:00AM - 10.30AM

**Lunches:** Served in the Grand Ballroom on December 11 and 12, 2024 between 12:30PM - 02:00PM

**Cheese & Wine Poster Sessions:** Grand Ballroom Poster Area on December 11 & 12 2024 between 05:00PM - 07:30PM

# PARTNER ACKNOWLEDGEMENTS

## ACADEMIC SUPPORT



## PLATINUM



## GOLD



## MEDIA SUPPORT





11<sup>TH</sup> EDITION

DECEMBER 10 - 13, 2024

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