# CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>WELCOME</td>
<td>2</td>
</tr>
<tr>
<td>OVERVIEW</td>
<td>2</td>
</tr>
<tr>
<td>CONTINUING MEDICAL EDUCATION</td>
<td>3</td>
</tr>
<tr>
<td>CONFERENCE SUPPORT</td>
<td>4</td>
</tr>
<tr>
<td>VIRTUAL PLATFORM</td>
<td>5</td>
</tr>
<tr>
<td>ON-DEMAND CONTENT AND WEBCASTS</td>
<td>5</td>
</tr>
<tr>
<td>CONFERENCE SCHEDULE AT A GLANCE</td>
<td>6</td>
</tr>
<tr>
<td>PRECONFERENCE SESSIONS</td>
<td>9</td>
</tr>
<tr>
<td>LIVE PLENARY, ORAL, AND INTERACTIVE SESSIONS, AND ON-DEMAND SYMPOSIA</td>
<td>11</td>
</tr>
<tr>
<td>BY DAY</td>
<td></td>
</tr>
<tr>
<td>SCIENCE SPOTLIGHTS™</td>
<td>47</td>
</tr>
<tr>
<td>SESSIONS BY CATEGORY</td>
<td>109</td>
</tr>
<tr>
<td>CROI FOUNDATION</td>
<td>112</td>
</tr>
<tr>
<td>IAS–USA</td>
<td>112</td>
</tr>
<tr>
<td>CROI 2021 PROGRAM COMMITTEE</td>
<td>113</td>
</tr>
<tr>
<td>Scientific Program Committee</td>
<td>113</td>
</tr>
<tr>
<td>Community Liaison Subcommittee</td>
<td>113</td>
</tr>
<tr>
<td>Former Members</td>
<td>113</td>
</tr>
<tr>
<td>EXTERNAL REVIEWERS</td>
<td>114</td>
</tr>
<tr>
<td>SCHOLARSHIP Awardees</td>
<td>114</td>
</tr>
<tr>
<td>AFFILIATED OR PROXIMATE ACTIVITIES</td>
<td>114</td>
</tr>
<tr>
<td>EMBARGO POLICIES AND SOCIAL MEDIA</td>
<td>115</td>
</tr>
<tr>
<td>CONFERENCE ETIQUETTE</td>
<td>115</td>
</tr>
<tr>
<td>ABSTRACT PROCESS</td>
<td>116</td>
</tr>
<tr>
<td>Scientific Categories</td>
<td>117</td>
</tr>
<tr>
<td>Abstract Content</td>
<td>117</td>
</tr>
<tr>
<td>Presenter Responsibilities</td>
<td>117</td>
</tr>
<tr>
<td>Abstract Review Process</td>
<td>117</td>
</tr>
<tr>
<td>Statistics for Abstracts</td>
<td>117</td>
</tr>
<tr>
<td>Abstracts Related to SARS-CoV-2 and Special Study Populations</td>
<td>117</td>
</tr>
<tr>
<td>INDEX OF SPECIAL STUDY POPULATIONS</td>
<td>118</td>
</tr>
<tr>
<td>INDEX OF PRESENTING AUTHORS</td>
<td>122</td>
</tr>
</tbody>
</table>
WELCOME TO vCROI 2021

Welcome to vCROI 2021! The COVID-19 pandemic has changed the world for all of us in so many ways. Over the past year, we have had to put some of our HIV research on hold, learned to do our research in different ways using different tools, to communicate with each other in virtual formats, and to apply the many lessons in HIV research, care, and community advocacy to addressing the COVID-19 pandemic. Scientists and community stakeholders who have long been engaged in the endeavor to end the epidemic of HIV have pivoted to support and inform the unprecedented progress made in battle against SARS-CoV-2. Most importantly, we have learned that intensive global collaboration can and does result in rapid and profound scientific innovation.

In spite of the some of the delays in HIV research and pivot to addressing COVID-19, we are delighted to present the most critically important advances in our understanding of the basic, clinical, and epidemiologic science, prevention, and new data on public health aspects of HIV, hepatitis viruses, and SARS-CoV-2.

The many talented speakers at vCROI 2021 will present the advances, but there is still much work ahead. We hope that all of you will not only watch both the live and on-demand presentations, but actively participate in the discussions through the chat functions. Deliberation and discussion of the science presented at CROI is what makes CROI so important in moving our field forward. We thank our researchers and clinicians for including their work and our audience for your active participation.

We hope that we can all be together for CROI in Denver for CROI 2022!

OVERVIEW

The Conference on Retroviruses and Opportunistic Infections (CROI) was established in 1993 to provide a forum for basic scientists and clinical investigators to present, discuss, and critique their investigations into the epidemiology and biology of human retroviruses and associated diseases. The synergy of basic science and clinical investigation has been a major contributor to the success of the meeting. CROI has facilitated the presentation of important discoveries in the field, thereby accelerating progress in HIV and AIDS research. As always, the best and most consequential original research will define the science at virtual CROI 2021 (vCROI 2021), which will include research in HIV, hepatitis viruses, SARS-CoV-2, and other viral infections and their related conditions. vCROI 2021 will include 4.5 hours per day of live (real-time) interactive and engaging sessions, as well as on-demand sessions, in a variety of formats.
CONTINUING MEDICAL EDUCATION

Accreditation Statement
The International Antiviral Society—USA (IAS—USA) is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians. The IAS—USA designates this blended activity for a maximum of 46 AMA PRA Category 1 Credits™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

A blended activity refers to an activity that consists of both live content to participate in real-time and prerecorded content to watch on-demand.

ABIM MOC Points
Successful completion of this CME activity, which includes participation in the evaluation component, enables the participant to earn up to 46 MOC points in the American Board of Internal Medicine’s (ABIM) Maintenance of Certification (MOC) program. Eligible participants will earn MOC points equivalent to the amount of CME credits claimed for the activity. It is the CME activity provider’s responsibility to submit participant completion information to ACCME for the purpose of granting ABIM MOC credit.

Objectives
After participating in vCROI 2021, participants will be able to:

• Describe basic-science research advances in HIV, hepatitis viruses, SARS-CoV-2, and other viral infections and their related conditions
• List the most recent findings from clinical trials in the field of HIV and the implications of these data for state-of-the-art treatment strategies
• Describe current epidemiologic data on the prevalence of HIV infection, transmission, treatment, and linkage to and retention in care in populations worldwide; the implications of these data for public-health program planning; and current advances in biobehavioral prevention

Statement of Need
Since HIV was identified, the scientific response to the global pandemic has been a coordinated effort among basic-science researchers, clinical investigators, health care practitioners, epidemiologists, and community leaders to move information and potential treatment options from research to clinical trials and out to affected communities as quickly as possible. Researchers working in HIV/AIDS and its complications founded CROI in 1993 as a science-focused forum for exchanging current research findings among their international peers. CROI continues to focus on scientific exchange, providing an environment in which basic science researchers, translational researchers, clinical investigators, epidemiologists, and public health experts meet to present and discuss the latest research into research in HIV, hepatitis viruses, SARS-CoV-2, and other viral infections and their related conditions.

Claiming CME Credits, ABIM MOC Points, or a Certificate of Participation
For information on how to claim CME Credits, ABIM MOC Points, or a Certificate of Participation, visit the CROI CME webpage.
CONFERENCE SUPPORT

CROI is largely supported by the registration fees of participants. In addition, the IAS–USA seeks grant support from ineligible companies, particularly from companies with competing products, in the interest of objective, balanced, and scientifically rigorous activities. The Accreditation Council for Continuing Medical Education (ACCME) defines ineligible companies as “those whose primary business is producing, marketing, selling, re-selling, or distributing healthcare products used by or on patients.” The ACCME previously referred to these entities as commercial interests. These companies have no input in or control over the selection of faculty or content of the presentations.

CROI 2021 has, to date, received grant support commitments from the following ineligible companies:

PLATINUM LEVEL SUPPORT
- Gilead Sciences, Inc.
- Janssen Therapeutics
- Merck & Co., Inc.
- ViiV Healthcare

BRONZE LEVEL SUPPORT
- AbbVie Inc.
- Hologic, Inc.
- Theratechnologies Inc.

Additional Support
- Cepheid
VIRTUAL PLATFORM

To access the Virtual Platform, log into your account on the CROI Conference website. In addition to live and on-demand content, the CROI 2021 Platform has many features to enhance your experience, including:

- Watch and participate in live and on-demand sessions
- Find information about speakers and other CROI participants
- Contact and chat with other CROI participants
- Set up Zoom-like meetings within the Platform for up to 50 CROI participants at a time
- Add sessions to your personal calendar
- Receive the latest updates about the CROI program
- Post opportunities for employment, post-doctoral positions, and internships

**New this year: Meet Up!** New Investigators in basic science, clinical research, epidemiology, and public health as well as community members, educators, and advocates can meet in designated virtual chat rooms in the networking section of the platform that are open 24/7. These rooms are informal and not moderated or hosted. These scholarship recipients are invited to stop by and chat throughout the conference.

For additional information on how to maximize your virtual conference experience, visit the Guide for User Experience webpage.

ON-DEMAND CONTENT AND WEBCASTS

Unique this year, only registered attendees will have access to the meeting content (including presentation webcasts) during and up to 6 months after the conference. Unlike previous years, access to on-demand presentations and materials will not be available to the public until 6 months after the conference. Additional details will be available on the CROI website after the conference ends.
## Schedule at a Glance

### Virtual CROI 2021 Schedule at a Glance

<table>
<thead>
<tr>
<th>Time</th>
<th>Saturday, March 6, 2021</th>
<th>Sunday, March 7, 2021</th>
<th>Monday</th>
</tr>
</thead>
<tbody>
<tr>
<td>10:00 AM EST</td>
<td>Opening Session (10:00 – 12:05) MARTIN DELANEY PRESENTATION: VACCINE NATIONALISM IS KILLING US: HOW INEQUITIES IN RESEARCH AND ACCESS TO SARS-CoV-2 VACCINES WILL PERPETUATE THE PANDEMIC</td>
<td>BERNARD Fileds Lecture: NEUTRALIZING ANTIBODIES AGAINST CORONAVIRUSES</td>
<td>Plenary: P-1 IMMUNOLOGY 1: GENERAL CONSIDERATIONS</td>
</tr>
<tr>
<td>11:15 AM EST</td>
<td>Concurrent Workshops (12:20 – 2:20) W-2 FRONTIERS IN LABORATORY TECHNOLOGIES</td>
<td></td>
<td>Plenary: P-2 DISRUPTING THE VIRUS TO CONTEST THE PANDEMIC</td>
</tr>
<tr>
<td>12:00 PM EST</td>
<td>W-3 CLINICAL TRIAL DESIGN AND ANALYSIS</td>
<td></td>
<td>Plenary: P-3 IMMUNOLOGY 2: SPECIFIC CONSIDERATIONS</td>
</tr>
<tr>
<td>1:30 PM EST</td>
<td>W-4 CASE TRACING AND CASE MANAGEMENT: COVID-19 WORKSHOP</td>
<td></td>
<td>Plenary: P-4 IMMUNOLOGY 3: IMMUNE RESPONSES</td>
</tr>
<tr>
<td>2:30 PM EST</td>
<td></td>
<td></td>
<td>Plenary: P-5 IMMUNOLOGY 4: CONTINUING THE CONVERSATION</td>
</tr>
</tbody>
</table>
CROI 2021 Schedule at a Glance

**Tuesday, March 9, 2021**

**Plenary Session (10:00 - 11:00)**
- P-1 HIV-1 bNabs: Looking Ahead
- P-4 Sustained Delivery and Long-Acting Agents for Prevention of HIV

**Concurrent Oral Abstract Sessions (11:15 - 1:15)**
- O-5 SARS-CoV-2 vs Host: Virology, Immunology, and Pathogenesis
- O-6 New Weapons Against SARS-CoV-2 and HIV
- O-7 Tuberculosis and Hepatitis
- O-8 COVID Epidemiology and its Impact on HIV Care and Prevention
- O-9 Prevention 2021

**Concurrent Interactive Sessions (1:30 - 2:30)**
- I-4 HIV-1 and SARS-CoV-2: Durability of Host Immune Responses from Vaccination or Infection
- I-5 From Daily Pills to Monthly Shots for HIV Prevention and Treatment: Can Efficacy Be Translated into Effectiveness?
- I-6 PreP Scale-Up to Meet UNAIDS 2030 Goal: It Just Isn’t Possible — Or Is It?

**Wednesday, March 10, 2021**

**Plenary Session (10:00 - 11:00)**
- P-5 Elite Controllers: A Model for a Functional Cure of HIV-1 Infection
- P-6 HIV Treatment in Pregnancy: Beyond Prevention of Vertical Transmission

**Concurrent Oral Abstract Sessions (11:15 - 1:15)**
- O-10 HIV Reservoirs
- O-11 Brain Connections, Malignancies, and Tumor Viruses
- O-12 Maternal and Child HIV and SARS-CoV-2
- O-13 Innovations and Challenges in Testing, Prevention, and Care

**Concurrent Interactive Sessions (1:30 - 2:30)**
- I-7 SARS-CoV-2 and the Host Immune Response: Good vs. Bad Immunity
- I-8 COVID-19 Clinical Controversies
- I-9 COVID-19 Disparities: How Can They Help Move the Needle Forward?

**General Information**

Last Updated on March 4, 2021
Preconference Sessions

SATURDAY MARCH 6, 2021

Workshop-1
PROGRAM COMMITTEE WORKSHOP FOR NEW INVESTIGATORS AND TRAINEES
10:00 AM - 2:00 PM EST

Target Audience: This workshop is directed at new investigators and trainees (e.g., undergraduate students, graduate students, postdoctoral fellows, and physician fellows). Attendance is mandatory for all scholarship recipients, but the workshop is open to all CROI attendees.

Level of Knowledge: It is assumed that participants have been conducting active research in the field for fewer than 3 years.

Objectives: At the completion of the session, participants will be able to:
- Describe the current state of the art of selected areas of HIV and SARS-CoV-2 basic, epidemiologic, and clinical research
- List the leading research themes being presented at CROI 2021
- Navigate CROI 2021, maximize the knowledge gained, and interact with research colleagues
- Clarify their individual research interests in relation to the priorities discussed at the workshop and at CROI 2021 overall

Conveners
Serena S. Spudich, Yale University, New Haven, CT, USA
Nicolas Chomont, Université de Montréal, Montreal, Quebec, Canada

10:00
INTRODUCTIONS

10:05
ADVANCES IN MOLECULAR VIROLOGY OF HIV AND SARS-CoV-2
Frank Kirchhoff, Ulm University Medical Center, Ulm, Germany

10:30
LIVE QUESTIONS AND ANSWERS

10:40
BREAK

10:50
ADVANCES IN HIV AND SARS-CoV-2 IMMUNOLOGY
Galit Alter, Ragon Institute of MGH, MIT and Harvard, Cambridge, MA, USA

11:15
LIVE QUESTIONS AND ANSWERS

11:25
ADVANCES IN COVID-19 TREATMENT STRATEGIES AND CONTROLLING THE EPIDEMIC
Jürgen Rockstroh, Medizinische Universitätsklinik, Bonn, Germany

11:50
LIVE QUESTIONS AND ANSWERS

12:00
BREAK

12:10
ADVANCES IN BIOMEDICAL PREVENTION OF HIV
Jean-Michel Molina, University of Paris, Paris, France

11:15
LIVE QUESTIONS AND ANSWERS
Preconference Sessions

Saturday

10:45  ADVANCES IN HIV CURE
      Katherine J. Bar, University of Pennsylvania, Philadelphia, PA, USA

1:10  LIVE QUESTIONS AND ANSWERS

1:20  DISCUSSION
SUNDAY MARCH 7, 2021

OPENING SESSION

10:00 AM - 12:05 PM EST

Target Audience: The Opening Session is directed at all CROI participants, researchers, and clinicians in HIV, hepatitis viruses, SARS-CoV-2, and other viral infections and their related conditions, as well as new investigators, community educators, and research trainees (eg, undergraduate students, graduate students, postdoctoral fellows, and physician fellows).

CHAIRS WELCOME TO virtual CROI 2021

Sharon L. Hillier, University of Pittsburgh, Pittsburgh, PA, USA

James A. Hoxie, University of Pennsylvania, Philadelphia, PA, USA

Elaine J. Abrams, ICAP at Columbia University, New York, NY, USA

The Martin Delaney Presentation is held annually in honor of pioneering HIV/AIDS activist Martin Delaney (1945–2009). It recognizes the important contributions of community advocacy and engagement in research.

Presentation Objectives: At the completion of this presentation, attendees will be able to:

• Connect the dots between the struggle for access to antiretroviral therapy for HIV/AIDS and to SARS-CoV-2 vaccines around the globe
• Identify concrete actions that scientists, affected communities, and activists can take together to ensure access to SARS-CoV-2 vaccines, avoid global endemicity of COVID-19, and prevent the emergence of viral variants that may compromise ultimate control of the SARS-CoV-2 pandemic

10:15 INTRODUCTION TO THE MARTIN DELANEY PRESENTATION

James Pickett, AIDS Foundation of Chicago, Chicago, IL, USA

2 VACCINE NATIONALISM IS KILLING US: HOW INEQUITIES IN RESEARCH AND ACCESS TO SARS-CoV-2 VACCINES WILL PERPETUATE THE PANDEMIC

10:20

Gregg S. Gonsalves, Yale University, New Haven, CT, USA

Fatima Hassan, Health Justice Initiative, Cape Town, South Africa
The Bernard Fields Lecture, named in tribute to the exemplary work of the esteemed microbiologist and virologist Bernard Fields (1938–1995), is given during the Opening Session, usually by a basic scientist recognized for her or his important and relevant contributions to the fields of virology and viral pathogenesis.

10:50 INTRODUCTION TO THE BERNA UDS FIELDS LECTURE
James A. Hoxie, University of Pennsylvania, Philadelphia, PA, USA

Galit Alter, Ragon Institute of MGH, MIT and Harvard, Cambridge, MA, USA

3 BERNARD FIELDS LECTURE: NEUTRALIZING ANTIBODIES AGAINST CORONAVIRUSES
Pamela J. Bjorkman, California Institute of Technology, Pasadena, CA, USA

The N’Galy-Mann Lecture recognizes an HIV/AIDS researcher for her or his important and relevant work in the fields of epidemiology or clinical research. The lecture is named in honor of Drs Bosenge N’Galy and Jonathan Mann for their crucial, pioneering work in HIV science and care in Africa.

10:55 INTRODUCTION OF THE N’GALY-MANN LECTURE
Elaine J. Abrams, ICAP at Columbia University, New York, NY, USA

Tedros Adhanom Ghebreyesus, World Health Organization, Geneva, Switzerland

Anthony S. Fauci, National Institutes of Health, Bethesda, MD, USA

Workshop-2 FRONTIERS IN LABORATORY TECHNOLOGIES
12:20 PM - 2:20 PM EST

Target Audience: This session is directed at students, researchers, and clinicians who are interested in learning the hot new technologies that are influencing HIV or SARS-CoV-2 research or hold a substantial potential for research.

Level of Knowledge: It is assumed that the participants are familiar with the main technologic and data analysis approaches used in HIV and SARS-CoV-2 research.

Objectives: At the completion of the session, participants should be able to:
- Describe the utility of distinct microscopic techniques to probe viral protein structures
- Identify key features of the S antigen that are required for binding and fusion
- Describe how antibodies interfere with S antigen bioactivity
Conveners
Galit Alter, Ragon Institute of MGH, MIT and Harvard, Cambridge, MA, USA
Frank Kirchhoff, Ulm University Medical Center, Ulm, Germany

5  STRUCTURES OF SARS-CoV-2 ANTIBODIES INDUCED BY INFECTION AND mRNA VACCINES
12:20  Christopher O. Barnes, California Institute of Technology, Pasadena, CA, USA

6  EMERGING CONCEPTS IN HIV-1 RESTRICTION
12:50  Edward Campbell, Loyola University Chicago, Chicago, IL, USA

7  SARS-CoV-2 SPECIFIC AND CROSS-REACTIVE T CELL RESPONSES
12:20  Daniela Weiskopf, La Jolla Institute for Immunology, La Jolla, CA, USA

8  ARTIFICIAL INTELLIGENCE-INSPIRED ANTIBODY ENGINEERING
1:50  Sai Reddy, Swiss Federal Institute of Technology, Zurich, Switzerland

Workshop-3  CLINICAL TRIAL DESIGN AND ANALYSIS
12:20 PM - 2:20 PM EST

Target Audience: This session is directed at clinicians and scientists who are interested in designing or interpreting clinical and epidemiologic studies.

Level of Knowledge: It is assumed that participants are familiar with the basic design of randomized and observational clinical trials and of HIV or SARS-CoV-2 epidemiologic studies.

Objectives: At the end of the session, participants should be able to:
• Describe the basic design, strengths, and challenges of platform trials and adaptive trial designs
• Identify primary and secondary outcome measures for COVID-19 vaccine trials
• Discuss challenges occurring with numerous COVID-19 trials being conducted simultaneously, with different timelines for approval

Conveners
Susan P. Buchbinder, San Francisco Department of Public Health, San Francisco, CA, USA
Richard E. Chaisson, The Johns Hopkins University, Baltimore, MD, USA

9  MAKING SENSE OF STUDY DESIGN DIFFERENCES BETWEEN COVID-19 PLATFORM TRIALS
12:20  Lori Dodd, National Institutes of Health, Bethesda, MD, USA

10  DESIGN OF CURRENT AND FUTURE COVID-19 VACCINE EFFICACY TRIALS
12:50  Holly Janes, Fred Hutchinson Cancer Research Center, Seattle, WA, USA

1:20  LIVE QUESTIONS AND ANSWERS
Target Audience: This session is directed at clinicians interested in SARS-CoV-2 sequencing and the management of COVID-19.

Level of Knowledge: It is assumed that the participants are familiar with general principles of infectious disease management.

Objectives: At the completion of the session, participants should be able to:
- Describe how rapid genomic sequencing of SARS-CoV-2 can impact COVID-19 identification and management
- Describe the clinical features and typical course of COVID-19 disease
- List the current treatment options for COVID-19 for different levels of disease severity
- Describe the main cornerstones of critical care for COVID-19

Conveners
Robert T. Schooley, University of California San Diego, La Jolla, CA, USA
David L. Thomas, The Johns Hopkins School of Medicine, Baltimore, MD, USA

11 RAPID GENOMIC SEQUENCING FOR MANAGEMENT OF COVID-19
12:20 Kwok-Yung Yuen, The University of Hong Kong, Hong Kong

12 COVID-19: A HOSPITALISED UNWELL PATIENT WITH PNEUMONITIS
12:50 Sanjay Bhagani, Royal Free Hospital, London, United Kingdom

13 CRITICAL CARE OF COVID-19
1:20 Janhavi Athale, Mayo Clinic Arizona, Phoenix, AR, USA
1:50 LIVE QUESTIONS AND ANSWERS
CONFERENCE DAYS
MONDAY MARCH 8, 2021

Plenary Session-1  MONDAY PLENARY SESSION
10:00 AM - 11:00 AM EST

Session Hosts
Wesley Sundquist, University of Utah, Salt Lake City, UT, USA
Carlos del Rio, Emory University, Atlanta, GA, USA

1:50  WELCOME AND DAILY ROADMAP
Sharon L. Hillier, University of Pittsburgh, Pittsburgh, PA, USA

14  IMAGING VIRAL LIFE CYCLES
10:10  Hans-Georg Kräusslich, Heidelberg University, Heidelberg, Germany

15  DISPARITIES IN HEALTH: FROM HIV TO COVID-19 AND BEYOND
10:35  James E. Hildreth, Meharry Medical College, Nashville, TN, USA

Oral Abstract-01  HIV/SIV HOST AND CELLULAR INTERACTIONS: VIROLOGY, IMMUNOLOGY, AND PATHOGENESIS
Oral Abstract Moderators
John M. Coffin, Tufts University, Medford, MA, USA
Richard A. Koup, National Institute of Allergy and Infectious Diseases, Bethesda, MD, USA

11:15  INTRODUCTIONS
78  DECIPHERING THE HOST NUCLEUS SUBVERSION BY HIV-1 TO REPLICATE
11:20  Viviana Scoca, Marion LouveauX, Renaud Morin, Dmitry Ershov, Jean-Yves Tinevez, Francesca Di Nunzio

79  HIV-1 CAPSID RETAINS ITS INTEGRITY UNTIL MINUTES BEFORE UNCOATING IN THE NUCLEUS
11:30  Chenglei Li, Ryan C. Burdick, Kunio Nagashima, Wei-Shau Hu, Vinay K. Pathak

80  TRAFFICKING OF HIV-1 ENVELOPE TO THE EHD1/MICAL-L1 TUBULAR-SORTING ENDOSONE
11:40  Lingmei Ding, Grigoriy Lerner, Boris Anokhin, Nicholas Weaver, Paul Spearman

81  A COMPREHENSIVE CRISPR SCREEN FOR HIV DEPENDENCY FACTORS
11:50  Vanessa R. Montoya, Abby Felton, Molly OhAinle, Michael Emerman

12:00  LIVE QUESTIONS AND ANSWERS
12:10  INTRODUCTIONS
82 EARLY bnAb THERAPY IN SHIVAD8-E0-INFECTED Rhesus Macaques
12:15
Joana Dias, Mangaiakarasi Asokan, David R. Ambrozak, Lucio Gama, Jianfei HuH, Daniel C. Douek, slim Fourati, Rafiek-Pierre Sékaly, John-Paul Todd, Yoshiaki Nishimura, Malcolm A. Martin, Jeffrey D. Lifson, Amarendra Pegu, John R. Mascola, Richard A. Koup, for the Vaccine Research Center, National Institutes of Health

83 IMMUNE CORRELATES OF POSTTREATMENT CONTROL IN SHIV-INFECTED INFANT MACAQUES
12:25
Veronica Obregon-Perko, Bhrugu Yagnik, Tiffany M. Styles, Katherine M. Bricker, Gloria Mensah, Stella J. Berendam, Katharine J. Bar, George Shaw, Guido Silvestri, Genevieve Fouda, Sallie R. Permar, Rama R. Amara, Ann Chahroudi

84 SIVΔGY INFECTION INDUCES ELITE CONTROL AND RESISTANCE TO SHIV HETEROLOGOUS CHALLENGE
12:35
Khader Ghneim, Nicholas Maness, Pyone Aye, Workineh Torben, Faith Schiro, Brandon Keele, Mark Marsh, G. Lynn Law, Michael Gale, Rafiek-Pierre Sékaly, James Hoxie, Susan Pereira Ribeiro

85 TRAPPING THE HIV-1 V3 LOOP IN A HELICAL CONFORMATION ENABLES BROAD NEUTRALIZATION
12:45
Matthias Glögl, Nikolaus Friedrich, Young Do Kwon, Thomas Lemmin, Gabriele Cerutti, Jason Gorman, Lilidona Maliqi, Peer Mittl, Caio Foulkes, Thomas Reberg, Birgit Dreier, Lawrence Shaprio, Peter D. Kwong, Andreas Plückthun, Alexandra Trkola

86 AN Env-gag mRNA VACCINE PROTECTS MACAQUES FROM HETEROLOGOUS TIER-2 SHIV INFECTION
12:55
Peng Zhang, Elisabeth Narayanan, Shilei Ding, Madhu Prabhakaran, Yaroslav Tsybovsky, Richard A. Koup, Malcolm A. Martin, Johnathan Misamore, Adrian McDermott, John R. Mascola, Andrea Carfi, André Finzi, Anthony S. Fauci, Paolo Lusso, for the National Institute of Allergy and Infectious Diseases

1:05 LIVE QUESTIONS AND ANSWERS

Oral Abstract-02 HIV TREATMENT AND PREVENTION: NEW OPPORTUNITIES TO OPTIMIZE DRUG DOSING, ADHERENCE, AND ANTIRETROVIRAL THERAPY 11:15 AM - 1:15 PM EST

Oral Abstract Moderators
Angela Kashuba, University of North Carolina at Chapel Hill, Chapel Hill, NC, USA
Courtney V. Fletcher, University of Nebraska Medical Center, Omaha, NE, USA

11:15 INTRODUCTIONS

87 ISLATRAVIR PK THRESHOLD & DOSE SELECTION FOR MONTHLY ORAL HIV-1 PrEP
11:20
Munjal Patel, Xiaowei Zang, Youfang Cao, Randolph P. Matthews, Rebeca M. Plank, Peter Sklar, Jay A. Grobler, Michael N. Robertson, Ryan Vargo

88 NEXT-GENERATION ISLATRAVIR IMPLANTS PROJECTED TO PROVIDE YEARLY HIV PROPHYLAXIS
11:30
Randolph P. Matthews, Xiaowei Zang, Stephanie Barrett, Adrian Goodey, Tycho Heimbach, Vanessa L. Weissler, Carlien Leyssens, Tom Reynolds, Ryan Vargo, Yang Liu, Robert Schwab, Sylvie Rottey, Michael N. Robertson, Selwyn A. Stoch, Marian Iwamoto
89  CLINICAL EVALUATION OF DRUG INTERACTIONS WITH ORAL LENACAPAVIR AND PROBE DRUGS  
11:40  
Rebecca Begley, Justin Lutz, Hadas Dvoy-Sobol, Steve West, Kristin Kawata, John Ling, Martin Rhee, Polina German

90  PK AND SAFETY OF HIGH-DOSE RIFAMPICIN IN TB/HIV COINFECTED PATIENTS ON EFV OR DTG  
11:50  
Christine Sekaggya-Wiltshire, Ruth Nabiseire, Joseph Musaazi, Florence Aber, Brian Otaalo, Mohammed Lamorde, Paolo Denti, Rob Aarnoutse, Kelly Dooley, Derek J. Sloan

12:00  LIVE QUESTIONS AND ANSWERS

12:10  INTRODUCTIONS

91  PK OF DOSE-ADJUSTED EMERGENCY CONTRACEPTION WITH EFV-BASED ART IN ACTG 5375  
12:15  
Kimberly K. Scarsi, Laura M. Smeaton, Anthony T. Podany, Maxine Olefsky, Elizabeth Woolley, Elizabeth Barr, Kayla Campbell, Sivaporn Gatechompol, Jeffrey Jeppson, Sajeeda Mawlana, Khuanchai Supparatpinyo, Catherine Godfrey, Susan E. Cohn, Rosie Mngqibisa, for the AIDS Clinical Trials Group A5375 Study Team

92  PK AND SAFETY OF HIGH-DOSE RIFAMPICIN IN TB/HIV COINFECTED PATIENTS ON EFV OR DTG  
11:50  
Christine Sekaggya-Wiltshire, Ruth Nabiseire, Joseph Musaazi, Florence Aber, Brian Otaalo, Mohammed Lamorde, Paolo Denti, Rob Aarnoutse, Kelly Dooley, Derek J. Sloan

12:00  LIVE QUESTIONS AND ANSWERS

12:10  INTRODUCTIONS

93  EMTRICITABINE TRIPHOSPHATE IN DRIED BLOOD SPOTS PREDICTS FUTURE VIREMIA IN PWH  
12:25  
Mary Morrow, Samantha MaWhinney, Ryan Coyle, Stacey Coleman, Lucas Ellison, Jia-Hua Zheng, Lane Bushman, Jennifer Kiser, Peter Anderson, Jose R. Castillo-Mancilla

94  EMTRICITABINE TRIPHOSPHATE IN DRIED BLOOD SPOTS PREDICTS FUTURE VIREMIA IN PWH  
12:25  
Mary Morrow, Samantha MaWhinney, Ryan Coyle, Stacey Coleman, Lucas Ellison, Jia-Hua Zheng, Lane Bushman, Jennifer Kiser, Peter Anderson, Jose R. Castillo-Mancilla

95  RANDOMIZED TRIAL OF RESISTANCE TESTING FOR VIROLOGIC FAILURE IN SUB-SAHARAN AFRICA  
12:55  
Mark Siedner, Mahomed-Yunus Moosa, Suzanne McCluskey, Kevin L. Ard, Winnie Muyindike, Pravikrishen Moodley, Jaysingh Brijkumar, Tamlyn Rautenberg, Gavin George, Rajesh T. Gandhi, Brent A. Johnson, Henry Sunpath, Mwebesa Bwana, Vincent Marconi

1:05  LIVE QUESTIONS AND ANSWERS

Oral Abstract-03  COMPLICATIONS OF HIV AND COVID-19  
11:15 AM - 1:15 PM EST

Oral Abstract Moderators
Judith S. Currier, University of California Los Angeles, Los Angeles, CA, USA
Peter W. Hunt, University of California San Francisco, San Francisco, CA, USA

11:15  INTRODUCTIONS
96  SHORT-COURSE ALENDRONATE FOR THE PREVENTION OF ART-ASSOCIATED BONE LOSS  
11:20  
Tara McGinty, Elena Alvarez-Barco, Willard Tinagco, Alan Macken, Cathal O'Brien, Aoife G. Cotter, Eoin Feeney, Eoin Kavanaugh, Geraldine McCarthy, Alan Landay, Sam McConkey, Peter Doran, Patrick Mallon, for APART Study Group

97  PREVENTION OF CARDIOVASCULAR DISEASE IN PERSONS WITH AND WITHOUT HIV  
11:30  
Michael J. Silverberg, Tory Levine-Hall, Alexandra Anderson, Stacey E. Alexeeff, Jennifer O. Lam, C. Bradley Hare, Jason Flamm, Andrew Williams, Matthias Cavassini, Kendall Bryant, Michael A. Horberg, Derek D. Satre

98  SEX MODIFIES THE ASSOCIATION BETWEEN INFLAMMATION AND VASCULAR EVENTS IN TREATED HIV  
11:40  

99  IDENTIFICATION OF UNIQUE PROTEINS PREDICTIVE OF MORTALITY AND MECHANISMS IN HIV  
11:50  
Priscilla Hsue, Peter Ganz, Mark Segal, Janet P. Tate, Hilary A. Tindle, Kaku So-Armah, Amy Justice, Matthew Freiberg

100 BIOLOGICAL PROFILES PREDICT CORONARY ARTERY DISEASE IN PWH AND RISK-MATCHED CONTROLS  
12:15  

101 12-YEAR COGNITIVE DECLINE IS ASSOCIATED WITH LUNG DISEASE, DIABETES, AND DEPRESSION  
12:25  

102 MULTIMORBIDITY IN PEOPLE WITH HIV USING ART IN THE US: PROJECTIONS TO 2030  
12:35  
Parastu Kasaie, Cameron Stewart, Elizabeth Humes, Lucas Gerace, Kelly Gebo, Cynthia Boyd, Amy Justice, Peter Zandi, Richard Moore, Kate Buchacz, Viviane D. Lima, Amanda Willig, Cherise Wong, Keri N. Althoff, for the Projecting Age, multimorbidity, and polypharmacy (PEARL) model and the North American AIDS Cohort

103 COVID-19 HOSPITALIZATION AMONG PEOPLE WITH HIV OR SOLID ORGAN TRANSPLANT IN THE US  
12:45  
Jing Sun, Rena Patel, Vithal Madhira, Amy L. Olex, Evan French, Jessica Y. Islam, Richard Moffitt, Nora Franceschini, Roslyn B. Mannion, Gregory D. Kirk, for the National COVID Cohort Collaborative

12:55 LIVE QUESTIONS AND ANSWERS
Oral Abstract-04 IDENTIFYING DISPARITIES AND OPPORTUNITIES IN HIV
11:15 AM - 1:15 PM EST

Oral Abstract Moderators
Richard E. Chaisson, The Johns Hopkins University, Baltimore, MD, USA
Adaora Adimora, The University of North Carolina at Chapel Hill, Chapel Hill, USA

11:15 INTRODUCTIONS

104 DISPARITIES IN TIMELY RECEIPT OF ART PRESCRIPTION IN HIV CARE IN THE US, 2012-2018
11:20 Jun Li, Elizabeth Humes, David B. Hanna, Jennifer S. Lee, Keri N. Althoff, Richard Moore, Heidi Crane, Jonathan Colasanti, Michael A. Horberg, Ank Nijhawan, Gypsyamber D’Souza, Christopher T. Rentsch, Kelly Gebo, Kate Buchacz, for the North American AIDS Cohort Collaboration on Research and Design (NA-ACCORD) of IeDEA

105 GEOGRAPHIC DIFFERENCES IN TIME TO VIRAL SUPPRESSION IN THE DEEP SOUTH, 2012-2019
11:30 Aadia Rana, David S. Batey, John Bassler, Ariann Nassel, Lauren Ostrenga, Debbie Wendell, Danita Crear, Xueyuan Wang, Melvera Bender, Emma Kay, Mariel Parman, Emily Levitan, Michael Mugavero

106 DECREASED HIV DIAGNOSES AMONG MSM OF COLOR IN THRIVE-FUNDED JURISDICTIONS, 2014-2018
11:40 Kashif Iqbal, Xueyuan Dong, Weiming Zhu, Kenneth L. Dominguez, Mary Tanner, Athenia Kourtis, Sonia Singh, Karen W. Hoover

107 GENDER-AFFIRMING SURGERY ASSOCIATED WITH HIGH VIRAL SUPPRESSION AMONG TRANSGENDER PWH
11:50 Cristina Rodríguez-Hart, Gagarin Zhao, Zil Goldstein, Asa Radix, Lucia Torian

12:00 LIVE QUESTIONS AND ANSWERS

12:10 INTRODUCTIONS

12:15 Sophie Sembajwe, Andria Apostolou, Jeffrey McCollum, Azfar-E-Alam Siddiqi, Irene Hall, Jianmin Li, Baohua Wu

109 LOWER UPTAKE OF Dolutegravir AMONG WOMEN OF REPRODUCTIVE POTENTIAL VS MEN—KENYA
12:25 Matthew L. Romo, Rena Patel, Jessie Edwards, John M. Humphrey, Elizabeth A. Kelvin, Mercy Maina, Katarzyna Wyka, Kara Wools-Kaloustian, Denis Nash, for IeDEA

110 RCT OF AN ONLINE MENTAL HEALTH INTERVENTION AMONG OLDER PLWH DURING COVID-19 PANDEMIC
12:35 Jeff Berko, Peter Mazonson, Duncan Short, Cassidy Gutner, Maile Karris, Gregory Huhn, Lynsay MacLaren Ehui, Theoren Loo, Sarah-Marie Chan, Frank Spinelli, Andrew Zolopa

111 FEE FOR HOME DELIVERY AND MONITORING OF ART RAISES VIRAL SUPPRESSION IN SOUTH AFRICA
12:45 Ruanne Barnabas, Adam Spiro, Xolani Ntinga, Melissa Mugambi, Meighan Krows, Torin Schaafsma, Theodore Zhao, Heidi Van Rooyen, Jared Baeten, Connie L. Celum, Andrew Bruce, Alastair Van Heerden, for the Deliver Health Study Team

12:55 LIVE QUESTIONS AND ANSWERS
Interactive Session-01  SARS-CoV-2 EVOLUTION IN POPULATIONS AND INDIVIDUALS  
1:30 PM - 2:30 PM EST

16-Description: This highly interactive session begins with a brief overview of the issue or controversy. Scientific experts will each offer their opinions or observations in a 5-minute summary, followed by a 30-minute, spirited discussion among the panel members. The moderator will bring in comments and questions from the audience. This session will address the evolution of SARS-CoV-2 vs HIV at the population level, viral and antibody evolution in populations, the origin and spread of highly transmissible variants of SARS-CoV-2, and the selection of neutralization-resistant SARS-CoV-2 mutants.

Target Audience: This session is directed at basic, translational, and clinical researchers of SARS-CoV-2, as well as interested clinicians and community members.

Level of Knowledge: It is assumed that the participants are familiar with basic concepts of virology and epidemiology.

Objectives: At the completion of the session, participants will be able to:

• Describe the roles of mutation and selection in generation of epidemiologically important mutational variants of SARS-CoV-2
• Compare the appearances and significance of genetic variations in SARS-CoV-2 and HIV
• Describe the molecular basis for increased infectivity of SARS-CoV-2 variants

Moderators
Katharine J. Bar, University of Pennsylvania, Philadelphia, PA, USA
John Coffin, Tufts University, Boston, MA, USA

• HIV-1 Env AND SARS-CoV-2 SPIKE EVOLUTION: SIMILARITIES AND DIFFERENCES
  Bette Korber, Los Alamos National Laboratory, Los Alamos, NM, USA

• SARS-CoV-2 EVOLUTION AT THE POPULATION LEVEL
  Morgane Rolland, Walter Reed Army Institute of Research, Silver Spring, MD, USA

• STRUCTURE AND FUNCTION OF SARS-CoV-2 SPIKE PROTEIN VARIANTS
  Jeremy Luban, University of Massachusetts, Worcester, MA, USA

• SELECTION OF NEUTRALIZATION RESISTANT SARS-CoV-2 MUTANTS
  Paul Bieniasz, The Rockefeller University, New York, NY, USA

• ANTIBODY IMMUNITY TO SARS-CoV-2 501Y.V2 THROUGH VACCINATION AND INFECTION
  Penny Moore, University of Witwatersrand, Johannesburg, South Africa

Interactive Session-02  CASE-BASED DISCUSSION ON WEIGHT GAIN IN HIV AND ANTIRETROVIRAL THERAPY  
1:30 PM - 2:30 PM EST

17-Description: This interactive session will examine current controversies about the causes and consequences of weight gain during antiretroviral therapy (ART) using a case-based format as a platform for discussion. Specific topics that will be covered include: 1) the relative contributions of particular ART drugs/classes and reversal of viral replication/inflammation to weight gain, 2) the pathophysiology of weight gain during ART, 3) the impact of ART-associated weight gain on type 2 diabetes risk, and 4) how these issues are perceived and managed in diverse populations, including children, pregnant women, and people with HIV in low-income countries.

Target Audience: This session is directed at researchers, clinicians, and translational scientists interested in metabolic complications in people with HIV.
**Level of Knowledge:** It is assumed that participants have a basic understanding of ART strategies and an awareness of recent studies suggesting differences in weight gain by different ART regimens.

**Objectives:** At the completion of the session, participants should be able to:
- Make ART treatment decisions incorporating knowledge of effects on weight and type 2 diabetes risk
- Apply these considerations to diverse populations
- Describe the basic concepts in obesity and type 2 diabetes pathogenesis

**Moderator**

Peter W. Hunt, University of California San Francisco, San Francisco, CA, USA

**Panelists**

Grace McComsey, University Hospitals Cleveland Medical Center, Cleveland, OH, USA

Sadaf Farooqi, Cambridge University, Cambridge, United Kingdom

Jane O’Halloran, Washington University in St Louis, St Louis, MO, USA

Cissy Kityo, Joint Clinical Research Centre, Lubowa, Uganda

---

**Interactive Session-03 CONTACT TRACING IN CONTROLLING EPIDEMICS: IS THE JUICE WORTH THE SQUEEZE?**

1:30 PM - 2:30 PM EST

**Description:** This interactive session will begin with 3 presentations by experts describing the role, methodology, and ethical issues of contract tracing. Following the presentations, there will be a moderated discussion and responses to comments and questions from the audience.

**Target Audience:** This session is directed at researchers, clinicians, public health practitioners, program managers, and students interested in the role of contact tracing in epidemics.

**Level of Knowledge:** It is assumed that the participants are familiar with epidemics and methods for their control.

**Objectives:** At the end of the session, participants should be able to:
- Describe contact tracing as an epidemic control strategy
- List enablers and challenges for effective contact tracing
- Identify similarities and differences in contact tracing for different types of infectious diseases
- Describe available digital contact tracing tools and risks and benefits of their use

**Moderator**

Wafaa El-Sadr, Columbia University, New York, NY, USA
• THE ROLE OF CONTACT TRACING IN EPIDEMIC CONTROL: FACILITATORS AND BARRIERS
  Chi-Chi Udeagu, New York City Department of Health and Mental Hygiene, New York, NY, USA

• CONTACT TRACING FOR HIV AND SEXUALLY TRANSMITTED INFECTIONS
  Matthew Golden, University of Washington, Seattle, WA, USA

• CONTACT TRACING GOES VIRAL: VALUE AND ETHICS OF DIGITAL CONTACT TRACING
  Jeffrey Kahn, Johns Hopkins University, Baltimore, MD, USA

ON-DEMAND SYMPOSIA RELEASED ON MONDAY, MARCH 8, 2021

Symposium-01 NAVIGATING TO THE NUCLEUS

Target Audience: This session is directed at HIV researchers and trainees and physicians with an interest in learning about recent advances in understanding several of the key steps in the first half of the HIV life cycle, particularly those mediated by the viral capsid, and in learning more about the emerging promise of capsid inhibitors for HIV treatment.

Level of Knowledge: It is assumed that the participants are familiar with the basic steps of the first half of the HIV life cycle (reverse transcription, nuclear entry, and integration).

Objectives: At the completion of this session, participants will be able to:
• List different roles for the viral capsid in the first half of the HIV viral life cycle
• Describe current views on the process of capsid trafficking and uncoating
• Evaluate the therapeutic potential of inhibiting capsid functions
• Identify key remaining research questions that will help to advance the field

Conveners
John M. Coffin, Tufts University, Medford, MA, USA
Wesley I. Sundquist, University of Utah School of Medicine, Salt Lake City, UT, USA

19  LIVE-CELL IMAGING: CAPSID TRAFFICKING TO THE NUCLEUS
  Barbara Müller, University of Heidelberg, Heidelberg, Germany

20  LIVE-CELL IMAGING OF HIV-1 NUCLEAR IMPORT, UNCOATING, AND PROVIRUSES
  Vinay K. Pathak, National Cancer Institute, Frederick, MD, USA

21  VISUALIZATION OF HIV-1 CAPSID-DEPENDENT REPLICATION IN VITRO
  Barbie Ganser-Pornillos, University of Virginia, Charlottesville, VA, USA

22  LENACAPAVIR (GS-6207): FIRST CLINICALLY ACTIVE LONG-ACTING INHIBITOR OF HIV CAPSID
  Tomas Cihlar, Gilead Sciences, Foster City, CA, USA
Symposium-02 INNATE IMMUNE DEFENSES AGAINST HIV-1 AND SARS-CoV-2

Target Audience: This session is directed at scientists and clinicians interested in innate immune defense mechanisms against SARS-CoV-2 and viral countermeasures.

Level of Knowledge: It is assumed that the participants are familiar with basic principles of innate antiviral immunity.

Objectives: At completion of the session, participants will be able to:
- Describe the origin and pathogenicity of zoonotic coronaviruses
- List innate antiviral mechanisms and evasion strategies of SARS-CoV-2
- Recognize clinical perspectives of interferon therapy against SARS-CoV-2

Conveners
Galit Alter, Ragon Institute of MGH, MIT and Harvard, Cambridge, MA, USA
Frank Kirchhoff, Ulm University Medical Center, Ulm, Germany

23 FROM GENOME TO FUNCTION: PHENOTYPIC CHARACTERISATION OF PANDEMIC SARS-CoV-2
Volker Thiel, University of Bern, Bern, Switzerland

24 IMMUNE EVASION STRATEGIES BY SARS-CoV-2: NSP1 AND BEYOND
Konstantin Sparrer, Ulm University, Ulm, Germany

25 SHARED VULNERABILITIES AND DIFFERENT COUNTERMEASURES OF HIV AND SARS-CoV-2
Eric O. Freed, National Cancer Institute, Frederick, MD, USA

26 IMMUNE RESPONSES TO SARS-CoV-2
Akiko Iwasaki, Yale University, New Haven, CT, USA

Symposium-03 TUBERCULOSIS: NEW APPROACHES TO PREVENTION AND TREATMENT AND ISSUES FOR PREGNANT WOMEN AND CHILDREN

Target Audience: This session is directed at researchers, clinicians, and trainees who are interested in tuberculosis prevention and treatment in pregnant women, children, and people with HIV.

Level of Knowledge: It is assumed that participants are familiar with the basics of tuberculosis prevention and treatment.

Objectives: At the completion of the session, participants should be able to:
- Describe the progress in developing long-acting injectable drugs for the treatment and prevention of tuberculosis
- Identify the clinical, pharmacologic, and safety challenges for the treatment and prevention of tuberculosis in pregnant women with HIV
- Describe challenges and progress in preventing and treating tuberculosis in HIV-positive and HIV-exposed children
- Describe the impact of COVID-19 on the global tuberculosis pandemic with specific emphasis on people with HIV

Conveners
Constance A. Benson, University of California San Diego, San Diego, CA, USA
Richard E. Chaisson, Johns Hopkins University, Baltimore, MD, USA
27 THE POTENTIAL OF LONG-ACTING INJECTABLE DRUGS FOR PREVENTION AND TREATMENT OF TUBERCULOSIS
Eric Nuermberger, Johns Hopkins University, Baltimore, MD, USA

28 PREGNANCY, HIV, AND TUBERCULOSIS: CURRENT PRACTICES AND RESEARCH OPPORTUNITIES
Jyoti S. Mathad, Cornell University, New York, NY, USA

29 ADVANCES IN PEDIATRIC TUBERCULOSIS PREVENTION AND TREATMENT
Nicole Salazar-Austin, Johns Hopkins University, Baltimore, MD, USA

30 IMPACT OF COVID-19 PANDEMIC ON HIV AND TUBERCULOSIS: WHO PERSPECTIVE
Soumya Swaminathan, World Health Organization, Geneva, Switzerland

Symposium-04 EFFECT OF HIV ON COVID, EFFECT OF COVID ON HIV

Target Audience: This session is directed at the breadth of the audience at CROI interested in HIV and COVID-19.

Level of Knowledge: It is assumed that the participants are familiar with the overall pathogenesis, epidemiology, and clinical features of HIV and of COVID-19.

Objectives: At the completion of the session, participants should be able to:

• Describe risk factors for acquisition of SARS-CoV-2 and for COVID-19
• Describe risk factors for morbidity and mortality from COVID-19 and in particular among persons with HIV
• Identify the effects of COVID-19 on health systems overall and on HIV programs in particular
• Describe examples of experiences “on the ground” on efforts to mitigate the potential deleterious effects of COVID-19 on HIV programs and on the lives of people with HIV

Conveners
François Dabis, University Bordeaux Segalen, Bordeaux, France
Wafaa M. El-Sadr, Columbia University, New York, NY, USA

31 DOES HIV IMPACT COVID-19 SUSCEPTIBILITY OR SEVERITY?
Julia Del Amo, Ministry of Health, Madrid, Spain

32 THE IMPACT OF COVID-19 ON THE HIV PANDEMIC WORLDWIDE
Andrew D. Kambugu, Infectious Diseases Institute-Makerere University, Kampala, Uganda

33 THE IMPACT OF COVID-19 BEYOND HIV
Helen Bygrave, International AIDS Society, Geneva, Switzerland

34 FEAR AND COVID-19: EXPERIENCES ON THE GROUND
Francois Venter, Wits Reproductive Health and HIV Institute, Johannesburg, South Africa
TUESDAY MARCH 9, 2021

Plenary Session-2  TUESDAY PLENARY SESSION  10:00 AM - 11:00 AM EST

Session Hosts
Peter W. Hunt, University of California San Francisco, San Francisco, CA, USA
Sharon L. Hillier, University of Pittsburgh, Pittsburgh, PA, USA

10:00  WELCOME AND DAILY ROADMAP
Elaine J. Abrams, ICAP at Columbia University, New York, NY, USA

36  HIV-1 bNAb: LOOKING AHEAD
10:10  Marina Caskey, The Rockefeller University, New York, NY, USA

37  SUSTAINED DELIVERY AND LONG-ACTING AGENTS FOR PREVENTION OF HIV
10:35  Linda-Gail Bekker, University of Cape Town, Cape Town, South Africa

Oral Abstract-05  SARS-CoV-2 VS HOST: VIROLOGY, IMMUNOLOGY, AND PATHOGENESIS  11:15 AM - 1:15 PM EST

Oral Abstract Moderators
Wesley I. Sundquist, University of Utah School of Medicine, Salt Lake City, UT, USA
Guido Silvestri, Emory University, Atlanta, GA, USA

11:15  INTRODUCTIONS

112  IFITM PROTEINS PROMOTE SARS-CoV-2 INFECTION IN HUMAN LUNG CELLS
11:20  Caterina Prelli Bozzo, Rayhane Nchioua, Meta Volcic, Daniel Sauter, Jan Muench, Konstantin Sparrer, Frank Kirchhoff

113  SARBECCOVIRUS ORF6 PROTEINS ANTAGONIZE INTERFERON SIGNALING
11:30  Izumi Kimura, Keiya Uriu, Yoriyuki Konno, Daniel Sauter, So Nakagawa, Kei Sato, for the Institute of Molecular Virology, Ulm University Medical Center

114  SEVERE COVID-19 IS FUELED BY DISRUPTED GUT BARRIER INTEGRITY

115  SARS-CoV-2 PERSISTS IN INTESTINAL ENTEROCYTES UP TO 7 MONTHS AFTER SYMPTOM RESOLUTION
11:50  Minami Tokuyama, Mark S. Ladinsky, Divya Jha, Francesca Cossarini, Alexandra E. Livanos, Jason Reidy, Michael Tankelevich, Gustavo Martinez-Delgado, Pamela J. Bjorkman, Saurabh Mehandru

12:00  LIVE QUESTIONS AND ANSWERS
12:10  INTRODUCTIONS
116 COVID-19 OUTCOME: INSIGHTS FROM QUANTIFICATION OF VIREMIA AND NEUTRALIZING ANTIBODY
12:15
Jana L. Jacobs, Brittany Staines, William Bain, Priscila Da Silva Castanha, Asma Naqvi, Valerie F. Boltz, Ernesto T. Marques, Thomas Denny, Christopher Woods, Alison Morris, Mary F. Kearney, Mark S. Ladinsky, Pamela J. Bjorkman, Georgios D. Kitsios, John W. Mellors

117 CHARACTERIZATION AND EPITOPE MAPPING OF SARS-CoV-2–SPECIFIC CELLS
12:25
Kristin L. Boswell, Phillip A. Swanson, Giune Padilla, Adrian McDermott, Martin R. Gaudinski, Richard A. Koup

118 BARICITINIB LOWERS INFLAMMATION AND PATHOLOGY IN SARS-CoV-2–INFECTED Rhesus Macaques
12:35
Timothy Hoang, Maria Pino, Arun Boddapat, Elise Viox, Carly E. Starke, Amit Upadhyay, Sanjeev Gumber, Susan Pereira Ribeiro, Rafick-Pierre Sekaly, Rebecca Levit, Jacob Estes, Thomas H. Vanderford, Raymond Schinazi, Steven Bosing, Mirko Paiardini

119 ONE DOSE OF COVID-19 mRNA VACCINE IN SARS-CoV-2–EXPERIENCED PEOPLE MAY BE SUFFICIENT
12:45
Marie I. Samanovic-Golden, Amber M. Cornelius, Trishala Karmacharya, Jimmy Wilson, Sophie L. Gray-Gaillard, Joseph M. Allen, Sara W. Hyman, Ramin S. Herati, Mark Mulligan, for the NYU Infectious Diseases with Public Health Importance (IDPHI) Study Team

120 SARS-CoV-2 RECRUITS A HAEM METABOLITE TO EVADE ANTIBODY IMMUNITY
12:55
Annachiara Rosa, Valerie E. Pye, Carl Graham, Luke Muir, Jeffrey Seow, Kevin W. Ng, Nicola J. Cook, Chloe Rees-Spear, Mariana Silva dos Santos, James L. MacRae, Marit J. van Gils, George Kassiotis, Laura E. McCoy, Katie J. Doore, Peter Cherepanov

1:05 LIVE QUESTIONS AND ANSWERS

Oral Abstract-06 NEW WEAPONS AGAINST SARS-CoV-2 AND HIV
11:15 AM - 1:15 PM EST

Oral Abstract Moderators
Joseph J. Eron, University of North Carolina at Chapel Hill, Chapel Hill, NC, USA
Douglas D. Richman, University of California San Diego, La Jolla, CA, USA

11:15 INTRODUCTIONS

121 BAMLANIVIMAB PREVENTS COVID-19 MORBIDITY AND MORTALITY IN NURSING-HOME SETTING
11:20
Myron S. Cohen, Ajay Nirula, Mark Mulligan, Richard Novak, Mary Marovich, Alexander Steimer, Andrew C. Adams, Andrew E. Schade, Jack Knorr, Jay L. Tuttle, Janelle Sabo, Paul Klekotka, Lei Shen, Daniel M. Skovronsky, for the BLAZE-2 Study Team (Lilly/NIAID/CoVPN)

122 BAMLANIVIMAB+ETESEVIMAB FOR TREATMENT OF COVID-19 IN HIGH-RISK AMBULATORY PATIENTS
11:35
Michael Dougan, Ajay Nirula, Robert L. Gottlieb, Masoud Azazid, Bharat Mocherla, Peter Chen, Gregory Huhun, Andrew C. Adams, Andrew E. Schade, Janelle Sabo, Dipak R. Patel, Paul Klekotka, Lei Shen, Daniel M. Skovronsky, for the BLAZE-1 Investigators

123 CASIRIVIMAB WITH IMDEVIMAB ANTIBODY COCKTAIL FOR COVID-19 PREVENTION: INTERIM RESULTS
11:40

vCROI 2021
124  POTENT NEUTRALIZING ANTIBODIES FOR SEVERE COVID-19: A RANDOMIZED CLINICAL TRIAL  
11:50  Carlijn Jordans, Arvind Gharbharan, Corine H. Geurts van Kessel, Jeroen J. Van Kampen, Barry Rockx, Bart Haagmans, Francis Swaneveld, Yvonne Mueller, Peter Katsikis, Marion Koopmans, Bart J. Rijnders, Casper Rokx, for the CONCOVID Trial Network  

12:00  LIVE QUESTIONS AND ANSWERS  
12:10  INTRODUCTIONS  
125  ESTIMATING WITHIN-HOST RO FOR SARS-CoV-2 AND IMPLICATIONS FOR ANTIVIRAL THERAPY  
12:15  Ruian Ke, Ruy M. Ribeiro, Alan S. Perelson  
126  PHASE IIA PROOF-OF-CONCEPT TRIAL OF NEXT-GENERATION MATURATION INHIBITOR GSK3640254  
12:25  Christoph Spinner, Franco B. Felizarta, Giuliano Rizzardini, Patrick Philibert, Essack Mitha, Pere Domingo, Christoph Stephan, Michelle DeGrosky, Veronica Bainbridge, Joyce Zhan, Teodora Pene Dumitrescu, Jerry L. Jeffrey, Samit R. Joshi, Max Lataillade, for 208132 Study Team  
127  POTENT ANTIVIRAL ACTIVITY OF LENACAPAVIR IN PHASE 2/3 IN HEAVILY ART-EXPERIENCED PWH  
12:35  Sorana Segal-Maurer, Antonella Castagna, Mezgebe Berhe, Gary Richmond, Peter J. Ruane, Gary I. Sinclair, Krittaecho Siripassorn, Ya-Pei Liu, Nicolas Margot, Hadas Dvory-Sobol, Robert H. Hyland, Martin Rhee, Jared Baeten, Diana Brainard, Edwin DeJesus  
128  ACTIVITY AND RESISTANCE CHARACTERIZATION OF THE HIV CAPSID INHIBITOR LENACAPAVIR  
12:45  Laurie VanderVeen, Nicolas Margot, Vidula Naik, Martin Rhee, Christian Callebaut  
129  RESISTANCE PROFILE OF MK-8507, A NOVEL NNRTI SUITABLE FOR WEEKLY ORAL HIV TREATMENT  
12:55  Tracy L. Diamond, Ming-Tain Lai, Meizhen Feng, Min Xu, Nancy A. Sachs, Daria Hazuda, Ernest Asante-Appiah, Jay A. Grobler  
1:05  LIVE QUESTIONS AND ANSWERS  

Oral Abstract-07  TUBERCULOSIS AND HEPATITIS  
11:15 AM - 1:15 PM EST  

Oral Abstract Moderators  
Constance A. Benson, University of California San Diego, San Diego, CA, USA  
Robert T. Schooley, University of California San Diego, La Jolla, CA, USA  
11:20  INTRODUCTIONS  
130  RIFAPENTINE +/- MOXIFLOXACIN FOR PULMONARY TUBERCULOSIS IN PEOPLE WITH HIV  
11:15  April Pettit, Payam Nahid, Patrick P. Phillips, Andrew Vernon, Ekaterina Kurbatova, Rodney Dawson, Ian Sanne, Ziyaad Waja, Lerato Mohapi, Wadzanai Samaneka, John Johnson, Susan Dormann, Richard E. Chaisson, Susan Swindells, for the TBTC Study 31/ACTG 5349 Study Team  
131  HIGH-DOSE RIFAMPICIN FOR HIV-ASSOCIATED TB MENINGITIS: A PHASE II RANDOMISED TRIAL  
11:30  Fiona Cresswell, David Meya, Enock Kagimu, Daniel Grint, Lindsey te Brake, John Kasibante, Emily Martyn, Morris Rutakingirwa, Lillian Tugume, Kenneth Ssebumbulidde, Elin Svensson, Rob Aarnoutse, Ananta Bangdiwala, Alison Elliott, David Boulware, for the Rift Study
Conference Day 2

132  BICTEGRAVIR CONCENTRATIONS AND VIROLOGIC RESPONSES IN PLWH RECEIVING 1HP FOR LTBI
11:40
Hsin-Yun Sun, Chih-Ning Cheng, Ya-Ting Lin, Wen-Chun Liu, Yu-Chung Chuang, Shu-Wen Lin, Ching-Hua Kuo, Chien-Ching Hung

133  A CLUSTER RANDOMIZED TRIAL OF CONTACT TRACING IN HOUSEHOLDS OF INDEX PATIENTS WITH TB
11:50
Neil A. Martinson, Limakatso Lebina, Emily Webb, Andrew Ratsela, Jonathan Golub, Zama Bosch, Kegaugetswe P. Motsomi, Peter MacPherson

12:00  LIVE QUESTIONS AND ANSWERS

12:10  INTRODUCTIONS

134  A CLUSTER RANDOMIZED TRIAL OF TARGETED UNIVERSAL TESTING FOR TB IN CLINICS
12:15
Limakatso Lebina, Bareng A. Nonyane, Ribka Berhanu, Pren Naidoo, Zameer Brey, Anthony Kinghorn, Sipho Nyathi, Katherine Young, Harry Hausler, Lucy Conell, Leisha Genade, Neil A. Martinson, for the TUTT Team

135  A SIMPLE AND SAFE APPROACH TO HCV TREATMENT: FINDINGS FROM THE A5360 (MINMON) TRIAL
12:25
Sunil S. Solomon, Sandra Wagner-Cardoso, Laura M. Smeaton, Leonard Sowah, Chanelle Wimbish, Gregory Robbins, Irena Brates, Nelson Cheinquer, Anchalee Avihingsanon, Donald Anthony, Benjamin Linas, Susanna Naggie, David Wyles, Mark S. Sulkowski

136  HEPATOCELLULAR CARCINOMA AND HBV VIREMIA IN HIV/HBV-COINFECTED PERSONS IN NA-ACCORD
12:35
H. Nina Kim, Craig W. Newcomb, Dena M. Carbonari, Edward R. Cachay, M John Gill, Mark Hull, Jay R. Kostman, Joseph K. Lim, Michael J. Silverberg, Michael A. Horberg, Angel Mayor, Mari M. Kitahata, Marina B. Klein, Vincent Lo Re, for the North American AIDS Cohort Collaboration on Research and Design (NA-ACCORD) of IeDEA

137  UPRISING CIRCULATION OF HBV-COMPLEX PROFILES WITH HBsAg VACCINE-ESCAPE MUTATIONS
12:45
Lorenzo Piermatteo, Mohammad Alkhatib, Ada Bertoli, Lavinia Fabeni, Miriam Lichtner, Massimo Marignani, Caterina Pasquazzi, Nerio Iapadre, Giustino Parruti, Giuseppina Cappiello, Massimo Andreoni, Loredana Sarmati, Francesca Ceccherini-Silberstein, Valentina Svicher, Romina Salpini

12:55  LIVE QUESTIONS AND ANSWERS

Oral Abstract Moderators
Susan P. Buchbinder, San Francisco Department of Public Health, San Francisco, CA, USA
James McIntyre, Anova Health Institute, Johannesburg, Gauteng, South Africa

11:15  INTRODUCTIONS

138  PHYLOGENETIC ANALYSIS OF THE TIMING OF SARS-CoV-2 INTRODUCTIONS INTO WASHINGTON STATE
11:20
Diana M. Tordoff, Alex Greninger, Pavitra Roychoudhury, Joshua T. Herbeck

139  FROM TESTING TO MORTALITY: COVID-19 AND THE INVERSE CARE LAW IN SWITZERLAND
11:30
Julien Riou, Radoslaw Panczak, Christian Althaus, Christoph Junker, Damir Perisa, Katrin Schneider, Matthias Egger

Oral Abstract-08  COVID EPIDEMIOLOGY AND ITS IMPACT ON HIV CARE AND PREVENTION
11:15 AM - 1:15 PM EST
140 SEX/GENDER DIFFERENCES IN TESTING, PRESENTATION, AND OUTCOMES OF SARS-CoV-2 INFECTION
11:40 Eileen P. Scully, Grant Schumock, Martina Fu, Eili Klein, Sabra L. Klein, Karen Bandeen-Roche, Brian Garibaldi, Amita Gupta, for the CROWN Registry Team

141 RACIAL DISPARITIES IN COVID-19 POSITIVITY AMONG PEOPLE LIVING WITH HIV IN THE US
11:50 Jessica Y. Islam, Vithal Madhira, Jing Sun, Amy L. Olex, Gregory D. Kirk, Nora Franceschini, Rena Patel

12:00 LIVE QUESTIONS AND ANSWERS
12:10 INTRODUCTIONS

142 HIV AND COVID-19 INPATIENT OUTCOMES: A MATCHED RETROSPECTIVE MULTICENTRE ANALYSIS
12:15 Ming J. Lee, Colette Smith, Sarah Fidler, Lynsey C. Goodwin, Lisa Hamzah, Sarah Lawrence, Rebecca Marchant, Adrian Palfreeman, Manish Pareek, Kyle Ring, Luke Snell, John Thornhill, Marie Williamson, Achyuta Nori, for the RECEDE-C19 Study Group

143 CHANGES IN HIV TESTING SERVICES AFTER COVID-19 IN 11 SUB-SAHARAN AFRICAN COUNTRIES

144 DRAMATIC DECLINE IN PUBLIC SECTOR HIV/STI TESTING DURING SARS-CoV-2 PANDEMIC, OREGON
12:35 Timothy W. Menza, Amy Zlot, Jillian Garai, Sarah Humphrey, Josh Ferrer

145 COVID-19 IMPACT ON INDEX TESTING SERVICES IN 5 HIGH HIV PREVALENCE INDIAN DISTRICTS

12:55 LIVE QUESTIONS AND ANSWERS

Oral Abstract-09 PREVENTION 2021
11:15 AM - 1:15 PM EST

Oral Abstract Moderators
Raphael J. Landovitz, University of California Los Angeles, Los Angeles, CA, USA
Landon Myer, University of Cape Town, Cape Town, South Africa

11:15 INTRODUCTIONS

146 IMPACT OF VAGINAL STIs ON bNab PROTECTION IN MACAQUES
11:20 David A. Garber, Sundaram A. Vishwanathan, Patricia Guenthner, Chunxia Zhao, James Mitchell, Shanon Ellis, Marcos Manganare, Michael Seaman, Michel Nussenzweig, Walid Heneine, Janet McNicholl

147 PHASE 1 PK, SAFETY, AND ACCEPTABILITY STUDY OF 3-MONTH DAPIVIRINE VAGINAL RINGS
11:30 Albert Liu, Clara Dominguez Islas, Holly Gundacker, Craig Hoesly, Ariane Van der Straten, Craig Hendrix, May Beamer, Cindy Jacobson, Tara McClure, Tanya Harrell, Katherine Bunge, John Steytler, Jeremy Nuttall, Jeanna Pliper, Mark Marzinke
148  INCIDENCE OF HIV INFECTION WITH DAILY OR ON-DEMAND ORAL PrEP WITH TDF/FTC IN FRANCE
11:40
Jean-Michel Molina, Jade Ghosn, Constance Delaugerre, Gilles Pialoux, Christine Katlama, Laurence Slama, Claire Pintado, Michel Ohayon, Hannane Mouhim, Lambert Assoumou, Bruno Spire, Mohamed Ben Mechlia, Daniela Rojas Castro, Dominique Costagliola, for the ANRS Prevenir Study Group

149  IMPACT OF COMMON SIDE EFFECTS ON PrEP PERSISTENCE DURING PREGNANCY IN SOUTH AFRICA
11:50
Dvora L. Joseph Davey, Rufaro Mvududu, Nyiko Mashele, Maia Lesosky, Linda-Gail Bekker, Pamina M. Gorbach, Thomas J. Coates, Landon Myer, for the PrEP-PP Study Team

150  COST-EFFECTIVENESS OF LONG-ACTING PrEP AMONG MSM/TGW IN THE US
12:15
Anne M. Neilan, Raphael J. Landovitz, Mylinh H. Le, Beatriz Grinsztejn, Kenneth Freedberg, Marybeth McCauley, Nattanicha Wattananimitgul, Myron S. Cohen, Andrea Ciaramello, David Paltiel, Rochelle P. Walensky

151  SOCIAL NETWORKS PREDICT PrEP UPTAKE IN SEARCH STUDY IN RURAL KENYA AND UGANDA
12:25
Catherine A. Koss, Joshua R. Nugent, Lillian B. Brown, James Ayieko, Jane Kabami, Mucunguzi Atukunda, Edwin D. Charlebois, Florence Mwangwa, Gabriel Chamie, Craig Cohen, Elizabeth A. Bukusi, Maya L. Petersen, Moses R. Kamya, Diane V. Havlir, Laura B. Balzer

152  HSV-2 ACQUISITION IN A RANDOMIZED TRIAL OF CONTRACEPTIVE METHODS AMONG AFRICAN WOMEN
12:35
Nelly R. Mugo, Renee Heffron, Helen V. Rees, Caitlin Scoville, Charles Morrison, Athena Kourtis, Elizabeth A. Bukusi, Maggs Bekinkina, Neena M. Philip, Ivana Beesham, Jen Deese, Vinodh Edward, Deborah Donnell, Jared Baeten, for the ECHO Trial Consortium

153  LABORATORY ANALYSIS OF HIV INFECTIONS IN HPTN 083: INJECTABLE CAB FOR PrEP
12:45
Mark Marzinke, Beatriz Grinsztejn, Jessica Fogel, Estelle M. Piwowar-Manning, Brett Hanscom, Lara Coelho, Myron S. Cohen, Alex R. Rinehart, James F. Rooney, Adeola Adeyeye, Peter Anderson, Marybeth McCauley, Raphael J. Landovitz, Susan Eshleman, for the HPTN 083 Study Team

12:55  LIVE QUESTIONS AND ANSWERS

154  Interactive Session-04  HIV-1 AND SARS-CoV-2: DURABILITY OF HOST IMMUNE RESPONSES FROM VACCINATION OR INFECTION
1:30 PM - 2:30 PM EST

38-Description: This highly interactive session begins with a brief overview of the issue or controversy. The scientific experts each offer opinions or observations in a 5-minute summary, followed by a 30-minute, spirited discussion among the panel members. The moderator will bring in comments and questions from the audience. This session will address the waning immunity in SARS-CoV-2–infected populations, T-cell immunity in SARS-CoV-2, population-level immunity, programming durable immunity, and pathological B-cell activation during SARS-CoV-2 infection.

Target Audience: This session is directed at basic scientists, clinicians, and epidemiologists interested in HIV and SARS-CoV-2 immunity.

Level of Knowledge: It is assumed that the participants are familiar with SARS-CoV-2 infection- and vaccine-induced immunity.
Objectives: At the conclusion of the session, participants should be able to:
• Describe the importance of durability of immunity in natural infection and vaccination
• Describe the remarkable differences in durability of various vaccines
• Describe knowledge on vaccine approaches to enhance durability to SARS-CoV-2

Moderators
Galit Alter, Ragon Institute of MGH, MIT and Harvard, Cambridge, MA, USA
Guido Silvestri, Emory University, Atlanta, GA, USA

• HUMORAL RESPONSES AGAINST THE SARS-CoV-2 SPIKE
  Andrés Finzi, University of Montreal, Montreal, Canada

• T-CELL IMMUNITY IN SARS-CoV-2 NATURAL INFECTION AND FOLLOWING VACCINATION
  Julie McElrath, Fred Hutchinson Cancer Research Center, Seattle, WA, USA

• LONGITUDINAL ANTIBODY RESPONSES TO SARS-CoV-2 AND EMERGING VARIANTS
  Katie Doores, King’s College London, London, United Kingdom

• PROGRAMMING DURABLE IMMUNITY
  Robert Seder, Vaccine Research Center, Bethesda, MD, USA

• PATHOLOGICAL B-CELL ACTIVATION DURING SARS-CoV-2 INFECTION
  Ignacio Sanz, Emory University, Atlanta, GA, USA

Interactive Session-05  FROM DAILY PILLS TO MONTHLY SHOT FOR HIV PREVENTION AND TREATMENT: CAN EFFICACY BE TRANSLATED INTO EFFECTIVENESS?
1:30 PM - 2:30 PM EST

39-Description: This panel discussion will address the challenges of long-acting agents for HIV prevention and treatment at the clinic and population levels. The panel will present insights into the use of these agents, the latest information on pharmacokinetic and drug resistance considerations, and perspectives on implementation considerations from US and global physicians.

Target Audience: This session is directed at practicing clinicians involved in treatment and prevention of HIV.

Level of Knowledge: It is assumed that the participants are familiar with the basic information, including the results of relevant prevention and treatment clinical trials such as Discover, HPTN 083, ATLAS, and FLAIR.

Objectives: At the completion of the session, participants will be able to:
• Identify the challenges in implementing long-acting antiretroviral therapies (LA-ART) for HIV treatment and prevention
• Describe the pharmacokinetics of LA-ART, the concept of the “tail,” and the implications for drug resistance
• List the populations that will benefit most from the use of LA-ART for treatment and prevention
Interactive Session-06  PrEP SCALE-UP TO MEET UNAIDS 2030 GOAL: IT JUST ISN’T POSSIBLE—OR IS IT?
1:30 PM - 2:30 PM EST

40-Description: This interactive discussion will highlight the challenges that need to be overcome to achieve the 2030 UNAIDS targets. Opportunities and challenges to meeting these goals via a singular focus on antiretroviral treatment for people with HIV (ie, absent biomedical prevention scale-up) or in partnership with biomedical prevention will be highlighted, using recent randomized clinical trial data on treatment as prevention (TasP) programs, and recent programmatic accomplishments in pre-exposure prophylaxis (PrEP) scale-up as starting points for discussion.

Target Audience: This session is directed at clinicians, policy makers, public health officials, non-governmental organizations, and stakeholders and consumers of HIV treatment and prevention services.

Level of Knowledge: It is assumed that the participants are familiar with data supporting HIV treatment as prevention, data supporting efficacy and safety of, and implementation challenges associated with, HIV PrEP, and global HIV epidemiology and resource constraints.

Objectives: At the completion of the session, participants should be able to:
• Identify the opportunities for and barriers to reaching the UNAIDS 2030 goals
• Describe the current status and limitations of TasP as an HIV prevention strategy given recent randomized controlled trial data
• Describe the successes and challenges of PrEP scale-up in well-resourced and resource-constrained contexts

• SETTING THE STAGE: UNAIDS 2030 GOALS AND CURRENT STATE OF THE EPIDEMIC
Moderator: Sheena McCormack, University College London, London, United Kingdom
ON-DEMAND SYMPOSIA RELEASED ON TUESDAY MARCH 9, 2021

Symposium-05 IMMUNE-MEDIATING KILLING OF HIV RESERVOIRS: OPPORTUNITIES AND OBSTACLES

Target Audience: This session is directed at scientists and clinicians who are interested in understanding why immune responses cannot eradicate HIV during antiretroviral therapy (ART).

Level of Knowledge: It is assumed that the participants are familiar with the concepts of HIV persistence and innate and adaptive immune responses against HIV.

Objectives: At the completion of this session, participants will be able to:
- Identify intrinsic cellular mechanisms that contribute to the resistance of reservoir cells to immune-mediated killing
- Identify the reasons that CD8 T cells do not efficiently eliminate infected cells during ART
- Describe novel strategies to circumvent this resistance, including the disruption of B-cell follicles
- Describe the changes in innate immune pressure on HIV over time, and how this impacts virus rebound

Conveners
Nicolas Chomont, Université de Montréal, Montreal, Quebec, Canada
Katharine J. Bar, University of Pennsylvania, Philadelphia, PA, USA

42 HOW TO GENERATE GOOD KILLERS BY INITIATING ART (NOT TOO) EARLY?
Lydie Trautmann, Oregon Health Sciences University, Portland, OR, USA

43 BREAKING THE B-CELL FOLLICLE BARRIER TO ELIMINATE VIRAL RESERVOIRS
Afat Okoye, Oregon Health Sciences University, Portland, OR, USA

41 INTRINSIC RESISTANCE OF RESERVOIR CELLS TO IMMUNE KILLING
R. Brad Jones, Weill Cornell Medicine, New York, NY, USA

44 TYPE I INTERFERON RESISTANCE OF REBOUND HIV-1
Beatrice H. Hahn, University of Pennsylvania, Philadelphia, PA, USA
Symposium-06  NOVEL ANTIVIRAL STRATEGIES AND HOW TO DEPLOY THEM

Target Audience: This session is directed at clinicians and translational scientists engaged in the treatment of HIV, SARS-CoV-2, or both infections.

Level of Knowledge: It is assumed that the participants are familiar with currently available antiviral therapy for each of these pandemic viral infections.

Objectives: At the completion of the session, participants should be able to:
- Describe available 2-drug antiretroviral combinations and the data that support their use
- Identify the novel antiretroviral agents in clinical development and understand their mechanisms of action
- Discuss antiretroviral agents in use and in development for prevention and treatment of HIV infection in neonates and infants
- Describe the antiviral agents active against SARS-CoV-2 in clinical development and list their mechanisms of action

Conveners
Joseph J. Eron, University of North Carolina at Chapel Hill, Chapel Hill, NC, USA
Huldrych F. Günthard, University Hospital Zurich, Zurich, Switzerland

45  TRIPLE DRUG ART, DUAL ART, OR JUST ART?
Jose R. Arribas, Hospital Universitario La Paz, IdiPAZ, Madrid, Spain

46  NOVEL ANTIRETROVIRAL THERAPIES IN CLINICAL DEVELOPMENT
Alexandra L. Calmy, University Hospital Geneva, Geneva, Switzerland

47  ARVs AND ART FOR NEWBORNs AND INFANTS: A LAST FRONTIER
Moherndran Archary, University of KwaZulu-Natal, Durban, South Africa

48  GOT ANYTHING FOR THIS COUGH? NEW ANTIVIRALS FOR TREATMENT OF SARS-CoV-2
Davey M. Smith, University of California San Diego, San Diego, CA, USA

Symposium-07 COVID-19: FAR MORE THAN JUST THE LUNGS

Target Audience: This session is directed at clinicians and investigators with an interest in the broad spectrum of clinical manifestations of COVID-19 in adults and children.

Level of Knowledge: It is assumed that participants are familiar with general concepts of the human vasculature and inflammation and have a general understanding of central nervous system and cardiac disease.

Objectives: At the conclusion of the session, participants should be able to:
- Describe the concept of how SARS-CoV-2 interacts with the endothelium and how this may underlie COVID-19 disease manifestations and provide opportunities for therapeutic interventions
- Describe the main pathogenic and clinical features of multisystem inflammatory syndrome and its management in children
• Describe the current understanding of the pathogenesis and main clinical features of neurologic complications of COVID-19 and potential long-term neurologic and neuropsychiatric complications

• Describe the current thinking about the pathogenesis and clinical features of cardiac complications of COVID-19 as well as their potential impact for long-term health

Conveners
Serena S. Spudich, Yale University, New Haven, CT, USA
Peter Reiss, Amsterdam University Medical Centers, Amsterdam, Netherlands

49 SINGLE VASCULAR CELL HETEROGENEITY IN HEALTH AND DISEASE: A COVID-19 UPDATE
Peter Carmeliet, University of Leuven, Leuven, Belgium

50 BODY ON FIRE: MULTISYSTEM INFLAMMATORY SYNDROME IN CHILDREN
Elizabeth A. Whittaker, Imperial College London, London, United Kingdom

51 THINK ABOUT IT: NEUROLOGIC MANIFESTATIONS OF COVID-19
Benedict D. Michael, University of Liverpool, Liverpool, United Kingdom

52 COVID-19: CONCERNS OF THE HEART
Valentina O. Puntmann, Goethe University, Frankfurt, Germany

Symposium-08 WHAT DOES PrEP DELIVER? CME

Target Audience: This session is directed at researchers, clinicians, and advocates interested in biomedical prevention of HIV infection via preexposure prophylaxis (PrEP).

Level of Knowledge: It is assumed that participants have a knowledge of PrEP modalities, including old and emerging ones.

Objectives: At the completion of the session, participants will be able to:

• Describe key barriers and facilitators to PrEP initiation, adherence, and persistence in different populations worldwide, including key populations

• Describe PrEP programs and unique issues for young women and adolescent girls in South Africa

• Identify key aspects of community, pharmacy, and clinic PrEP delivery models as exemplified by the SEARCH study in East Africa

• Describe the key drivers of PrEP cost effectiveness in terms of populations, drugs, and delivery models

Conveners
Connie L. Celum, University of Washington, Seattle, WA, USA
Monica Gandhi, University of California San Francisco, San Francisco, CA, USA

53 YOUNG WOMEN: ADHERENCE, EFFECT, AND RETENTION
Thesla Palanee-Phillips, Wits Reproductive Health and HIV Institute, Johannesburg, South Africa
54  CHALLENGES AND OPPORTUNITIES IN IMPLEMENTING PrEP IN KEY POPULATIONS
Gregorio A. Millett, amfAR, Washington, DC, USA

55  MODELS OF DELIVERING PrEP IN EAST AFRICA: INNOVATIONS AND LESSONS LEARNED
Moses R. Kamya, Makerere University College of Health Sciences, Kampala, Uganda

56  INCORPORATING INJECTABLE PrEP AND NEWER FORMULATIONS INTO LMIC
Yogan Pillay, Clinton Health Access Initiative, South Africa
WEDNESDAY MARCH 10, 2021

Plenary Session-3  WEDNESDAY PLENARY SESSION 10:00 AM - 11:00 AM EST

Session Hosts
Nicolas Chomont, Université de Montréal, Montreal, Canada
Elaine J. Abrams, ICAP at Columbia University, New York, NY, USA

10:00  WELCOME AND DAILY ROADMAP
James A. Hoxie, University of Pennsylvania, Philadelphia, PA, USA

57  ELITE CONTROLLERS: A MODEL FOR A FUNCTIONAL CURE OF HIV-1 INFECTION
10:10  Xu Yu, Ragon Institute of MGH, MIT and Harvard, Cambridge, MA, USA

58  HIV TREATMENT IN PREGNANCY: BEYOND PREVENTION OF VERTICAL TRANSMISSION
10:35  Shahin Lockman, Brigham and Women’s Hospital, Boston, MA, USA

Oral Abstract-10  HIV RESERVOIRS 11:15 AM - 1:15 PM EST

Oral Abstract Moderators
Douglas D. Richman, University of California San Diego, La Jolla, CA, USA
Katharine J. Bar, University of Pennsylvania, Philadelphia, PA, USA

11:15  INTRODUCTIONS

154  INFECTED CELLS ARE CLONOTYPICALLY DIVERSE IN BLOOD & LYMPH NODES SINCE FIEBIG STAGE I

155  EVOLUTIONARY DYNAMICS OF HIV RESERVOIR CELLS VIA A NOVEL SINGLE-CELL MULTIMETRICS ASSAY
11:30  Kevin B. Einkauf, Matthew Osborn, Ce Gao, Elizabeth Parsons, Chenyang Jiang, Xiaodong Lian, Xiaoming Sun, Jane E. Blackmer, Eric S. Rosenberg, Xu Yu, Mathias Lichterfeld

156  NONINVASIVE PLASMA GLYCOMIC AND METABOLIC BIOMARKERS OF POSTTREATMENT HIV CONTROL
11:40  Leila B. Giron, Clovis S. Palmer, Qin Li, Xiangfan Yin, Emmanouil Papasavvas, Mohammad Damra, Aaron R. Goldman, Hsin-Yao Tang, Rowena Johnston, Karam Mounzer, Alan Landay, Luis J. Montaner, Jeffrey Jacobson, Jonathan Li, Mohamed Abdel-Mohsen

157  PD-1 BLOCKADE ENHANCES THERAPEUTIC BENEFITS OF VACCINE IN A CHRONIC SIV/MACAQUE MODEL
12:00  LIVE QUESTIONS AND ANSWERS

12:10  INTRODUCTIONS

158  TYPE I INTERFERON-ASSOCIATED GENE EXPRESSION PREDICTS TIME TO VIRAL REBOUND ON TI

Penny Zacharopoulou, Emanuele Marchi, Ane Ogbe, Nicola Robinson, Helen Brown, Mathew Jones, Lucia Parolini, Matthew Pace, Nicholas Grayson, Pontiano Kaleebu, Helen V. Rees, Sarah Fidler, Goulder Philip, Paul Klenerman, John Frater

159  HIV-1 PROVIRUS CANNOT BE REACTIVATED IN PATIENTS ON TREATMENT WITH ART AND DASATINIB

Lorena Vigón, Paula Martínez-Román, Juan Ambrosioni, Antonio Navarro, Adam Spivak, Miguel Cervero, Jose M. Miro, Paula Prieto, Christoph Wyen, Christian Hoffmann, José Alcamí, Verónica Briz, Vicente Planelles, Maria Rosa López-Huertas, Mayte Coiras

160  DURABLE HIV-1 ANTIBODY PRODUCTION IN HUMANS AFTER AAV8-MEDIATED GENE TRANSFER

Joseph P. Casazza, Evan M. Cale, Sandeep Narpala, Laura Novik, Galina V. Yamschikov, Bob C. Lin, Janardan P. Pandey, Adrian McDermott, Mario R. Roederer, Alejandro Balazs, David Baltimore, Richard A. Koup, Julie E. Ledgerwood, John R. Mascola, for the VRC603 Team

161  A PLACEBO-CONTROLLED ATI TRIAL OF HTI VACCINES IN EARLY TREATED HIV INFECTION

Lucia Bailon, Anuska Llano, Samandhy Cedeño, Miriam B. Lopez, Yovaninna Alarcon, Pep Coll, Ángel Rivero, Anne R. Leselbaum, Ian McGoowan, Devi SenGupta, Bonaventura Clotet, Christian Brander, Jose Molto, Beatriz Mothe, for the AELIX-002 Trial Group

12:55  LIVE QUESTIONS AND ANSWERS

Oral Abstract-11  BRAIN CONNECTIONS, MALIGNANCIES, AND TUMOR VIRUSES

11:15 AM - 1:15 PM EST

Oral Abstract Moderators

Dennis L. Kolson, University of Pennsylvania, Philadelphia, PA, USA

Ronald T. Mitsuyasu, University of California Los Angeles, Los Angeles, CA, USA

11:15  INTRODUCTIONS

162  NEURON DAMAGE AND RESERVOIR ARE SECONDARY TO HIV TRANSCRIPTS DESPITE SUPPRESSIVE ART

Kazuo Suzuki, John Zaunders, Angelique Levert, Shannen Butterly, Zhixin Liu, Takaomi Ishida, Chin-Shiou Huang, Thomas Gates, Caroline Rae, Lauriane Jugé, Lucette A. Cysique, Bruce Brew

163  3T BRAIN MRS REVEALS DISTINCT METABOLITE PATTERNS OF ART INITIATION DURING ACUTE HIV

Napapon Sailasuta, Torie Tsuei, Carlo Sacdalan, Eugene Kroon, Kultida Poitavee, Nittaya Phanuphak, Shayanee Martin, Jintanat Ananworanich, Victor Valcour, Sandhya Vasen, Mantana Pothisri, Netsiri Dumrongpisutikul, Serena S. Spudich, Robert Paul, for the SEARCH 010/ RV254 Study Team

164  EFFECTS OF HIV AND AGING ON FUNCTIONAL CONNECTIVITY AND ANATOMY

Patrick H. Luckett, Kayla Hannon, John J. Lee, Robert Paul, Joshua S. Shimony, Karin L. Meeker, Sarah Cooley, Beau M. Ances
165  DIVERGENT AND SELF-REACTIVE IMMUNE RESPONSES IN THE CNS OF COVID-19 PATIENTS
11:50  Eric Song, Christopher Bartley, Ryan Chow, Thomas Ngo, Ruoyi Jiang, Colin Zamecnik, Ravi Dandekar, Lindsay McAlpine, Serena S. Spudich, Joseph DeRisi, Akiko Iwasaki, Samuel Pleasure, Michael Wilson, Shelli F. Farhadian, for the Yale IMPACT Team

12:00  LIVE QUESTIONS AND ANSWERS

12:10  INTRODUCTIONS

166  CHROMOSOMAL COPY NUMBER ALTERATIONS IN ANAL PRECANCERS FROM PEOPLE WITH HIV
12:15  Tinaye Mutetwa, Rosa Karlic, Jane Houldsworth, Anne M. Bowcock, Michael M. Gaia, Yuxin Liu, Paz Polak, Keith Sigel

167  POMALIDOMIDE AND LIPOSOMAL DOXORUBICIN FOR KAPOSI SARCOMA +/- OTHER KSHV DISEASES
12:25  Ramya Ramaswami, Kathryn Lurain, Anaïda Widell, Priscila Goncalves, Irene Ekwede, William D. Figg, Cody Peer, Ralph Manguson, Jomy George, Seth Steinberg, Denise Whitby, Thomas S. Uldrick, Robert Yarchoan

12:35  VAGINAL pH PREDICTS CERVICAL INTRAEPITHELIAL NEOPLASIA-2 REGRESSION IN HIV+ WOMEN

12:55  INFLAMMASOME ACTIVATION IN PATIENTS WITH KSHV-ASSOCIATED DISORDERS
13:05  Ramya Ramaswami, Silvia Lage, Kathryn Lurain, Joseph Rocco, Maura Manion, Robert Yarchoan, Irini Sereti

Oral Abstract-12  MATERNAL AND CHILD HIV AND SARS-CoV-2
11:15 AM - 1:15 PM EST

Oral Abstract Moderators
Landon Myer, University of Cape Town, Cape Town, South Africa
Hermione Lyall, Imperial College Healthcare National Health Service Trust, London, United Kingdom

11:15  INTRODUCTIONS

171  COVID-19 INFECTION IN HIGH-RISK SOUTH AFRICAN PREGNANCIES WITH AND WITHOUT HIV

172  CHARACTERISATION OF SARS-CoV-2-INFECTED CHILDREN DEVELOPING NEUTRALISING ANTIBODIES
11:30  Alessandra Ruggiero, Nicola Cotugno, Bonfante Francesco, Maria Raffaella Petra, Giuseppe R. Pascucci, Veronica Santilli, Emma Manno, Carlo Concato, Giulia Linardos, Daniele Donà, Carlo Giaquinto, Petter Brodin, Paolo Rossi, Anita De Rossi, Paolo Palma
173  PEDIATRIC AND ADOLESCENT HIV TESTING AND DIAGNOSIS IN THE CONTEXT OF COVID-19
11:40
Jessica M. Gross, Susan Hrpecak, Emilia Rivadeneira, Meena Srivastava, Michael Grillo, Gurpreet Kindra, Jacobus Olivier, Maria Deus, Nelly Honwana, Esther Nazziwa, Madina Apolot, Magdalene Mayer, Amy Medley

174  Dolutegravir-Based ART is Superior to NNRTI/PI-Based ART in Children and Adolescents
11:50
Anna Turkova, for the ODYSSEY/PENTA-20 Trial Team

12:00  LIVE QUESTIONS AND ANSWERS

12:10  INTRODUCTIONS

175  DoloPHIN2 Final Results Dolutegravir vs Efavirenz in Late Pregnancy to 72W Postpartum
12:15
Thokozile R. Malaba, Irene Nakatudde, Kenneth Kintu, Tao Chen, Sabrina Bakeera-Kitaka, Lucy Read, Helen Reynolds, Angela Colbers, Kelly Byrne, Duolao Wang, Catriona Waith, Catherine Orrell, Mohammed Lamorde, Landon Myer, Saye Khoo

176  Antepartum Weight Gain and Adverse Pregnancy Outcomes in IMPAACT 2010
12:25
Risa M. Hoffman, Lauren Ziemia, Sean Brummel, Lameck Chinula, Teacher G. Nematalzida, Frances Nakayiwa, Jeff Stringer, Chelsea Krotje, Patrick Jean-Philippe, Anne Coletti, Rebecca Zash, Roger Shapiro, Paul Sax, Judith S. Currier, Shahin Lockman

177  SAFETY/EFFICACY OF DTG VS EFV, TDF VS TAF IN PREGNANCY/POSTPARTUM: IMPAACT 2010 Trial
12:45
Lameck Chinula, Sean Brummel, Lauren Ziemia, Katie McCarthy, Benjamin Johnston, Nahid Chakhtoura, Patrick Jean-Philippe, Lynda Stranix-Chibanda, Violet Korutaro, Haseena Cassim, Fairlie Lee, Gaerolwe Masheto, Paul Sax, Judith S. Currier, Shahin Lockman

178  ADVERSE PREGNANCY OUTCOMES AMONG HIV-INFECTED WOMEN EXPOSED TO ISONIAZID IN BRIEF-TB
12:45
Amita Gupta, Michael Hughes, Jorge T. Leon-Cruz, Anchalee Avihingsanon, Noluthando Mwelase, Patrice Severe, Ayotunde Omo-Oarhe, Gaerolwe Masheto, Laura Moran, Constance A. Benson, Richard E. Chaisson, Susan Swindells, for the ACTG 5279 BRIEF TB Trial

12:55  LIVE QUESTIONS AND ANSWERS

Oral Abstract-13  INNOVATIONS AND CHALLENGES IN TESTING, PREVENTION, AND CARE
11:15 AM - 1:15 PM EST

Oral Abstract Moderators
Jonathan Mermin, Centers for Disease Control and Prevention, Atlanta, GA, USA
Wafaa M. El-Sadr, Columbia University, New York, NY, USA

11:15  INTRODUCTIONS

179  PreP Use During Acute HIV Infection in a Community Setting Compromises HIV Diagnosis
11:20
Donn J. Colby, Suteeraporn Pinyakorn, Ratchapong Kanaprach, Sasiwimol Ubolyam, Tippawan Pankam, Kultida Poltavee, Eugene Kroon, Carlo Sacdalan, Nittiya Chomcheay, Jintanat Ananworanich, Siriwat Akapirat, Sandhya Vasan, Nittaya Phanuphak, Mark de Souza, for the RV254/SEARCH010 Research Group
A CLUSTER-RANDOMIZED TRIAL OF TRADITIONAL HEALERS DELIVERING HIV TESTING IN UGANDA

Radhika Sundararajan, Juliet Mwanga-Amumpaire, Matthew Ponticiello, Myung Hee Lee, Steffanie Strathdee, Winnie Muyindike, Denis Nansera, Rachel King, Daniel Fitzgerald

HIV SELF-TESTING TO OPTIMIZE FACILITY TESTING: A CLUSTER-RANDOMIZED TRIAL IN MALAWI

Kathryn Dovel, Sundeeup Gupta, Christian Stillson, Misheck Mphande, Kelvin Balakasi, Isabella Robson, Chi-Hong Tseng, Alemayehu Amberbir, Leslie Berman, Shaukat Khan Khan, Joep J. Van Oosterhout, Naoko Doi, Brooke Nichols

COMMUNITY MULTIMONTH ART PROVISION: POOLED ANALYSIS OF 2 CLUSTER-RANDOMIZED TRIALS

John Lopes, Nicoletta Mabhena-Ngorima, Appolinaire Tiam, Betty Tukei, Pedro Pisa, Vincent Tukei, Khotso Maile, Charles Chasela, Ashraf Grimwood, Geoffrey Fatti

LIVE QUESTIONS AND ANSWERS

INTRODUCTIONS

POINT-OF-CARE URINE TENOFOVIR VERSUS SELF-REPORTED ART ADHERENCE IN ROUTINE HIV CARE

Tamsin K. Phillips, Yolanda Gomba, David Huang, Landon Myer

RAPID VS SAME-DAY TREATMENT INITIATION FOR PATIENTS WITH TB SYMPTOMS AT HIV DIAGNOSIS

Nancy Dorvil, Cynthia Riviere, Patrice Severe, Heejung Bang, Jessy Devieux, Kerlyne Lavoille, Stephanie Bousleiman, Etienne Cremieux, Emelyne Dumont, Alexandra Apollon, Benedict Charles, Giovanni Saintyl, Mikerylene Faustin, Jean W. Pape, Serena Koenig

COMMUNITY DISTRIBUTION OF ART DURING CIVIL UNREST AND COVID-19 IN HAITI

Patrice Joseph, Ho Chi Ching Cheung, Neil Sequiera, Jean Edouard Mathon, Marc-Antoine Jean-Juste, Youry Macius, Rode Secours, Colette Guiteau, Karine Severe, Nancy Dorvil, Eli Maxime Francois, Adias Marcelin, Rose-Irene Verdier, Marie Marcelle Deschamps, Jean W. Pape

RESILIENCE OF HIV ACTIVITIES DURING COVID-19 PANDEMIC AT HEALTH FACILITIES IN AFRICA


LIVE QUESTIONS AND ANSWERS

Interactive Session-07 SARS-CoV-2 AND THE HOST IMMUNE RESPONSE: GOOD VS BAD IMMUNITY

1:30 PM - 2:30 PM EST

59-Description: This highly interactive session begins with a brief overview of the issue or controversy. The scientific experts each offer opinions or observations in a 5-minute summary, followed by a 30-minute, spirited discussion among the panel members. The moderator will bring in comments and questions from the audience. This session will address several aspects of the immunity directed to SARS-CoV-2, including innate, humoral, and cellular immune responses.

Target Audience: This session is directed at basic scientists and clinicians who have interest in immune responses to SARS-CoV-2.

Level of Knowledge: It is assumed that the participants are familiar with basic concepts in innate and adaptive immune responses.
Objectives: At the end of the session, participants should be able to:

- Describe the nature, timing, and impact of the innate and adaptive immune responses that emerge following infection with SARS-CoV-2
- Identify beneficial and detrimental immune factors that modulate the pathogenesis of SARS-CoV-2 infection
- Discuss the interactions between innate and adaptive immune responses during SARS-CoV-2 infection

Moderators

Richard A. Koup, National Institute of Allergy and Infectious Diseases, Bethesda, MD, USA
Nicolas Chomont, Université de Montréal, Montreal, Canada

- SARS-CoV-2 DEBRIS AND ITS CONTRIBUTION TO COVID-19
  Benjamin tenOever, Icahn School of Medicine at Mount Sinai, New York, NY, USA
- TOWARD SWEET THERAPIES FOR SOUR IMMUNOPATHOLOGIES IN COVID-19
  Catherine Blish, Stanford University School of Medicine, Stanford, CA, USA
- AFUCOSYLATED IgG RESPONSES AND SEVERITY IN COVID-19
  Gestur Vidarsson, University of Amsterdam, Amsterdam, Netherlands
- ANTICIPATING ESCAPE PATHWAYS FOR SARS-CoV-2
  Julie Overbaugh, Fred Hutchinson Cancer Research Center, Seattle, WA, USA
- THE SPECTRUM OF T CELL RESPONSES TO SARS-CoV-2
  Marcus Buggert, Karolinska Institutet, Stockholm, Sweden

Interactive Session-08 COVID-19 CLINICAL CONTROVERSIES  CME

60-Description: Using illustrative case vignettes, a panel of experts will have a moderated and lively exchange of what they consider to be optimal treatment strategies and what issues require our attention in terms of potential long-term health concerns once patients recover from the acute episode of illness.

Target Audience: This session is directed at clinicians and other health care professionals with an interest in the management of persons affected by COVID-19.

Level of Knowledge: It is assumed that the participants are familiar with general concepts of the clinical management of patients with signs and symptoms of systemic illness and the major trials of COVID-19 therapies published to date.

Objectives: At the completion of the session, participants should be able to:

- Describe the potential controversies and dilemmas when deciding to administer which therapies to which patient, at what time, and in which setting during the course of illness
- Identify the knowns, unknowns, and the needs for future research concerning what may constitute persistent symptoms post-COVID-19

Case Presenters and Discussion Moderators

Roy M. Gulick, Weill Cornell Medical College, New York, NY, USA
Paul E. Sax, Brigham and Women’s Hospital, Boston, MA, USA

Panelists

Karine Lacombe, Saint-Antoine Hospital, Paris, France
Zarir Udwadia, Hinduja Hospital and Medical Research Center, Mumbai, India
Claudia Cortes, University of Chile, Santiago, Chile
• CASE 1: TREATMENT APPROACHES FOR A PATIENT WITH COVID-19 INFECTION

• CASE 2: LONG-TERM OUTCOMES WITH A PATIENT WHO RECOVERS FROM COVID-19 INFECTION

Interactive Session-09  COVID-19 DISPARITIES: HOW CAN THEY HELP MOVE THE NEEDLE FORWARD?
1:30 PM - 2:30 PM EST

61-Description: This session will summarize critical data on the SARS-CoV-2 pandemic among several populations that experience disproportionate burdens of morbidity and mortality due to COVID-19. Speakers will also give recommendations for key interventions that could substantially decrease these disparities and participate in an interactive panel discussion with audience participation.

Target Audience: This session is directed at HIV and SARS-CoV-2 researchers, clinicians, and community advocates to learn about disparities in SARS-CoV-2 and how to address them.

Level of Knowledge: It is assumed that the participants are familiar with some of the basic principles in SARS-CoV-2 transmission and prevention as well as the disproportionate outcome this infection is having on marginalized communities, especially in the United States.

Objectives: At the completion of the session, participants will be able to:
• Describe racial and ethnic disparities in SARS-CoV-2 infection rates and disease outcomes in the United States
• Identify how COVID-19 has impacted incarcerated populations worldwide, with a special emphasis on the United States
• Describe the impact of COVID-19 on indigenous communities worldwide, with an emphasis on Native American communities in the United States

Moderators
Adaora Adimora, University of North Carolina at Chapel Hill, Chapel Hill, NC, USA
Monica Gandhi, University of California San Francisco, San Francisco, CA, USA

• DISPARITIES IN COVID-19 AMONG RACIAL AND ETHNIC MINORITIES IN THE US
Mary T. Bassett, Harvard T.H. Chan School of Public Health, Boston, MA, USA

• DISPARITIES IN COVID-19 IN NATIVE AMERICAN COMMUNITIES
David R. Wilson, National Institutes of Health, Bethesda, MD, USA

• INCARCERATED POPULATIONS AND COVID-19
Robert E. Fullilove, Columbia University Medical Center, New York, NY, USA

ON-DEMAND SYMPOSIA RELEASED ON WEDNESDAY MARCH 10, 2021

Symposium-09  NEW FINDINGS AND UNSETTLED CONTROVERSIES IN CENTRAL NERVOUS SYSTEM INFECTION AND DISEASE

Target Audience: This session is directed at researchers and clinicians interested in understanding the neuropathogenesis of HIV and the role of the central nervous system (CNS) as a potential reservoir and barrier to achieving HIV remission or cure.
Level of Knowledge: It is assumed that the participants are familiar with basic HIV biology, HIV latency and replication, control of HIV replication by antiretroviral therapy, and the concept that HIV can infect cells trafficking into, or persisting within, the CNS.

Objectives: At the completion of this session, attendees should be able to:
- Describe the relationship between microglia and neurons in the development of brain injury and their potential roles in maintenance of HIV infection in the brain
- Describe the potential roles for CD4+ T lymphocytes and macrophages in SIV neuropathogenesis
- Identify the evidence for early myeloid reservoirs for HIV within the CNS and their relevance to HIV cure
- Define the syndrome of CNS HIV escape and the evidence gained from examination of escape viruses that provides insight into CNS HIV persistence

Conveners
Dennis L. Kolson, University of Pennsylvania, Philadelphia, PA, USA
Serena S. Spudich, Yale University, New Haven, CT, USA

62 NOVEL FINDINGS OF NEURONAL MODULATION OF HIV EXPRESSION IN MICROGLIA
Jonathan Karn, Case Western Reserve University, Cleveland, OH, USA

63 ROLE OF CNS CD4 T CELLS AND MACROPHAGES IN SIV NEUROPATHOGENESIS AND RESERVOIRS
Vanessa M. Hirsch, National Institutes of Health, Bethesda, MD, USA

64 MYELOID CNS HIV RESERVOIRS...THE DEBATE CONTINUES
Lishomwa Ndhlovu, Weill Cornell Medicine, New York, NY, USA

65 LESSONS FROM CNS HIV ESCAPE AND ATI FOR UNDERSTANDING HIV PERSISTENCE IN THE CNS
Sarah B. Joseph, University of North Carolina at Chapel Hill, Chapel Hill, NC, USA

Symposium-10 ADOLESCENTS, YOUTH, AND PrEP

Target Audience: This session is directed at clinicians, epidemiologists, and implementers seeking to more effectively deliver pre-exposure prophylaxis (PrEP) to adolescents and pregnant and breastfeeding young women.

Level of Knowledge: It is assumed that the participants are familiar with: a) the global epidemiology of HIV among adolescents and young adults; b) the gaps in the prevention and treatment cascades for these populations; and c) the social, behavioral, and clinical challenges they face in achieving uptake, adherence, and maintenance of prevention interventions.

Objectives: At the completion of the session, participants should be able to:
- Describe ongoing efforts to introduce PrEP during pregnancy and breastfeeding among women, with an emphasis on African contexts
- Describe the rationale and safety of PrEP use in pregnancy and during breastfeeding and considerations for new agents
- Identify the challenges to engaging adolescents and young adults in PrEP uptake, adherence, and retention; describe how the PrEP pipeline is or is not including youth in clinical trials
- Identify the underlying neurodevelopmental reasons for how adolescents and youth process HIV risk; how mental health impacts uptake and adherence to PrEP; ways that health care systems and practitioners can shift approaches and expectations around engaging youth in PrEP programs over time
- Describe how marketing and communications approaches can and should be used to capture the attention of adolescents and youth around PrEP in ways that differ from how PrEP is promoted to adults

Conveners
Annette H. Sohn, Therapeutics Research Education and AIDS Training in Asia, Bangkok, Thailand
Connie L. Celum, University of Washington, Seattle, WA, USA

66 PrEP DURING PREGNANCY AND BREASTFEEDING
John Kinuthia, University of Nairobi, Nairobi, Kenya

68 IMPROVING ADOLESCENT PrEP USE: UNDERSTANDING DEVELOPMENTAL PROCESSES AND CONTEXT
Claude A. Mellins, Columbia University, New York, NY, USA

67 PrEP ADHERENCE INTERVENTIONS FOR ADOLESCENTS AND YOUNG ADULTS
Sybil Hosek, Stroger Hospital, Chicago, IL, USA

69 IMPROVING HOW WE MARKET PrEP TO YOUTH
Elzette Rousseau, University of Cape Town, Cape Town, South Africa

Symposium-11 FOCUS ON THE LIVER: NEW INSIGHTS INTO MANAGEMENT AND CONTROL OF LIVER DISEASE

Target Audience: This session is directed at HIV clinicians and researchers who are interested in liver diseases.

Level of Knowledge: It is assumed that the participants are familiar with the fundamental principles of clinical medicine, virology, and biochemistry of the liver and liver diseases.

Objectives: At the completion of the session, participants should be able to:
- Compare the hepatitis C virus (HCV) elimination goals with the current state of affairs and identify the major impediments to reaching these goals
- Contrast mechanisms and treatment of fat accumulation in liver with other tissues in persons with and without HIV
- List the elements of innate control of hepatitis B virus (HBV) infection compare adaptive and innate responses; and identify the roles of interferons in controlling HBV
- Compare the cure for HBV with that for HIV
- List the mechanisms of action for newer HBV treatments

Conveners
David L. Thomas, The Johns Hopkins School of Medicine, Baltimore, MD, USA
Jürgen K. Rockstroh, Medizinische Universitätsklinik, Bonn, NRW, Germany
Conference Day 3

Wednesday

70  HEPATITIS C ELIMINATION: WHAT'S TAKING SO LONG?
Annie Luetkemeyer, University of California San Francisco, San Francisco, CA, USA

71  MECHANISMS AND TREATMENTS OF STEATOSIS IN HIV
Steven Grinspoon, Harvard Medical School, Boston, MA, USA

72  HARNESING IMMUNITY TO CURE HBV
Ulrike Protzer, Technische Universität München, Munich, Germany

73  NEW PROSPECTS FOR THE TREATMENT OF HBV
Heiner Wedemeyer, Hannover Medical School, Hannover, Germany

Symposium-12  COVID-19 VACCINE: FROM EFFICACY TO EFFECTIVENESS

Target Audience: This session is directed at clinicians and public health professionals interested in COVID-19 vaccines.

Level of Knowledge: It is assumed that the participants are familiar with the current status of COVID-19 vaccines.

Objectives: At the completion of the session, participants should be able to:
- Describe how vaccine protocols are different during an epidemic or a pandemic
- Describe how COVID-19 vaccines will be rolled out globally
- List causes of vaccine hesitancy

Conveners
Susan P. Buchbinder, San Francisco Department of Public Health, San Francisco, CA, USA
Carlos del Rio, Emory University, Atlanta, GA, USA

74  LESSONS LEARNED AND CHALLENGES IN COVID-19 VACCINE TRIALS
Kathleen Neuzil, University of Maryland, Baltimore, MD, USA

75  EQUITABLE ROLL-OUT OF COVID-19 VACCINES IN THE UNITED STATES
Michelle A. Williams, Harvard T.H. Chan School of Public Health, Boston, MA, USA

76  VACCINE ACCEPTANCE
Saad Omer, Yale University, New Haven, CT, USA

77  GLOBAL DISTRIBUTION OF THE SARS-CoV-2 VACCINE
Nicole Lurie, Coalition for Epidemic Preparedness Innovations, Washington, DC, USA
Science Spotlights™-A1  VIROLOGY OF SARS-CoV-2

187  HOST-PATHOGEN INTERACTIONS OF HIGHLY PATHOGENIC CORONAVIRUSES REVEAL DRUG TARGETS
David E. Gordon, Mehdi Bouhaddou, Veronica V. Rezelj, Kris M. White, Matthew J. O'Meara, Gwendolyn M. Jang, Jeffrey Z. Guo, Joseph M. Hiatt, Kirsten Obernier, Pedro Beltrao, Marco Vignuzzi, Adolfo Garcia-Sastre, Kevan M. Shokat, Brian K. Shoichet, Nevan J. Krogan, for the QBI-Coronavirus Research Group

188  SYSTEMATIC ANALYSIS OF SARS-CoV-2 INFECTION OF AN ACE2-NEGATIVE HUMAN AIRWAY CELL

189  SARS-CoV-2 SPIKE PROTEIN INDUCES MONOCYTE APOPTOSIS AND INTERLEUKIN-8 PRODUCTION
Aswath Padmanabhan Chandrasekar, Mark Maynes, Sekar Natesampillai, F.N.U. Shweta, Andrew D. Badley, Nathan W. Cummins

190  LUCIFERASE COMPLEMENTATION ASSAY FOR IDENTIFICATION OF SARS-CoV-2 3CLpro INHIBITORS
Jonathan Rawson, Alice Duchon, Olga Nikolaitchik, Vinay K. Pathak, Wei-Shau Hu

191  EXCESS OF SARS-CoV-2 SUBGENOMIC RNAs IN CELLS AND FLUIDS DURING ACUTE INFECTION
Sushama Telwatte, Holly A. Martin, Joseph K. Wong, Chuanyi M. Lu, Sulggi A. Lee, Steven A. Yukl

Science Spotlights™-A2  VIROLOGY OF HIV

192  IDENTIFICATION OF A NEW LENTIVIRUS RESTRICTION COUNTERACTED BY VPR
Rodrigo Matus Nicodemos, David R. Ambrozak, Sam Darko, Amy Ransier, Daniel C. Douek, Richard A. Koup

193  MULTIPLY INFECTED ACH2 CELLS ARE RESPONSIBLE FOR THE MAJORITY OF ACH2 HIV PRODUCTION
Joseph P. Casazza, Avery N. Sukienik, Quang N. Nguyen, David R. Ambrozak, Jianfei Hu, Sam Darko, Amy Ransier, Farida Laboune, Stephen D. Schmidt, Daniel C. Douek, Richard A. Koup

194  miRNA'S PLASMA PROFILE ANTICIPATES LOSS OF VIROLOGICAL CONTROL IN ELITE CONTROLLERS
Jenifer Masip, Elena Yeregui, Reyes Jiemenez-Leon, Maria C. Gasca-Capote, Alberto Perez-Gomez, Verónica Alba, Anna Marti, Montserrat Vargas, Consuelo Viladés, Sergi Veloso, Joaquín Peraire, Francesc Vidal, Ezequiel Ruiz-Mateos, Anna Rull

195  IDENTIFICATION OF A NOVEL ANTI-HIV miRNA IN INTERLEUKIN-27—DIFFERENTIATED MACROPHAGES
Suranjana Goswami, Xiaojun Hu, Jun Yang, Sylvain Laverdure, Ju Qiu, Qian Chen, Brad T. Sherman, Weizhong Chang, Tomozumi Imamichi

196  RAB11-FIP1-DEPENDENT AND INDEPENDENT HIV-1 ENVELOPE TRAFFICKING
Boris Anokhin, Grigoriy Lerner, Lingmei Ding, Paul Spearman
197 IRON CHELATOR PPyeT INHIBITS HIV-1 REPLICATION IN HUMANIZED MICE
Namita Kumari, Miguel D. Rougvie, Songping Wang, Douglas Nixon, Fatih Kashanchi, Sergei Nekhai

198 QUANTITATIVE PHOSPHOPROTEOME ANALYSES OF PP1-TARGETING HIV-1 INHIBITOR 1E7-03
Xionghao Lin, Tatiana Ammosova, Songping Wang, Andrey I. Ivanov, Sergei Nekhai

Science Spotlights™-B1 ANIMAL MODELS FOR HIV INFECTION

199 A SORTING SIGNAL IN THE SIV Env TAIL IS SELECTED IN VIVO DURING PATHOGENIC INFECTION
Scott P. Lawrence, Samra Elser, Pyone Aye, Faith Schiro, Brandon Keele, James Hoxie, Mark Marsh, Nicholas Maness

200 ADOPTIVE TRANSFER OF GAMMA DELTA T CELLS ENHANCES HIV INFECTION IN A HUMANIZED MOUSE
Shivkumar Biradar, Yash Agarwal, Moses T. Bility, Robbie B. Mailliard

201 EXPERIMENTAL MICROBIAL DYSBIOSIS ENHANCES RECTAL SIV ACQUISITION IN RHESUS MACAQUES
Alexandra Ortiz, Phillip Baker, Charlotte Langner, Jennifer Simpson, Jacob Flynn, Carly E. Starke, Carol Vinton, Brandon Keele, Jason Brenchley

202 FULLY QUANTITATIVE PET IMAGING UNRAVELS THE RELATIVE SIZE OF GUT CD4 POOL
Sharat Srinivasula, Insook Kim, Paula Degrange, Bradley Long, Jorge A. Carrasquillo, Cliff Lane, Michele Di Mascio

203 PRE-ART VIRAL LOAD IS PREDICTIVE OF LYMPH NODE ART LEVELS IN SIV-INFECTED MACAQUES
Sharat Srinivasula, Paula Degrange, Andrew Bonvillian, Amanda Tobery, Jacob Kaplan, Claire Deleage, Angela D. Kashuba, Mackenzie L. Cottrell, Michele Di Mascio

204 ALTERED RESPONSE PATTERN FOLLOWING NONCANONICAL NF-κB ACTIVATION IN INFANT MACAQUES
Katherine M. Bricker, Brianna Williams, Danielle Oliver, Veronica Obregon-Perko, Brian Van Horne, Amanda P. Shauer, Lauren Tompkins, Mackenzie L. Cottrell, David M. Margolis, Richard M. Dunham, Ann Chahroudi

Science Spotlights™-B2 HOST RESPONSE TO SARS-CoV-2

205 TIMELY ACQUISITION OF MYELOID-CELL IMMUNE-REGULATORY PHENOTYPE AND COVID-19 OUTCOME
Amelia Chiara Trombetta, Guilherme B. Farias, André MC Gomes, Ana Godinho-Santos, Pedro Mota Prego Rossmannio, Carolina M. Conceição, Júlio Joel Laia Henriques, Diana F. Santos, Maria Ines Tostão Neiva, Afonso RM Almeida, Ana E. Sousa, Susana Mendes Fernandes

206 SUPRESSION OF ACE2 FUNCTION AND ANTVIRAL IMMUNE RESPONSE BY SARS-CoV-2 INFECTION
Lucía Gutiérrez Chamorro, Eva Riveira-Muñoz, Vansea Palau, Marta Massanella, Edurne Garcia-Vidal, Roger Badia, Sònia Pedreño-López, Jordi Senserrich, Bonaventura Clotet, Cecilia Cabrera, Marta Crespo, Julio Pascual, Marta Riera, Ester Ballana
207 FUNCTION, HOMING, AND RESIDENCY OF T-CELL IMMUNE RESPONSES AGAINST SARS-CoV-2
Nerea Sánchez-Gaona, Judith Grau-Expósito, Nuria Massana, Marina Suppi, Antonio Astorga Gamaza, David Perea, Joel Rosado, Anna Falcó, Cristina Kirkegaard, Jordi Navarro, Vicenç Falcó, Joaquín Burgos-Cibrian, María José Buzón, Meritxell Genescà

208 COMPARTMENTAL T-CELL PROFILE AND IFN RESPONSE IN SARS-CoV-2-INFECTED SUBJECTS
Letizia Santinelli, Francesca Sciarrà, Claudia Pinacchio, Giuseppe P. Innocenti, Giuseppe Olivento, Mirko Scordio, Federica Frasca, Guido Antonelli, Claudio M. Mastroianni, Alessandra Pierangeli, Carolina Scagnolari, Andrea Isidori, Mary A. Venneri, Gabriella D’Ettorre, Giancarlo Cecarelli

209 HOST FACTORS ASSOCIATED WITH PERSISTENT SARS-CoV-2 VIRAL RNA IN COVID-19 OUTPATIENTS
Annukka A. Antar, Tong Yu, Razvan Azamfirei, Nora Pisanic, Jeffrey A. Tornheim, Kirsten Littlefield, Sabra L. Klein, Andrew Pekosz, Christopher D. Heaney, Chen Hu, Mei Cheng Wang, Paul Blair, David L. Thomas, Yukari C. Manabe, for the Ambulatory COVID Study Team

210 EARLY CORE SIGNATURE OF SOLUBLE FACTORS IN MILD TO MODERATE SARS-CoV-2 INFECTION
Miguel Marin, Julieta Carabelli, Bibiana Quirant, Dan Ouchi, Aleix Pujol-Gimeno, Oscar Blanch-Lombarte, Ruth Peña, Noemi Lamonja-Vicente, Josep Maria Manresa-Dominguez, Francesc Ramos-Roure, Bonaventura Clotet, Eva Martinez-Caceres, Concepción Violán-Fors, Pere Torán-Monserrat, Julia G. Prado

211 FIRST HIGH-DIMENSIONAL EXAMINATION OF INTESTINAL BIOPSIES IN PATIENTS WITH COVID-19
Divya Jha, Ana Gonzalez-Reiche, Teresa Aydillo, Francesca Cossarini, Alexandra E. Livanos, Minami Tokuyama, Brian Lee, Gustavo Martinez-Delgado, Adeeb Rahman, Nikhil A. Kumta, Harm Van Bakel, Adolfo Garcia-Sastre, Saurabh Mehandru

212 INTESTINAL PERMEABILITY AND MICROBIAL TRANSLOCATION ARE INCREASED IN SEVERE COVID-19
Netanya S. Utay, Jayesh Shah, Anyelina Cantos, Lawrence Purpura, Michael T. Yin

213 SARS-CoV-2 INFECTS AND REPLICATES IN CELLS OF THE ENDOCRINE AND EXOCRINE PANCREAS
Janis Müller, Ruediger Gross, Carina Conzelmann, Jana Krueger, Tatjana Weil, Lennart Koepek, Caterina Prelli Bozzo, Frank Kirchhoff, Konstantin Sparrer, Heiko Lickert, Thomas Barth, Martin Wagner, Sandra Heller, Alexander Kleger, Jan Muench

214 UNIQUE CARDIOMETABOLIC IMMUNE SIGNATURES IN SEVERE-COVID-19 PATIENTS AND SURVIVORS
Namal Liyanage, Manuja Gunasena, Yasaswi Wijewantha, Emily Bowman, Janelle Gabriel, Amrendra Kumar, Aaren Kettelhut, Anushka Ruvanpathirana, Krishanthi Weragalaarachchi, Dhanuja Kasturiratna, Anna Vilgelm, Joseph Bednash, Thorsten Demberg, Nicholas Funderburg
215  IL10 AND B CELLS COOPERATE TO PREDICT SARS-CoV-2 DISEASE SEVERITY
Susan Pereira Ribeiro, Jozefien De Clercq, Ruth Seurinck, Niels Vandamme, Linyong Mao, Ashish A. Sharma, Adam N. Pelletier, Basiel Cole, Marion Pardons, Sarah Gerlo, Anna Bruchez, Robert Balderas, Martin Guilliams, Linos Vandekerckhove

216  RECRUITMENT OF SPECIFIC MONOCYTE AND DC SUBSETS TO THE LUNG DURING SEVERE COVID-19
Ildefonso S. Cerrillo, Pedro Landete, Ignacio De Los Santos, Hortensia De La Fuente, Maria J. Calzada, Isidoro Gonzalez, Arantza Alfranca, Francisco Sanchez, Cecilia Munoz, Joan Soriano, Julio Ancochea, Enrique Martin-Gayo, for the REINMUM COVID Research Group

217  SARS-CoV-2 ORF3a ACTIVATES THE NLRP3 INFLAMMASOME
Kimberly E. Rousseau, Alexis Figueroa, Guido Massaccesi, Michael Chattergoon

Science Spotlights™—B4  HIV AND THE GUT MICROBIOME

218  COLONIC GRANZYME B+ CD4 T CELLS ASSOCIATE WITH GUT AND SYSTEMIC T-CELL ACTIVATION
Stephanie Dillon, Emily Cooper, Tezha Thompson, Kaylee Mickens, Kejun Guo, Cheyret Wood, Katerina Kechris, Mario Santiago, Cara Wilson

219  ALTERED GASTROINTESTINAL PLASMA CELLS CONTRIBUTE TO DYSBIOSIS AND VIRAL REPLICATION
Francesca Cossarini, Louise Leyre, Divya Jha, Minami Tokuyama, Alexandra E. Livanos, Michael Tankelevich, Gustavo Martinez-Delgado, Adam Z. Horowitz, Ilaria Mogno, Ivo SahBandar, Michael Cruz, Judith A. Aberg, Lishomwa Nhlovu, Jeremiah J. Faith, Saurabh Mehandru

220  HIV REBOUND IN CONTROLLERS IS ASSOCIATED WITH SPECIFIC FECAL MICROBIOME PROFILE
Yanhui Cai, Steven G. Deeks, Cynthia Brinson, Moti Ramgopal, Norman Jones, Edwin DeJesus, Anthony Mills, Peter Shalit, Brian Moldt, Liao Zhang, Elena Vendrame, Devi SenGupta, Diana Brainard, Jeffrey Wallin, Ondrej Podlaha

221  GUT MICROBIAL DYSBIOSIS PRECEDES HIV WITH LIMITED CHANGES AFTER SEROCONVERSION
Jennifer A. Fulcher, Fan Li, Nicole Tobin, Sara Zabih, India Richter, Amy Ragsdale, Jesse Clark, Richard T. D’Aquilla, Brian Mustanski, Michele Kipke, Steve Shoptyaw, Pamina M. Gorbach, Grace M. Aldrovandi

222  A RANDOMIZED CONTROLLED TRIAL OF RIFAXIMIN IN INDIVIDUALS WITH HIV ON LONG-TERM ART
Kristi Huik, James Q. Virga, Catherine Rehm, Jennifer Bell, Brian Luke, Netanya S. Utay, Deborah McMahon, Anuradha Ganesan, Frank Maldarelli

Science Spotlights™—B5  NATURAL CONTROL OF HIV INFECTION

223  TRANSMISSION OF ATTENUATED HIV-1 FROM A CHRONIC PROGRESSOR TO A VIREMIC CONTROLLER
Bezawit A. Woldemeskel, Caroline C. Garliss, Joseph Cofrancesco, Joel Blankson
224 A META GENOME-WIDE ASSOCIATION STUDY OF HIV-DISEASE PROGRESSION IN HIV CONTROLLERS
Luis M Real, María Sáez, Anaïs Corma-Gomez, Antonio Gonzalez-Perez, Christian A. Thorbll, Rocío Ruiz, Reyes Jimenez-Leon, Alejandro Gonzalez-Serna, María C. Gasca-Capote, Alberto Perez-Gomez, Jacques Fellay, Mathias Lichterfeld, Ezequiel Ruiz-Mateos, for the Swiss HIV Cohort Study

225 IncRNA REGULATES METABOLISM IN MYELOID DENDRITIC CELLS FROM HIV-1 ELITE CONTROLLERS
Ciputra A. Hartana, Yelizaveta Rassadkina, Ce Gao, Enrique Martin-Gayo, Bruce D. Walker, Mathias Lichterfeld, Xu G. Yu

226 DEFECTIVE FUNCTIONS OF HIV ENVELOPE GLYCOPROTEIN ASSOCIATE WITH LONG-TERM HIV CONTROL
Silvia Pérez Yanes, Concepción Casado, María Pernas, Romina Cabrera-Rodriguez, Judith Estévez-Herrera, Daniel Márquez-Arce, Isabel Olivares, Victor Urrea, Silvia Marfil, Raquel Ortiz, Carla Rovirosa, Cecilio López-Galindez, Águstin Valenzuela-Fernández, Julià Blanco, for Romina Cabrera

227 ELEVATED PLASMA CYTOKINES IN ELITE CONTROL: IP-10 AND MIG PREDICT LOSS OF CONTROL

228 miRNA SIGNATURES IN CD4 T CELLS FROM PATIENTS WITH NATURAL CONTROL OF HIV INFECTION
Ruben A. Ayala-Suarez, Francisco Diez-Fuertes, Mercedes Bermejo, Esther Calonge, Lorna Leal, Manel E. Bargalló, Maria Jose Maleno, Felipe Garcia, Montserrat Plana, José Alcamí, for the ECRIS Integrated in the Spanish AIDS Research Network

229 THE VON HIPPEL–LINDAU CULLIN-RING E3 LIGASE REGULATES APOBEC3 CYTIDINE DEAMINASES
Gael Scholtes, Aubrey Sawyer, Isabelle Clerc, Meejeon Roh, Chisu Song, Richard T. D’Aquila

230 RESTRICTION OF HIV-1 INFECTION IN SICKLE CELL TRAIT
Sergei Nekhai, Namita Kumari, Mehdi Nouraie, Javed Khan, Sharmin Diaz, Asrar Ahmad, Patricia E. Houston, Songping Wang, Miguel D. Rougvie, Douglas Nixon, Sohail Rana, James G. Taylor, M. Neale Weitzmann, Seble Kassaye, for the WIHS Group

231 IFNL4 RS368234815 SNP IS ASSOCIATED WITH CD4:CD8 RATIO NORMALISATION IN PWH ON ART
Serkan Aydemir Aydemir, Christine Kelly, Marija Leoncikaite, Padraig McGetrick, Aoife G. Cotter, Gerard Sheehan, John S. Lambert, Eavan G. Muldoon, Eoin Feeney, Patrick Mallon, Willard Tinago, for the All Ireland Infectious Diseases (AIID) Cohort Study

232 REPLICATED EPIGENETIC ASSOCIATIONS WITH SCD14 AMONG MEN WITH HIV INFECTION
Boghuma K. Titanji, Zeyuan Wang, Qin Hui, Kaku So-Armah, Matthew Freiberg, Amy Justice, Ke Xu, Vincent Marconi, Yan Sun
233 TH17 CELL MASTER TRANSCRIPTION FACTOR RORC2 REGULATES HIV GENE EXPRESSION AND LATENCY
Tomas Raul Wiche Salinas, Yuwei Zhang, Daniele Sarnello, Alexander Zhvyoloup, Laurence Raymond Marchand, Delphine Planas, Manivel Lodha, Debashree Chatterjee, Katarzyna Karwacz, Sally Oxenford, Jean-Pierre Routy, Heather Amrine-Madsen, Petronela Ancuta, Ariberto Fassati

234 miR-422a: A TYPE I INTERFERON-REGULATED MODULATOR OF HIV REPLICATION
Li Du, Mohamed Bouzidi, Hannah Sperber, Samuel D. Abrams, Karla Medina, Zain Y. Dossani, Satish Pillai

235 GUT 0X40+CD4+ T CELLS STRONGLY CORRELATE WITH MARKERS OF PROGRESSION IN TREATED HIV
Isaac Rosado-Sánchez, Inés Herrero-Fernández, Salvador Sobrino, Ana Eloisa Carvalj, Miguel Genebat, Laura Tarancón-Diez, María Fontillón, Rocío M. De Pablo, Manuel Leal, Yolanda M. Pacheco-López

236 INTERLEUKIN-7 IS A POTENT INDUCER OF ANTI–HIV-1 CHEMOKINES
Hana Schmeisser, Samuel Owusu, Olivia I. Hansen, Qingbo Liu, Yuna Seo, Huiyi Miao, Raffaello Cimbro, Timothy G. Myers, Claire Deleage, Anthony S. Fauci, Paolo Russo

Science Spotlights™-B7 NON T-CELL EFFECTS OF HIV INFECTION

237 THE COMPLEMENT PATHWAY IS ACTIVATED IN HIV AND ASSOCIATED WITH NON-AIDS COMORBIDITY
Ivan Vujkovic-Cvijin, Ornella Sortino, Eveline Verheij, Ferdinand W. Wit, Neeltje A. Koostra, Brian Sellers, Maarten Schim van der Loeff, Yasmine Belkaid, Peter Reiss, Irini Sereti

238 DIGITAL SPATIAL PROFILING OF FIBROTIC LYMPH NODE MICROENVIRONMENTS IN CHRONIC HIV
Brooks Mitchell, Jingjing Gong, Hugh Luk, Nancy Hanks, Dominic C. Chow, Fredrick Yost, Lishomwa Ndhlovu, Owen Chan, Cecilia M. Shikuma

239 EFFECT OF HIV ACQUISITION ON SYSTEMIC INFLAMMATION IN A SEROCONVERSION COHORT
Jackson J. Wallner, Ewelina Kośmider, Ana Gervassi, Urvashi Pandey, Delia M. Pinto-Santini, Rachel A. Bender Ignacio, Paul C. Duer, Lisa M. Frenkel

240 mTOR ACTIVATION LIMITS LPS-INDUCED MONOCYTE INFLAMMATORY AND PROCOAGULANT RESPONSES
Nina Calantone, Hee-kyung Hong, Jason Brenchley, Joseph Bass, Richard T. D’Aquila, Harry E. Taylor

241 MONOCYTE SUBSETS AFTER LONG-TERM ART AND MEASURES OF HIV PERSISTENCE IN ACTG A5321
Bernard Macatangay, Deborah McMahon, Hanna Mar, Ronald J. Bosch, Joshua Cyktor, Evelyn Hogg, Luann Borowski, Joseph J. Eron, John W. Mellors, Rajesh T. Gandhi, Charles Rinaldo

242 IMMUNO-INFLAMMATORY PROFILE OF ADVANCED-HIV–INFECTED PERSONS IN A COVID-19 OUTBREAK
Alessandra Vergori, Antonio Boschini, Stefania Notari, Patrizia Lorenzini, Roberta Gagliardini, Paolo Ottogalli, Eleonora Cimini, Pierluca Piselli, Leila Angeli, Andrea Antinori, Chiara Agrati, Enrico Girardi
Science Spotlights™-B8 HIV AND T CELLS

243 mTOR REGULATION OF ANTIGEN-SPECIFIC CD4+ T-CELL RESPONSES IN MYCOBACTERIAL IRIS
Luxin Pei, Chun-Shu Wong, Frances Galindo, Megan Anderson, Elizabeth Laidlaw, Joseph Rocco, Adrian Zelazny, Andrea Lisco, Maura Manion, Irini Sereti

244 IMPACT OF FATTY ACIDS ON T-CELL FUNCTION AMONG PEOPLE LIVING WITH HIV
Omkar Chaudhary, Shihao Xu, Syim Salahuddin, Laurie Andrews, Susan Kaech, Brinda Emu

245 EFFECT OF HIV ON THE DISTRIBUTION OF NK CELL SUBSETS AND THEIR PHENOTYPE IN INFANTS
Vinh B. Dinh, Stefano Rinaldi, Suresh Pallikkuth, Lesley D. Armas, Nadia Sitoe, Rajendra Pahwa, Nicola Cotugno, Paula Vaz, Paolo Palma, Maria Grazia Lain, Savita G. Pahwa

246 EFFECT OF HIV ON IMMUNE ACTIVATION AND EXHAUSTION IN CD4 AND CD8 T CELLS IN INFANTS
Stefano Rinaldi, Vinh B. Dinh, Suresh Pallikkuth, Lesley D. Armas, Nadia Sitoe, Rajendra Pahwa, Nicola Cotugno, Paula Vaz, Paolo Palma, Maria Grazia Lain, Savita G. Pahwa

247 T-CELL IMMUNE DYSREGULATION AND MORTALITY IN WOMEN WITH HIV
Brandilyn A. Peters, Jee-Young Moon, David B. Hanna, Olaf Kutsch, Margaret Fischtl, Caitlin A. Moran, Adaora Adimora, Stephen Gange, Nadia Roan, Katherine G. Michel, Michael Augenbraun, Anjali Sharma, Alan Landay, Seema Desai, Robert Kaplan

248 IMPACT OF REPRODUCTIVE AGING ON IMMUNE FUNCTION IN CISGENDER MEN AND WOMEN WITH HIV
Stephen A. Rawlings, Antoine Chaillon, Masato Nakazawa, Eileen P. Scully, Brendon Woodworth, Christina Huynh, Christy Anderson, Jonathan Karn, Alan Landay, Sara Gianella

Science Spotlights™-B9 HIV-CELL INTERACTION IN VIVO

249 EXOSOMES AND VIRUSES: A TALE OF 2 OVERLAPPING WORLDS
Yuriy Kim, Daniel Pinto, Gifty Mensah, Maria Cowen, James Erickson, Heather Branscombe, Michelle Pleet, Catherine DeMarino, Renaud Mahieux, Fatah Kashanchi

250 STRAIN-DEPENDENT EFFECTS OF SIGNAL PEPTIDES ON HIV-1 Env GLYCOSYLATION AND FUNCTIONS
Chitra Upadhyay, Roya Feyznezhad, Liwei Cao, Kun-Wei Chan, Weiming Yang, Hui Zhang, Xiang-Peng Kong, Susan Zolla-Pazner, Catarina E. Hioe

251 AN EPIGENETIC ARCHITECTURE THEORY TO ASSESS THE FITNESS OF VIRAL SEQUENCES
Rocio Carrasco-Hernandez, Humberto Valenzuela-Ponce, Claudia García-Morales, Margarita Maiias-Florentino, Sepideh Mazrouee, Gustavo Reyes-Teran, Santiago Ávila-Ríos, Davey M. Smith, Joel Wertheim

252 HIV ACQUISITION PREDICTED BY LOWER BASELINE BUT GREATER INCREASE IN IMMUNE ACTIVATION
Rachel A. Bender Ignacio, Sayan Dasgupta, Rogelio Valdez, Urvashi Pandey, Siavash Pasalar, Ricardo Alfaro, Javier R. Lama, Ann C. Duerr
253 SINGLE-CELL TRANSCRIPTOME ANALYSIS DURING PRIMARY HIV-1 INFECTION AND cART
Teresa Evering, Roshan Sharma, William Stephenson, Leslie St. Bernard, Peter Smibert, Martin Markowitz, Nicolas Robine

254 EARLY ART INITIATION MAY PRESERVE INFLUENZA VACCINE RESPONSE DURABILITY
Samuel R. Schnittman, Jordan Boeck, Gabriele B. Beck-Engeser, Haelee Ahn, Norman Jones, Amelia N. Deitchman, Vanessa York, Heather Hartig, Rebecca Hoh, Frederick M. Hecht, Jeffrey N. Martin, Fran Aweeka, Steven G. Deeks, Jeffrey Milush, Peter W. Hunt

255 HIV PLASMA VIREMIA IS THE PRODUCT OF ONLY A SMALL PROPORTION OF INFECTED CELLS
Elizabeth Anderson, Shawn Hill, Catherine Rehm, Lindsey Adams, Erin Madeen, Mary E. Zipparo, Thuy Nguyen, Mary F. Kearney, Robert Gorelick, John M. Coffin, Frank Maldarelli

Science Spotlights™-D1  EVOLUTION OF ANTIBODY RESPONSES TO SARS-CoV-2 INFECTION

256 NEUTRALIZING-ANTIBODY RESPONSES FOLLOWING SARS-CoV-2 INFECTION
Juan M. Tiraboschi, Sofia Scevola, Julià Blanco, Laura Calatayud, Paula Prieto, Irene Soriano, Laura Arregui, Xavier Solanich, Arnau Antoli, Arkaitz Imaz, María Saumoy, Ana Silva, Edwards Pradenas, Jordi Carratala, Daniel Podzamczer

257 SARS-CoV-2 NEUTRALIZING-ANTIBODY RESPONSES IN CONVALESCENT INDIVIDUALS IN US AND PERU
Shelly Karuna, Sue Li, Shannon Grant, April Randhawa, Meg Trahey, Jen Hanke, Lisa Sanders, Robert De La Grecca, Carissa Karg, Laura Polakowski, John Hural, Jessica Andriesen, Lawrence Corey, David Montefiori, for the HVTN 405/HPTN 1901 Study Team

258 PERFORMANCE AND DYNAMIC CHANGE IN SARS-CoV-2 ANTIBODY RESPONSES
Grace Kenny, Willard Tinago, Alejandro García-Leon, Kathleen McCann, Padraig McGettrick, Sandra Green, Rosanna Inzitari, Aoiie G. Cotter, Eoin Feeney, Stefano Savinelli, Peter Doran, Patrick Mallon

259 STABLE NEUTRALIZING-ANTIBODY LEVELS 6 MONTHS AFTER MILD AND SEVERE COVID-19 EPISODE
Edwards Pradenas, Benjamin Trinité, Victor Urrea, Silvia Marfil, Carlos Ávila-Nieto, María Luisa Rodríguez De La Concepción, Ferran Tarrés-Freixas, Nuria Izquierdo-Users, Roger Paredes, Lourdes Mateu, Anna Chamorro, Marta Massanella, Jorge Carrillo, Bonaventura Clotet, Julià Blanco

260 PERSISTENCE OF SARS-CoV-2 –SPECIFIC AB RESPONSE IN HIV+ INDIVIDUALS ON ART
Suresh Pallikkuth, Mark Sharkey, Laura Beauchamps, Patricia Raccamarich, Claudia Uribe, Ana Salazar, Maria Pallin, Elizabeth Varghese, Maragret E. Roach, Alejandro Mantero, Savita G. Pahwa, Deborah Jones Weiss, Maria L. Alcaide

261 BINDING SIGNATURES AND CROSS-REACTIVITY IN THE SARS-CoV-2 IMMUNE RESPONSE
Caitlin Stoddard, Jared Galloway, Helen Y. Chu, Mackenzie M. Shipley, Kevin Sung, Hannah L. Itell, Caitlin R. Wolf, Jennifer K. Logue, Ariana Maqedson, Meghan Garrett, Katharine H. Crawford, Uri Laserson, Frederick Matsen IV, Julie Overbaugh
262 CHARACTERIZATION OF SARS-CoV-2–SPECIFIC RESPONSES IN PEOPLE LIVING WITH HIV

263 ESCAPE OF SARS-CoV-2 S01Y.V2 VARIANTS FROM NEUTRALIZATION BY CONVALESCENT PLASMA
Sandile Cele, Inbal Gazy, Laurelle Jackson, Shi-Hsia Hwa, Houriyah Tegally, Farina Karim, Gila Lustig, Alejandro Balazs, Willem A. Hanekom, Bernadette Gosnell, Mahomed-Yunus Moosa, Richard Lessells, Tulio de Oliveira, Alex Sigal

Science Spotlights™-D2 CELLULAR IMMUNE RESPONSES TO SARS-CoV-2
264 HIGH-RESOLUTION MAPPING OF T-CELL IMMUNITY TO THE ENTIRE SARS-CoV-2 PROTEOME
Athina Kilpeläinen, Luis Romero, Oscar Blanch-Lombarte, Bibiana Quirant, Esther Jiménez-Moyano, Dan Ouchi, Aleix Pujol-Gimeno, Noemi Lamonja-Vicente, Eva Martinez-Caceres, Concepción Viñolá-Fors, Pere Torán-Monserrat, Bonaventura Clotet, Christian Brander, Alex Olivera, Julia G. Prado

265 SARS-CoV-2 NON-SEROCONVERTORS PRESENT T-CELL RESPONSES WITH DECREASED ACTIVATION

266 IMPAIRMENT OF TYPE I/III IFN RESPONSE IN THE UPPER AIRWAYS OF SARS-CoV-2 PATIENTS
Federica Frasca, Mirko Scordio, Agnese Viscido, Giuseppe Oliveto, Camilla Bitossi, Carolina Scagnolari

Science Spotlights™-D3 NOVEL VACCINE CONCEPTS
267 A NOVEL VSV-BASED EBOLA/HIV-1 VACCINE PROVIDES PROTECTION IN MACAQUES FROM SHIV
Eric J. Arts, Alice Berger, Jannie Pedersen, Jason J. Knapp, Hiva Azizi, Yue J. Li, Marc-Alexander Lafrance, Florine Scholte, Jamie J. Mann, Amine Kamen, Keith Fowke, Eric A. Cohen, Chih-Yong Kang, Gary Kobinger

268 DESIGN AND IMMUNOGENICITY OF V3-GLYCAN EPITOPE-FOCUSED NANOPARTICLES FOR HIV VACCINES
Christine N. Daniels, Esther Lee, Cindy N. Bowman, Celia LaBranche, Robert Edwards, Brian Watts, M. G. Joyce, David Montefiori, Munir S. Alam, Barton Haynes, Kevin Saunders

269 NANOPARTICLE-DCS RESTORE CYTOTOXIC MEMORY-LIKE NK CELLS IN CHRONIC HIV PATIENTS
Ildefonso S. Cerrillo, Marta Calvet-Mirabent, Cristina Delgado, Ignacio De Los Santos, Jesus Sanz, Lucio Jesús F. García-Fraile, Maria José Buzón, María Ángeles Muñoz-Fernández, Francisco Sanchez, Enrique Martin-Gayo

270 AAV-EXPRESSED ANTI-HIV BIOLOGICS BLOCK ORAL SHIV ACQUISITION IN INFANT RHESUS MONKEYS
Amir Ardestehir, Koen K. Van Rompay, Sebastian P. Fuchs, Matthew R. Gardner, Rubens Tavora, Ronald C. Desrosiers, Michael Farzan, Mauricio A. Martins
PROTECTION FROM SHIV INFECTION IN IMMUNE-COMPLEX VACCINATED RHESUS MACAQUES

DUAL-ANTIGEN COVID-19 VACCINATION WITH ORAL BOOST PROTECTS NHP FROM VIRAL CHALLENGE

DISTINCT TISSUE TOPOLOGY AND CELL PHENOTYPES PREDICT NEUTRALIZATION IN HIV INFECTION

TISSUE LANDSCAPE OF HIV ANTIBODY NEUTRALIZATION SUSCEPTIBILITY
Antoine Chaillon, Chuangqi Wang, Timothy Schlub, Wen-Han Yu, Douglas A. Lauffenburger, Davey M. Smith, Boris Juegl

ANTIBODY PROFILING IDENTIFIES ANTIBODY TARGETS ASSOCIATED WITH NATURAL HIV CONTROL
Athena Chen, Kai Kammers, Daniel Monaco, Sarah E. Hudelson, Wendy Grant-McAuley, Richard Moore, Galit Alter, Steven G. Deeks, Charles Morrison, Leigh A. Eller, Joel Blankson, Oliver Laeyendecker, Ingo Ruczinski, Harry B. Larman, Susan Eshleman

AUTOLOGOUS NEUTRALIZING ANTIBODIES INCREASE WITH EARLY ART AND SHAPE HIV REBOUND
Elmira Esmaeilzadeh, Behzad Etemad, Lavine L. Christy, James Regan, Colline Wong, Abbas Mohammadi, Elizabeth Connick, Paul Volberding, Michael Seaman, Jonathan Li

FORCED RESIDENCY OF T CELLS IN VIREMIC TISSUES DOES NOT INDUCE CONTROL OF SIV VIREMIA
M. Betina Pampena, Leticia Kuri-Cervantes, Sadia Samer, Meagan Watkins, Ronald S. Veazey, Katharine J. Bar, Brandon Keele, Miles P. Davenport, Mirko Paierdini, Michael Betts

CD8+ RESIDENT MEMORY T CELLS CONTROL THE HIV RESERVOIR IN THE CERVICAL MUCOSA
Nuria Massana, Jon Cantero-Pérez, Marina Suppi, Judith Grau-Expósito, Josep Castellvi, Laura Mañalich-Barrachina, Cristina Centeno-Mediavilla, Vicenç Falcó, Maria José Buzón, Meritxell Genescà

EVALUATING VIRUS-SPECIFIC CD8 T CELLS FROM MULTIPLE ANATOMICAL SITES
Jennifer Simpson, Carly E. Starke, Carol Vinton, Alexandra Ortiz, Amy Ransier, Daniel C. Douek, Jonah Sacha, David A. Price, Jason Brenchley
280  COMBINATION OF IMMUNE CHECKPOINT BLOCKADE INCREASES IL-2 IN HIV-SPECIFIC CELLS

Chris Y. Chiu, Judy Chang, Ashanti Dantanarayana, Ajantha Rhodes, Vanessa Evans, Rachel Pascoe, Celine Gubser, Lydie Trautmann, Rémi Fromentin, Nicolas Chomont, Paul U. Cameron, James McMahon, Thomas A. Rasmussen, Sharon Lewin

281  SELECTIVE DEPLETION OF TIGIT-EXPRESSING MEMORY HIV-SPECIFIC CD8+ T CELLS IN HIV-1 AND cART

Oscar Blanch-Lombarte, Dan Ouchi, Julieta Carabelli, Miguel Marin, Esther Jiménez-Moyano, Ruth Peña, Adam Pelletier, Aarthi Talla, Ashish A. Sharma, Judith Dalmau, José Ramón Santos, Rafick-Pierre Sékaly, Bonaventura Clotet, Julia G. Prado

282  SIGLEC-9 DEFINES AND RESTRAINS AN NK SUBPOPULATION HIGHLY CYTOTOXIC TO HIV+ CELLS

Opeyemi S. Adeniji, Leticia Kuri-Cervantes, Michelle Ho, Kar Muthumani, Michael Betts, Mohamed Abdel-Mohsen

283  PROVIRAL BURDEN, GENETIC DIVERSITY, AND DYNAMICS DURING ART IN VIREMIC CONTROLLERS


284  HIV INTEGRATION INTO BACH2 AND STAT5B IS PREVALENT EARLY IN INFECTION

Michael Dapp, Kristen Miller, Marley Bishop, Ann C. Duerr, James I. Mullins

285  LONGITUDINAL ANALYSIS OF RESERVOIR DYNAMICS IN SIV-INFECTED MACAQUES ON LONG-TERM ART

Emily J. Fray, Alexandra M. Bender, John D. Ventura, Po-Ting Liu, Dan Barouch, Janet Siliciano, Robert Siliciano

286  DYNAMICS OF INTACT PROVIRAL SEQUENCES IN EARLY TREATED HIV-1 CLADE C-INFECTED INFANTS

Catherine K. Kofothethile, Stefano Rinaldi, Yelizaveta Rassadkina, Vinh B. Dinh, Ce Gao, Suresh Pallikkuth, Pilar Garcia-Broncano, Lesley D. Armas, Rajendra Pawha, Nicola Cotugno, Maria Grazia Lain, Paolo Palma, Roger Shapiro, Savita G. Pawha, Mathias Lichterfeld

287  CYTOKINE DYSREGULATION AND ANTIGEN RESPONSES DRIVE T-CELL EXPANSION IN HIV INFECTION

Jack A. Collora, Siavash Pasalar, Delia M. Pinto-Santini, Neal Ravindra, Javier R. Lama, Carmela Ganoza, Ricardo Alfaro, Rachela Calvi, Jennifer Chiarella, Serena S. Spudich, David Van Dijk, Ann C. Duerr, Ya-Chi Ho

288  IMPACT OF REPRODUCTIVE AGING ON HIV PERSISTENCE IN CISGENDER MEN AND WOMEN WITH HIV


289  SEX DIFFERENTIAL EXPRESSION OF IL-7 AND MARKERS OF HOMEOSTATIC PROLIFERATION

Guido Massaccesi, Brittany White, Monica Gandhi, Rowena Johnston, Jonathan Carn, Nicolas Chomont, Steven G. Deeks, Eileen P. Scully
### Science Spotlights™-E2  MECHANISMS OF HIV LATENCY

<table>
<thead>
<tr>
<th>Page</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>290</td>
<td>TYPE I INTERFERON SIGNALING INDUCES HIV-1 LATENCY IN MACROPHAGES</td>
<td>Timothy Hanley, Vicente Planelles</td>
</tr>
<tr>
<td>291</td>
<td>MODULATION OF HIV TRANSCRIPTION USING AN IN VITRO MACROPHAGE HIV-1 LATENCY MODEL</td>
<td>Michelle E. Wong, Chad J. Johnson, Anna C. Hearps, Anthony Jaworowski</td>
</tr>
<tr>
<td>292</td>
<td>NOVEL CRISPR SCREENS IDENTIFY A ROLE FOR CUL3 IN HIV-1 LATENCY MAINTENANCE</td>
<td>Emily Hsieh, Molly OhAinle, Michael Emerman</td>
</tr>
<tr>
<td>293</td>
<td>SYNERGISTIC COMBINATIONS OF LATENCY-REVERSING AGENTS IDENTIFIED USING CRISPR SCREENS</td>
<td>Weiwei Dai, Fengting Wu, Joseph Varriale, Hao Zhang, Janet Siliciano, Wei Li, Robert Siliciano</td>
</tr>
<tr>
<td>294</td>
<td>ACTIVATING PKC-ε INDUCES HIV EXPRESSION WITH IMPROVED TOLERABILITY</td>
<td>Alivelu M. Irrinki, Jasmine Kaur, Bally Randhawa, Hongxia Li, Ryan McFadden, Chelsea Snyder, Hoa Truong, Daniel Soohoo, Chad Greco, Eric Hu, Helen Yu, Bernard Murray, Wade Blair, Tomas Cihlar, Jeffrey Murry</td>
</tr>
</tbody>
</table>

### Science Spotlights™-E3  INTERVENTIONS TO TARGET THE VIRAL RESERVOIR AND DELAY VIRAL REBOUND

<table>
<thead>
<tr>
<th>Page</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>295</td>
<td>VENETOCLAX SIGNIFICANTLY REDUCES HIV VIRAL LOAD IN VIVO AND IN VITRO</td>
<td>Aswath Padmanabhan Chandrasekar, Nathan W. Cummins, Sekar Natesampillai, Anisha Misra, Alecia Alto, Andrew D. Badley</td>
</tr>
<tr>
<td>296</td>
<td>AUTOLOGOUS VIRUS-NEUTRALIZING ANTIBODIES DELAY VIRUS REBOUND IN INFANT SHIV MODEL</td>
<td>Stella J. Berendam, Emilie A. Uffmann, Tiffany M. Styles, Veronica Obregon-Perko, Amit Kumar, Katharine J. Bar, George Shaw, Guido Silvestri, Rama R. Amara, Ann Chahroudi, Sallie R. Permar, Genevieve Fouda</td>
</tr>
<tr>
<td>297</td>
<td>VIRUS REMISSION WITH AN OPTIMIZED EARLY ART REGIMEN IN MACAQUES</td>
<td>Michele B. Daly, Mara Sterling, Kenji Nishiura, Angela Holder, Chuong Dinh, Alison Swaims Kohlmeier, Sunita Sharma, Jillian Condrey, Rex A. Howard, Patrick Mills, James Mitchell, Veerle Van Eygen, William R. Spreen, Walid Heneine, Gerardo Garcia-Lerma</td>
</tr>
<tr>
<td>298</td>
<td>EFFECT OF RECOMBINANT GROWTH HORMONE ON HIV RESERVOIRS: A PILOT STUDY (CTN 298)</td>
<td>Isabelle Turcotte, Amélie Pagliauzza, Stéphane Isnard, Cezar Iovi, Rémi Fromentin, Steven G. Deeks, Mary Mahony, Brooke Hayward, Maryellen Craig, Jean-Pierre Routy, Nicolas Chomont</td>
</tr>
<tr>
<td>299</td>
<td>EFFECTS OF PD-1 BLOCKADE ON HIV RESERVOIRS IN BLOOD DURING ART</td>
<td>Liliana Pérez, Lauren B. Reoma, Sean Patro, Max Lee, Prakriti Mudvari, Bryan R. Smith, Amanda Wiebold, Jong Shin, Ulisses Santamaria, Tae-Wook Chun, Susan Moir, Mary F. Kearney, Avindra Nath, Eli A. Boritz</td>
</tr>
</tbody>
</table>
Science Spotlights™-E4  HIV RESERVOIRS IN CELLS AND TISSUES

300  THE PERIPHERAL CD4+ T-CELL RESERVOIR ATLAS IN cART-TREATED HIV-INFECTED INDIVIDUALS
   Cristina Gálvez, Judith Grau-Expósito, Victor Urrea, Maria José Buzón, Javier Martínez-Picado

301  HIV PERSISTS PREFERENTIALLY IN MEMORY CD4+ T CELLS CO-EXPRESSING PD1 AND CTLA4
   Thomas A. Rasmussen, Jennifer Zerbato, Ajantha Rhodes, Ashanti Dantanarayana, James McMahon, Jillian S. Lau, Wendy Brown, Rebecca Hoh, Nicolas Chomont, Jeffrey Millush, Sarah Palmer, Steven G. Deeks, Vanessa Evans, Sharon Lewin, for the HIV-PRADA Study Group

302  SINGLE-CELL TRANSCRIPTOMIC T-CELL STATES OF A RESERVOIR-MARKING Hu-MOUSE MODEL

303  SINGLE-CELL RNAFLOW-FISH REVEALS TRANSCRIPTIONAL DIVERSITY FOLLOWING LATENCY REVERSAL
   Gérémy Sannier, Mathieu Dubé, Caroline Dufour, Nathalie Brassard, Gloria G. Delgado, Amy Baxter, Julia Niessler, Roxanne Charlebois, Amélie Pagliuza, Rémi Fromentin, Jean-Pierre Routy, Nicolas Chomont, Daniel E. Kaufmann

304  RESTING AND ACTIVATED CD4+ T CELLS BOTH HAVE SILENT AND ACTIVE HIV PROVIRUSES IN VIVO
   Jennifer L. Groebner, Liliana Pérez, Rachel Sklutuis, Michael J. Bale, Wei Shao, Ann Wiegand, Steven G. Deeks, Deborah McMahon, Joseph J. Eron, Rajesh T. Gandhi, Frank Maladeiri, John M. Coffin, John W. Mellors, Eli A. Boritz, Mary F. Kearney

305  COMPLETED GENOME-INTACT UNSPLICED HIV TRANSCRIPTS ARE RARE IN EX VIVO CD4+ CELLS
   Nancy Francoeur, Yaqing Ren, Pragya Khadka, Winiffer D. Conce Alberto, Gintaras Deikus, Erika Benko, Colin Kovacs, Ales Varabyou, Mihaela Pertea, Yang-Hui Yeh, Ya-Chi Ho, Robert Sebra, R. Brad Jones, Melissa Smith, Guinevere Q. Lee

306  EXPRESSION OF CD32 IN HIV-RESERVOIR CELLS CONFERRESISTANCE TO NATURAL KILLER CELLS
   Antonio Astorga Gamaza, Judith Grau-Expósito, Joaquin Burgos-Cibrian, Jordi Navarro, Adrià Curran, Berta Raventós, Ariadna Torrella, Bibiana Planas, Paula Suanzes, Vicenc Falco, Meritxell Genescà, María José Buzón

307  PROFILING THE PROVIRAL LANDSCAPE IN TISSUES FROM ART-TREATED INDIVIDUALS
   Weiwei Sun, Yelizaveta Rassadkina, Aurelie Schaison, Ce Gao, Sarah I. Collens, Isaac H. Solomon, Shibani Mukerji, Xu Yu, Matthias Lichterfeld

308  HIV-INFECTED LYMPH NODE MIGRATORY DENDRITIC CELLS PERSIST IN ART-TREATED INDIVIDUALS
   Riddhima Banga, Francesco Procopio, Erica Lana, Annamaria Kauzlarc, Olivia M. Monje, Craig Fenwick, Matthias Cavassini, Jean-Marc Corpataux, Mauro Delorenzi, Giuseppe Pantaleo, Matthieu Perreau
<table>
<thead>
<tr>
<th>Science Spotlights™-E5</th>
<th>CONTROLLERS AND POSTTREATMENT CONTROLLERS</th>
</tr>
</thead>
<tbody>
<tr>
<td>309</td>
<td>LONGITUDINAL DYNAMICS OF INTACT PROVIRAL HIV-1 DNA IN POSTTREATMENT CONTROLLERS</td>
</tr>
<tr>
<td></td>
<td>Xiaoadong Lian, Kyra W. Seiger, Gregory T. Gladkov, Joshua Chevalier, Kevin B. Einkauf, Jane E. Blackmer, Chenyang Jiang, Eric S. Rosenberg, Ce Gao, Xu Yu, Tae-Wook Chun, Mathias Lichterfeld</td>
</tr>
<tr>
<td>310</td>
<td>CELL-FREE DNA PREDICTS HIV REBOUND TIMING FOLLOWING ANTIRETROVIRAL THERAPY CESSATION</td>
</tr>
<tr>
<td></td>
<td>Zain Y. Dossani, Karla Medina, Erika Marques de Menezes, Anna Sellas, Xutao Deng, Reuben Thomas, Katherine Pollard, Philip Norris, Clara Di Germanio, Nadia Roan, Warner Greene, Ole Søgaard, Martin Tolstrup, Satish Pillai</td>
</tr>
<tr>
<td>311</td>
<td>IMMUNE MARKERS AND TO TIME TO REBOUND DURING HIV TREATMENT INTERRUPTION IN ACTG A5345</td>
</tr>
<tr>
<td></td>
<td>Bernard Macatangay, Jonathan Li, Evgenia Aga, Ronald J. Bosch, Jennifer Kinslow, Mark Plinkton, Lysayn MacLaren Ehui, Eugene Kroon, Jintanat Ananworanich, Robert Coombs, John W. Mellors, Steven G. Deeks, Rajesh T. Gandhi, Davey M. Smith, Alan Landay</td>
</tr>
<tr>
<td>312</td>
<td>MATHEMATICAL MODELING OF PREDICTORS OF POSTTREATMENT CONTROL IN HIV CURE TRIALS</td>
</tr>
<tr>
<td></td>
<td>Gesham Magombedze, Devi SenGupta, Jonathan Li, Romas Geleziunas, Steven G. Deeks</td>
</tr>
<tr>
<td>313</td>
<td>THE SAO PAULO PATIENT: LOSING CELLULAR IMMUNITY AND REEMERGENCE OF DISTINCT HIV</td>
</tr>
<tr>
<td></td>
<td>Ricardo S. Diaz, Leila B. Giron, Juliana Galinskas, James Hunter, Muhammad S. Arif, Sadia Samer, Danilo Dias, Luiz Mario R. Janini, Iart Luca Shytaj, Maria Cecilia A. Sucupira, Juliana T. Maricato, Mohammad M. Tarek, Andrea Savarino</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Science Spotlights™-E6</th>
<th>ASSAYS TO MEASURE AND CHARACTERIZE HIV PERSISTENCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>314</td>
<td>A NOVEL EXTENDED-LENGTH HIV-1 PLASMA RNA SEQUENCING ASSAY</td>
</tr>
<tr>
<td></td>
<td>Katie Fisher, Xiao Qian Wang, Vincent Morcilla, Ashley Lee, Anthony Kelleher, Sarah Palmer</td>
</tr>
<tr>
<td>315</td>
<td>QUANTIFICATION BIAS IN HIV-1 PROVIRUSES BY NEAR FULL-LENGTH GENOME SEQUENCING METHODS</td>
</tr>
<tr>
<td>316</td>
<td>IMPROVED DETECTION OF HIV Gag p24 PROTEIN FROM PATIENT-DERIVED SAMPLES</td>
</tr>
<tr>
<td></td>
<td>Guoxin Wu, Carol Cheney, Qian Huang, Daria Hazuda, Bonnie Howell, Paul Zuck</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Science Spotlights™-F1</th>
<th>NEUROIMAGING AND ASSOCIATED BIOMARKERS</th>
</tr>
</thead>
<tbody>
<tr>
<td>317</td>
<td>ACCELERATED CEREBRAL BLOOD-FLOW REDUCTION AND BRAIN AGING IN PEOPLE LIVING WITH HIV</td>
</tr>
<tr>
<td></td>
<td>Kalen Petersen, Nicholas Metcalf, Sarah Cooley, Dimitre Tomov, Florin Vaida, Robert Paul, Beau M. Ances</td>
</tr>
<tr>
<td>Page</td>
<td>Title</td>
</tr>
<tr>
<td>------</td>
<td>----------------------------------------------------------------------</td>
</tr>
<tr>
<td>318</td>
<td>SEX DIFFERENCES IN WHITE-MATTER LOSS AND ASSOCIATED AXONAL INJURY IN PLWH</td>
</tr>
<tr>
<td>319</td>
<td>THE EFFECTS OF CARDIOVASCULAR HEALTH ON WHITE MATTER IN HIV+ AND HIV- PERSONS</td>
</tr>
<tr>
<td>320</td>
<td>VASCULAR INJURY MARKERS ASSOCIATED WITH COGNITIVE IMPAIRMENT IN HIV PATIENTS ON ART</td>
</tr>
<tr>
<td>321</td>
<td>SEX-SPECIFIC ASSOCIATIONS BETWEEN CSF MARKERS AND COGNITIVE FUNCTION IN PWH IN UGANDA</td>
</tr>
<tr>
<td>322</td>
<td>CIRCULATING INTERMEDIATE MONOCYTES: A COGNITIVE BIOMARKER IN HIV-INFECTED WOMEN</td>
</tr>
<tr>
<td>323</td>
<td>BASELINE MONOCYTE HIV RNA PREDICTS BLUNTED COGNITIVE TRAJECTORIES IN ACUTE INFECTION</td>
</tr>
<tr>
<td>324</td>
<td>Glyceria IS ASSOCIATED WITH NEUROPSYCHOLOGICAL IMPAIRMENT IN PREDOMINANTLY HIV+ MEN</td>
</tr>
<tr>
<td>325</td>
<td>PREDICTED PATHOGENICITY OF mtDNA VARIANTS AND MOTOR IMPAIRMENT IN PERSONS WITH HIV</td>
</tr>
<tr>
<td>326</td>
<td>BUCCAL MITOCHONDRIAL DNA IS ASSOCIATED WITH AMYLOID-β 1-42 IN CEREBROSPINAL FLUID</td>
</tr>
<tr>
<td>327</td>
<td>CSF MARKERS OF AD-RELATED PATHOLOGY AND MEMORY DEFICITS IN OLDER PEOPLE WITH HIV</td>
</tr>
<tr>
<td>Science Spotlights™-F3</td>
<td>COMORBIDITIES AND NEUROCOGNITIVE OUTCOMES</td>
</tr>
<tr>
<td>------------------------</td>
<td>------------------------------------------</td>
</tr>
<tr>
<td><strong>328</strong></td>
<td>HIGHER COMORBIDITY BURDEN PREDICTS WORSENING NEUROCOGNITION IN PEOPLE WITH HIV</td>
</tr>
<tr>
<td><strong>329</strong></td>
<td>NEUROCOGNITIVE DYSFUNCTION, INFLAMMATION, AND ADIPOSITY IN TREATED HIV PATIENTS</td>
</tr>
<tr>
<td><strong>330</strong></td>
<td>DEMENTIA INCIDENCE AMONG ART-TREATED PEOPLE WITH HIV IN A PRIMARY CARE SETTING</td>
</tr>
<tr>
<td><strong>331</strong></td>
<td>PWH AND ALZHEIMER’S DISEASE RISK: CLARIFYING THE HAND PHENOTYPE OVER TIME</td>
</tr>
<tr>
<td><strong>332</strong></td>
<td>EPIGENETIC AGING ASSOCIATED WITH COGNITIVE IMPAIRMENT IN OLDER BLACK ADULTS WITH HIV</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Science Spotlights™-F4</th>
<th>TREATMENT EFFECTS ON NEUROLOGIC OUTCOMES</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>333</strong></td>
<td>RANDOMIZED CONTROLLED TRIAL OF MARAVIROC FOR HIV-ASSOCIATED NEUROCOGNITIVE IMPAIRMENT</td>
</tr>
<tr>
<td><strong>334</strong></td>
<td>IMPACT OF SWITCH FROM EFV/F/TDF TO B/F/TAF ON PSYCHIATRIC SYMPTOMS AND NEUROCOGNITION</td>
</tr>
<tr>
<td><strong>335</strong></td>
<td>THE USE OF LESS NEUROTOXIC ANTIRETROVIRALS: SECONDARY ENDPOINTS OF THE MARAND-X STUDY</td>
</tr>
<tr>
<td><strong>336</strong></td>
<td>PEMBROLIZUMAB FOR PROGRESSIVE MULTIFOCAL LEUKOENCEPHALOPATHY (PML) IN PLWH</td>
</tr>
</tbody>
</table>
337 INTRANASAL INSULIN IMPROVES ATTENTION AND MEMORY IN PEOPLE WITH HIV

338 STATIN USE AND COGNITIVE PERFORMANCE IN THE MULTICENTER AIDS COHORT STUDY
Deanna Saylor, Samantha A. Molsberry, Eric C. Seaberg, Yu Cheng, Andrew Levine, Eileen Martin, Cynthia Munro, Frank Palella, James Becker, Ned Sacktor

339 REVERSIBILITY OF SLEEP DISTURBANCES AFTER SWITCHING FROM DTG/3TC/ABC TO DRV/C/FTC/TAF
Ignacio Perez-Valero, Sara De La Fuente, Rafael Micano, Maria Novella Mena, Miguel Gorgolas, Jesus Troya, Maria Lagarde, Alberto Diaz De Santiago, Carmen Busca, Pablo Ryan, Beatriz Alvarez, Cristina Hernandez Gutierrez, Adriana Pinto-Martinez, Alfonso Cabello Ubeda, for the GESIDA 10418 - Detox Study Group

340 STABLE IMPROVEMENT IN DEPRESSION 6 YEARS AFTER ART INITIATION DURING ACUTE HIV
Phillip Chan, Eugene Kroon, Donn J. Colby, Carlo Sacralan, Somchai Sreepleanjan, Suteeraporn Pinyakorn, Somporn Tipsuk, Nittiya Chomchey, Sandhya Vasam, Victor Valcim, Jintanat Ananworanich, Robert Paul, Nittaya Phanuphak, Serena S. Spudich, for the RV254 Study Team

341 HIV REPLICATION IN THE CNS IS ASSOCIATED WITH NEUROCOGNITION AND DEPRESSION PRE-ART
Sarah B. Joseph, Jessica Keys, Leah Rubin, Deanna Saylor, Gertrude F. Nakigozi, Noeline Nakasujja, Thomas Quinn, Sabrina Clark, Oliver Laeyendecker, Steven J. Reynolds, Maria Wawer, Robert Paul, Alyssa Vecchio, Ronald Swanstrom, Ned Sacktor

342 CELL-TYPE SPECIFIC GENOMICS AND TRANSCRIPTOMICS OF HIV IN THE BRAIN
Amara Plaza-Jennings, Callan O’Shea, Benjamin K. Chen, Susan Morgello, Lotje De Witte, Schahram Akbarian

343 PREDICTIVE FACTORS FOR HIV-1 CSF ESCAPE IN NEUROCOGNITIVE IMPAIRMENT
Paraskevas Filippidis, José Damas, Benjamin Viala, Frederic Assal, Alexandra Calmy, Philip Tarr, Tobias Derfuss, Michael Oberholzer, Iljas Jelic, Thomas Hundsberger, Leonardo Sacco, Matthias Cavassini, Renaud Du-Pasquier, Katharine E. Darling

344 ELUCIDATING THE ORIGINS OF HIV-1 IN THE CEREBROSPINAL FLUID
Olivia D. Council, Laura Kincer, Sarah B. Joseph, Susan Morgello, Benjamin B. Gelman, Ronald Swanstrom

345 PEMBROLIZUMAB TREATMENT IS ASSOCIATED WITH DECREASED CELL-ASSOCIATED HIV DNA IN CSF
Cynthia McMahan, Liliana Pérez, Elizabeth Horne, Jong Shin, Ulisses Santamaria, Bryan R. Smith, Avindra Nath, Eli A. Boritz, Lauren B. Reoma
346 NEUROMODULATORY EFFECTS OF SARS-CoV-2 ON THE BLOOD-BRAIN BARRIER
Erin Clough, Lee Chavis, Jessica L. Reynolds, Supriya D. Mahajan

347 DIMETHYL FUMARATE REDUCES BRAIN OXIDATIVE STRESS AND INFLAMMATION IN SIV INFECTION
Yoelvis Garcia-Mesa, Patricia Vance, Analise L. Gruenewald, Rolando Garza, Cecily Midkiff, Xavier Alvarez-Hernandez, David J. Irwin, Alexander J. Gill, Dennis L. Kolson

348 GUT DYSBIOSIS IN PEOPLE WITH HIV WHO HAVE NEUROPATHIC PAIN
Ronald J. Ellis, Robert K. Heaton, Sara Gianella, Gibraan Rahman, Rob Knight

349 WITHDRAWN

350 PHENOTYPIC CHANGE OF MONOCYTES INDUCED BY PLASMA EXOSOMES FROM HIV(+) WOMEN WITH HAND
Bryan J. Collazo-Rodriguez, Juan C. Medina, Jaylene Alvarez, Dariana Morales, Cristhian Negron, Yisel Cantres, Elaine Rodriguez, Valerie Wojna, Yamil Gerena

351 COMPARATIVE ANALYSIS OF HUMAN MICROGLIAL MODELS FOR STUDIES OF HIV REPLICATION
Jason E. Hammonds, Mohammad A. Rai, Mario Pujato, Christopher Mayhew, Krishna Roskin, Paul Spearman

352 VALIDATION OF RAPID SEMIQUANTITATIVE LATERAL FLOW ASSAY FOR URINE TENOFOVIR
Derin Sevenler, Sandy Dossantos, Xin Niu, Tim R. Cressey, Mehmet Toner, Rebecca Sandlin, Paul K. Drain

353 IMPLICATION OF MEASURING URINE TENOFOVIR BY RAPID LATERAL FLOW ASSAY FOR DOSE RECENCY
Xin Niu, Derin Sevenler, Sandy Dossantos, Rebecca Sandlin, Mehmet Toner, Tim R. Cressey, Paul K. Drain

354 ESTABLISHING THE CUT-OFF FOR A URINE-BASED POINT-OF-CARE TEST FOR ADHERENCE TO TAF
Matthew Spinelli, Dave Glidden, Mary Morrow, Samantha MaWhinney, Kelly A. Johnson, Hideaki Okochi, Warren Rodrigues, Guohong Wang, Monica Gandhi, Peter Anderson

355 URINE TENOFOVIR CONCENTRATIONS ARE LOWER AMONG INDIVIDUALS TAKING TAF THAN TDF
Kelly A. Johnson, Matthew Spinelli, Xin Niu, Dave Glidden, Samantha MaWhinney, Mary Morrow, Hideaki Okochi, Tim R. Cressey, Paul K. Drain, Monica Gandhi, Peter Anderson

356 HAIR MASS SPECTROMETRY IMAGING CAPTURES SHORT- AND LONG-TERM PreP ADHERENCE CHANGES
Joseph Mwangi, Nicole White, Kelly Knudtson, Amanda Polseno, Craig Sykes, Lisa Hightow-Weidman, Angela D. Kashuba, Elias Rosen
357 HAIR MASS SPECTROMETRY IMAGING OF DAILY MARAVIROC ADHERENCE IN HPTN 069/ACTG 5305
Elias Rosen, Nicole White, Mac Gilliland, Monica Gandhi, Roy M. Gulick, Angela D. Kashuba

358 TOTAL AND UNBOUND DORAVIRINE CONCENTRATIONS AND VIRAL SUPPRESSION IN CSF OF HIV+ PTS
Juan M. Tiraboschi, Sofia Scevola, Sujan D. Penchala, Laura Else, Paula Prieto, Maria Saumoy, Jordi Niubo, Benito Garcia-Vidal, Saye Khoo, Daniel Podzamczer

359 PERSISTENT HIV TRANSCRIPTION AND VARIABLE ARV LEVELS IN LYMPH NODES DURING ART
Courtney V. Fletcher, Eugene Kroon, Timothy Schacker, Suteeraporn Pinyakorn, Nicolas Chomont, Suthat Chotthanapund, Peeriya Prueksaew, Khunthalee Benjapornpong, Supranee Buranapraditkun, Jintanat Ananworanich, Sandhya Vasan, Denise C. Hsu, for the RV254/SEARCH 010 Study Group

360 PBPK MODELS OF TFV EXPOSURE IN LYMPH NODES REVEAL PERMEABILITY-LIMITED DISTRIBUTION
Erin M. Scholz, Yanguang Cao, Angela D. Kashuba

361 PHARMACOKINETIC AND PHARMACODYNAMIC STUDY OF TFV AND TAF FOR PrEP IN FORESKIN TISSUE
Carolina Herrera, Laura Else, Sujan D. Penchala, Azure-Dee A. Pillay, Thabiso B. Seiphetlo, Limakatso Lebina, Christian Callebaut, Neil A. Martinson, Julie Fox, Saye Khoo

362 DORAVIRINE CONCENTRATIONS AND HIV-1 RNA SUPPRESSION IN MALE AND FEMALE GENITAL FLUIDS
Sofia Scevola, Arkaitez Imaz, Mackenzie L. Cottrell, Jordi Niubo, Juan M. Tiraboschi, Sandra Morenilla, Irene Soriello, Angela D. Kashuba, Daniel Podzamczer

363 PREDICTED SUCCESS OF PrEP USERS’ PREFERRED NONDAILY TENOFOVIR/EMTRICITABINE REGIMENS
Julie B. Dumond, Mackenzie L. Cottrell, Allison E. Symonds, Craig Sykes, Nicole White, Angela D. Kashuba

364 HIGH LUNG LEVELS OF ACTIVE TRIPHOSPHATE PREDICTED WITH ORAL AT-527 IN COVID PATIENTS
Xiao-Jian Zhou, Arantxa Horga, Gaetano Morelli, Maureen Montrond, Keith Pietropaolo, Bruce Belanger, Steven S. Good, Adel Moussa, Janet Hammond, Jean-Pierre Sommadossi

365 INTEGRATED DMPK ALGORITHM FOR THE PREDICTION OF ARV DDI MAGNITUDE
Sandra Grañana-Castillo, Fazila S. Bunglawala, Nicolas Cottura, Asangaedem Akpan, Rachel Bearon, Saye Khoo, Marco Siccardi

366 EXOGENOUS HORMONE PHARMACOKINETICS IN TRANSGENDER ADOLESCENTS RECEIVING ORAL TDF/FTC
Jenna L. Vager, Kristina Brooks, Jennifer Brothers, Daniel Reiden, Meena Malhotra, Carrie Glenny, Kathleen Mulligan, Raphael J. Landovitz, Lucas Ellison, Lane Bushman, Jennifer Kiser, Peter Anderson, Sybil Hosek
367  TFV-DP AND FTC-TP IN PBMC AMONG TRANSGENDER ADOLESCENTS RECEIVING DAILY TDF/FTC
Jenna L. Yager, Kristina Brooks, Jennifer Brothers, Daniel Reirden, Meena Malhotra, Carrie Glenny, Kathleen Mulligan, Raphael J. Landovitz, Bethany Johnson, Lucas Ellison, Lane Bushman, Jennifer Kiser, Peter Anderson, Sybil Hosek

368  PHARMACOKINETICS OF 2 CONTRACEPTIVE IMPLANTS AMONG WOMEN ON RILPIVIRINE-BASED ART
Shadia Nakalema, Catherine A. Chappell, Michelle Pham, Ritah Nakijoba, Leah Mbabazi, Pauline Byakika-Kibwika, Julian Kaboggoza, Stephen I. Walimwba, Jeffrey Jeppson, Lee Winchester, Marco Siccardi, Courtney V. Fletcher, Kimberly K. Scarsi, Mohammed Lamorde

369  DRUG INTERACTIONS WITH ONCE-DAILY B/F/TAF IN COMBINATION WITH ONCE-WEEKLY RIFAPENTINE
Priyanka Arora, Sean E. Collins, Hal Martin, Xu Zhang, Lily Mak, John Ling, Polina German

370  EFFICACY AND PK OF DOLUTEGRAVIR 50 mg QD WITH FOOD VERSUS 50 mg BID WITH RIFAMPICIN
Thornthun Ueaphongsukkit, Sivaporn Gatechompol, Jiratchaya Sophonphan, Stephen J. Kerr, Hay Mar Su Lwin, Win Min Han, Sasiwimol Ubolyam, Prachya Chaiyahong, Charnnarong Phothidokmai, Yong Soon Cho, Jae Gook Shin, Anchealee Avihingsanond, for the HIV-NAT 254 Study

371  INTRACELLULAR DISPOSITION OF DARUNAVIR/RITONAVIR AND DOLUTEGRAVIR WITH RIFAMPIN
Amedeo De Nicolò, Andrea Calcagno, Ilaria Motta, Elisa De Vivo, Antonio D’Avolio, Giovanni Di Perri, Lubbe Wiesner, Ismaeel Ebrahim, Gary Maartens, Catherine Orrell, Helen McIlleron

372  POTENTIAL DRUG-DRUG INTERACTIONS IN HOSPITALIZED COVID-19 PATIENTS (CATCO-DDI)
Alice Tseng, Nancy Sheehan, Kendra Hewlett, Alison Y. Wong, Maria Kulikova, Bryan Coburn, Rob Fowler, Matthew P. Cheng, Srinivas Murthy

Science Spotlights™-G4 NEW APPROACHES TO OPTIMIZE DRUG DOSING: LONG ACTING AND BEYOND

373  CABOTEGRAVIR PPK SIMULATION TO INFORM Q2M STRATEGIES FOLLOWING DOSING INTERRUPTIONS
Kelong Han, Mark Baker, William R. Spreen, Susan L. Ford

374  IN SILICO PREDICTION OF LONG-ACTING CABOTEGRAVIR PK IN LIVER-IMPAIRED PATIENTS
Nicolas Cottura, Maiara C. Montanha, Fazila S. Bunglawala, Sandra Grañana-Castillo, Hannah Kinng, Marco Siccardi

375  PHARMACOKINETICS OF LENACAPAVIR, AN HIV-1 CAPSID INHIBITOR, IN HEPATIC IMPAIRMENT
Vamshi Jogiraju, Rebecca Begley, Jason Hindman, Steve West, Emily Ho, John Ling, Polina German

376  MODEL-INFORMED DOSE SELECTION FOR ISLATRAVIR/MK-8507 ORAL ONCE-WEEKLY PHASE 2B STUDY
Bhargava Kandala, Craig Fancourt, Hari Krishna Ananthula, Youfang Cao, Pavan Vaddady, Ernest Asante-Appiah, Tracy L. Diamond, Elizabeth G. Rhee, Randolph P. Matthews, Wendy Ankrom, Ryan Vargo
377 IN SILICO PREDICTION OF MONTHLY BICTEGRAVIR MICRONEEDLE ARRAY PATCHES

Hannah Kinvig, Fazila S. Bunglawala, Nicolas Cottura, Maiara C. Montanha, Andrew Lloyd, Kurtis Moffatt, Chunyang Zhang, Ryan Donnelly, Marco Siccardi

378 PBPK MODELING OF DEXAMETHASONE IN PATIENTS WITH COVID-19 AND LIVER DYSFUNCTION

Maiara C. Montanha, Nicolas Cottura, Michael Booth, Catherine E. Hodge, Hannah Kinvig, Fazila S. Bunglawala, Andrew Lloyd, Saye Khoo, Marco Siccardi

379 IN VIVO EVALUATION OF LONG-ACTING BIODEGRADABLE EMTRICITABINE IMPLANTS

Megan Neary, Joanne Sharp, Paul Curley, Henry Pertinez, Helen Box, Lee Tatham, Danielle Brain, Faye Hern, Anika Shakil, Chung Liu, Caren Meyers, Charles W. Flexner, Steve Rannard, Andrew Owen

380 PHARMACOGENOMIC TESTING PROVIDES INSIGHT AND ENHANCES MEDICATION MANAGEMENT IN PLWHIV

John D. Zeuli, Christina G. Rivera, Mary J. Kasten, Maryam Mahmood, Stacey A. Rizza, Zelalem Temesgen, John W. Wilson, Jessica A. Wright, Nathan W. Cummins

381 A NOVEL COVID-19 CURE STRATEGY: HIJACKING SARS-CoV-2 RNA-DEPENDENT RNA POLYMERASE

Serhat Gumrukcu, Tung X. Nguyen, Michael D. Bobardt, Philippe Gallay

382 NOVEL ENTRY INHIBITORS AGAINST SARS-CoV-2 BASED ON INTERFACE OF SPIKE RBD

Arpan Acharya, Kabita Pandey, Michelle Thurman, Elizabeth Klug, Kamal Singh, Siddappa N. Byrareddy

383 RATIONALLY DESIGNED ACE2-DERIVED PEPTIDES INHIBIT SARS-CoV-2

Ross C. Larue, Enming Xing, Adam D. Kenney, Yuexiu Zhang, Jasmine Tuazon, Jianrong Li, Jacob Yount, Pui-Kai Li, Amit Sharma

384 RNHC INHIBITS SARS-CoV-2 IN VITRO BUT IS MUTAGENIC IN MAMMALIAN CELLS

Shuntai Zhou, Collin Hill, Sanjay Sarkar, Victor Tse, Timothy Sheahan, Ralph Baric, Mark Heise, Ronald Swanstrom

385 ANTI-SARS-CoV-2 MULTI-DOMAIN DARPin® MOLECULES AS HIGHLY POTENT THERAPEUTICS

Marcel Walser, Sylvia Rothenberger, Daniel L. Hurdiss, Anja Schlegel, Valerie Calabro, Keith M. Dawson, Micha A. Häuptle, Sarah Taplin, Christoph Zitt, Leon De Waal, Frank J. Van Kuppevelt, Olivier Engler, Berend-Jan Bosch, Michael T. Stumpp, Patrick Amstutz

386 IDENTIFICATION OF REPURPOSING DRUGS AGAINST SARS-CoV-2 USING HUMAN LUNG TISSUES

Judith Grau-Expósito, David Perea, Nuria Massana, Marina Suppi, Joel Rosado, Javier García-Pérez, José Alcami, Anna Serrano, Vicenç Falcó, Meritxell Genescà, Maria José Buzón
387 THE 3CLpro INHIBITOR ALG-097111 POTENTLY INHIBITS SARS-CoV-2 REPLICATION IN HAMSTERS

Koen Vandyck, Rana Abdelnabi, Kusum Gupta, Dirk Jochmans, Dinah Misner, Jerome Deval, Dorothée Bardiot, Leonid Beigelman, Lawrence M. Blatt, Sandro Boland, Patrick Chaltin, Arnaud Marchand, Pierre Raboisson, Julian A. Symons, Johan Neyts

388 A SARS-CoV-2—NEUTRALIZING ACE2 DECOY SHOWS HIGH AFFINITY FOR N501Y AND L452R VARIANTS

Shiho Tanaka, Anders Olson, Gard Nelson, Aleksandr Buzko, Wendy Higashide, Annie Shin, Marcos Gonzalez, Justin Taft, Roosheel Patel, Sofija Buta, Dusan Bogunovic, Patricia R. Spillman, Kayvan Niazi, Shahroz Rabizadeh, Patrick Soon-Shiong

389 TARGETING THE RECEPTOR AXL BY BEMCENTINIB PREVENTS SARS-CoV-2 INFECTION

Dana Bohan, Hanora Van Ert, Sushil Dhakal, Natalie Ruggio, Kai Rogers, Tomasz Stokowy, Gro Gausdal, Akil Jackson, Hani Gabra, David R. Micklem, James Lorenz, Wendy Maury

Science Spotlights™-H2 SARS-CoV-2 TREATMENT: CLINICAL INTERVENTIONS

777 REDUCTION IN INFECTIOUS SARS-CoV-2 IN TREATMENT STUDY OF COVID-19 WITH MOLNUPRAVIR

Wendy P. Painter, Timothy Sheahan2, Ralph Baric, et al

390 MULTICENTER, OPEN-LABELED EFFICACY STUDY OF AVIFAVIR IN PATIENTS WITH COVID-19

Suzana Corritori, Elena Yakubova, Andrey Ivashchenko, Tagir Sitdakov, Alina Egorova, Elena Merkulova, Andrew Blinow, Nikita Lomakin, Elena Smolyarchuk, Natalia Papazova, Dmitry Kravchenko, Sergey Baranovsky, Jenny Remeeva, Nikolay Savchuk, Alexandre Ivatchenko

391 CASE SERIES: TREATMENT OF COVID-19 WITH CONVALESCENT PLASMA IN B-CELL DEPLETION

Arvind Gharbharan, Carlijn Jordans, Susanne Bogers, Corine H. Geurts van Kessel, Casper Rokx, Bart J. Rijnders

392 TREATMENT OF COVID-19 IN 22 B-CELL—DEPLETED PATIENTS

Arvind Gharbharan, Carlijn Jordans, Adam A. Anas, Susanne Bogers, Corine H. Geurts van Kessel, Casper Rokx, Bart J. Rijnders

393 REMDESVIR VERSUS STANDARD OF CARE FOR SEVERE COVID-19

Susan Olender, Theresa L. Walunas, Esteban Martinez, Marta Boffito, Katherine K. Perez, Antonella Castagna, Su Wang, Parag Goyal, Diego Ripamonti, Jose I. Bernardino, Richard H. Haubrich, Anand P. Chokkalingam, George Wu, Helena Diaz-Cuervo, Diana Brainard

394 COBICISTAT SYNERGIZES WITH REMDESEVIR TO SUPPRESS SARS-CoV-2 REPLICATION IN VITRO

Iart Luca Shytaj, Mahmoud M. Tolba, Bojana Lucic, Lara Gallucci, Mohamed Fares, Liv Zimmermann, Ahmed Taha Ayoub, Vibor Laketa, Petr Chlanda, Oliver T. Fackler, Boulant Sleeve, Ralf Bartenschlager, Megan Stanifer, Andrea Savarino, Marina Lusic

395 ACUTE KIDNEY INJURY IN PATIENTS WITH MODERATE COVID-19 TREATED WITH RDV VERSUS SoC


*Very late addition; full list of authors can be found in the virtual CROI 2021 Abstract eBook
396 SYMPTOM OUTCOME MEASURES FOR OUTPATIENT COVID-19 PHASE 3 TREATMENT TRIALS

Kara W. Chew, Carlee B. Moser, Eric S. Daar, David A. Wohl, Eunice Yeh, Justin Ritz, Arzhang Cyrus Javan, Joseph J. Eron, Judith S. Currier, Davey M. Smith, Michael Hughes, for the ACTIV-2/A5401 Study Team

397 TREATMENT AND OUTCOMES OF COVID-19 IN THE US: ARE THEY DIFFERENT ACCORDING TO RACE?

Essy Mozaffari, Aastha Chandak, Shuting Liang, Julie Gayle, Mark Thrun, Paul Hodgkins, Richard H. Haubrich

398 TENOFOVIR DIPHOSPHATE IN DRIED BLOOD SPOTS PREDICTS FUTURE VIREMIA IN SOUTH AFRICA

Reuben N. Robbins, Lauren Jennings, Nadia Nguyen, Christopher Ferraris, Cheng-Shiun Leu, Curtis Dolezal, Marvin Hsiao, Ofole Mgbako, John Joska, Jose R. Castillo-Mancilla, Landon Myer, Peter Anderson, Catherine Orrell, Robert Remien

399 EFFECTIVENESS OF THE DOLUTEGRAVIR TRANSITION IN UGANDA: DISCO COHORT WEEK-24 RESULTS

Suzanne McCluskey, Winnie Myuindike, Daniel Omoding, Godfrey Masette, Ashley Stuckwisch, Bethany Hedt-Gauthier, Vincent Marconi, Mahomed-Yunus Moosa, Deenan Pillay, Ravindra Gupta, Mark Siedner, for the Mwebesa Bwana Research Group

400 DOLUTEGRAVIR IN REAL LIFE: QUALITY-OF-LIFE OUTCOMES IN A COHORT STUDY IN LESOTHO


401 WEEK 96 EFFICACY AND SAFETY OF CABOTEGRAVIR + RILPIVIRINE EVERY 2 MONTHS: ATLAS-2M


402 LONG-ACTING CABOTEGRAVIR+RILPIVIRINE IN OLDER ADULTS: POOLED PHASE 3 WEEK-48 RESULTS


403 POPPK MODELING OF Q2M IM RPV LA FOR MANAGING DOSING INTERRUPTIONS IN HIV-1 PATIENTS

Stefaan Rossenu, Martine Neyens, Rodica Van Solingen-Ristea, Bryan Baugh, Herta Crauwels

404 BICTEGRAVIR AND CABOTEGRAVIR: IN VITRO PHENOTYPIC SUSCEPTIBILITY OF HIV-1 NONGROUP M

Charlène Martin, Ségolène Gracias, Charlotte Charpentier, Diane Descamps, Quentin Le Hingrat, Jean-Christophe Plantier, Elodie Alessandri-Gradt
405  IMPACT OF ANTIRETROVIRAL REGIMENS ON MORTALITY IN PATIENTS WITH ADVANCED HIV DISEASE
Joaquin Burgos-Cibrian, Sergio Moreno Fornés, Juliana Reyes-Urueña, Andreu Bruguera, Berta Raventós, Josep Maria Llibre, Arkaitz Imaz, Pere Domingo, Emili Letang, Joaquin Peraire, Joaquin-Amat Orti, David Dalmau, Jordi Casanova, Jose M. Miro, Vicenç Falcó, for the PISCIS Investigators

406  EFFECTIVENESS OF RECOMMENDED 3-DRUG REGIMENS FOR TREATING ADVANCED HIV INFECTION
Karam Mounzer, Laurence Brunet, Jennifer S. Fusco, Ian McNicholl, Helena Diaz-Cuervo, Michael Sension, Lewis McCurdy, Gregory P. Fusco

407  BLIP INCIDENCE IN DOLUTEGRAVIR- OR EFAVIRENZ-BASED ART DURING ACUTE HIV INFECTION
Bharat Nandakumar, Carlo Sacdalan, Suteeraporn Pinyakorn, Eugene Kroon, Trevor A. Crowell, Donn J. Colby, Sometchai Sreeplejanan, Peeriya Prueksakaew, Nitiya Chomchey, Denise C. Hsu, Sandhya Vasan, Nittaya Phanuphak

408  HMMCgag ASSAY DETECTS HIGH VIREMIA RATES ON ART STARTED DURING ACUTE HIV INFECTION
Donn J. Colby, Suteeraporn Pinyakorn, Carlo Sacdalan, Adam Yates, Eugene Kroon, Denise C. Hsu, Nittaya Phanuphak, Jintanat Ananworanich, Jeffry Lifson, Brandie Fullmer, Jorden L. Welker, Robert Gorelick, Sandhya Vasan, Frank Maldarelli, for the RV254/SEARCH010 Research Group

409  CURRENT ANTIRETROVIRAL TREATMENT AMONG PEOPLE WITH HIV IN CARE IN THE US (2018-2019)
Jimmy Ma, Robin M. Nance, Joseph A. Delaney, Bridget M. Whitney, Sonia Napravnik, Kenneth H. Mayer, Richard Moore, Katerina Christopoulos, Ronnie M. Gravett, Laura Bamford, Barbara Gripshover, Michael Saag, Heidi Crane, Mari M. Kitahata, for the CNICS Cohort

410  CHARACTERIZING FIRST VIRAL FAILURES AMONG ANTIRETROVIRAL THERAPY INITIATORS IN THE US

411  SECOND ANTIRETROVIRAL THERAPY REGIMEN IN VIREMIC PEOPLE WITH HIV IN THE US, 2008-2018

412  DOLUTEGRAVIR VS DARUNAVIR/R-BASED ART IN VERY ADVANCED PATIENTS: 48-WEEK RESULTS
Jose M. Miro, Ferran Torres, Christian Manzardo, Eva Bonfill, Vicenç Falcó, Pere Domingo, Daniel Podzamczer, Roger Paredes, Lluis Force, Adrià Curran, Mar Gutierrez, María Saumoy, Nuria Climent, Francisco Lozano, Montserrat Plana
413  D/C/F/TAF VS DTG/ABC/3TC FOR INITIAL TREATMENT IN HIV+ ADULTS: A RANDOMIZED STUDY

Daniel Podzamczer, Rafael Mican, Juan M. Tiraboschi, Joaquín Portilla, Pere Domingo, Josep Maria Libbre, Esteve Ribera, Maria Jesus Vivancos, Luis Morano, Mar Masia, Cristina Gomez-Ayerbe, Antonio Navarro, Ana Caicedo, Santiago Moreno, for the SYMTRI Study Group (PreEC/RIS-57)

414  DURABLE EFFICACY OF DTG+3TC IN GEMINI-1&2: YEAR 3 SUBGROUP ANALYSES


415  4-YEAR OUTCOMES OF B/F/TAF IN TREATMENT-NAIVE ADULTS

Kimberly Workowski, Chloe Orkin, Paul Sax, Debbie Hagins, Ellen Koenig, Jeffrey Stephens, David A. Wohl, Adriano Lazzarin, Samir Gupta, Hailin Huang, Rima K. Acosta, Jason Hindman, Diana Brainard, Sean E. Collins, Hal Martin

416  WEEK 96 ANALYSIS OF VIRAL BLIPS FROM A PHASE 2B TRIAL OF ISLATRAVIR AND DORAVIRINE

Chloe Orkin, Jean-Michel Molina, Yazdan Yazdanpanah, Carolina Chahin Anania, Joseph J. Eron, Stephanie O. Klopfner, Karen A. Eves, Deborah A. Hepler, Carey Hwang, Todd A. Correll

417  SWITCHING TO DTG/3TC FDC IS NONINFERIOR TO TBR FOR 96 WEEKS: TANGO SUBGROUP ANALYSES

Paul Benson, Clifford A. Kinder, Maria Jesus Perez-Elias, Don E. Smith, Stefan H. Scholten, Moumou Ait-Khaled, Keith A. Pappa, Ruolan Wang, Jonathan Wright, Brian Wynne, Michael Aboud, Jean A. Van Wyk, Kimberly Smith

418  MISSING DATA, MISSING DIVERSITY: PARTICIPANT DEMOGRAPHICS IN INDUSTRY STUDIES 2010-20

Liz Barr, Michael J. Dorosh, Murray Penner, Moises Agosto, Danielle Campbell, Bob Huff, Rick Guasco, Andy Kaytes, David Palm, for the AIDS Treatment Activists Coalition

419  W96 EFFICACY OF 4/7 DAYS MAINTENANCE ART STRATEGY: ANRS-170 QUATUOR TRIAL


**Science Spotlights™-I1 NEW DRUGS, OLD DRUGS, AND NEW RESISTANCE MECHANISMS**

420  STRUCTURAL BASIS FOR VIRAL RESISTANCE TO LONG-ACTING HIV-1 CAPSID INHIBITOR GS-6207

Stephanie M. Bester, Reed Haney, Daniel Adu-Ampratwum, James Fuchs, Mamuka Kvaratskhelia

421  GSK3640254 IS A NOVEL MATURATION INHIBITOR WITH AN OPTIMIZED VIROLOGY PROFILE

Jerry L. Jeffrey, Mark Cockett, Tricia Protack, Zeyu Lin, Martin Gartland, Ira B. Dicker, Mark Krystal

422  REDUCED SUSCEPTIBILITY TO TEMSAVIR IS NOT LINKED TO IBA OR MVC RESISTANCE

Burt Rose, Margaret Gartland, Eugene Stewart, Mark Cockett, Peter Ackerman, Max Latailade, Cyril Llamoso, Mark Krystal
423  HIV-1 5'-LEADER MUTATIONS IN PWH DEVELOPING RTI-RESISTANCE MUTATIONS
Janin Nouhin, Malaya K. Sahoo, Philip L. Tzou, Benjamin A. Pinsky, Joseph D. Puglisi, Elisabetta V. Puglisi, Robert W. Shafer

424  MUTATIONS IN GP41 IN PRIMARY HIV-1 ISOLATES CONFER RESISTANCE TO ANTIRETROVIRALS
Yuta Hikichi, Rachel Van Duyne, Phuong Pham, Jennifer L. Groebner, Ann Wiegand, John W. Mellors, Mary F. Kearney, Eric O. Freed

425  EVALUATION OF bNAB SENSITIVITY BY GENOTYPING AND PHENOTYPING FOR HIV CLINICAL TRIALS
Brian Moldt, PC Parvangada, Ross Martin, Craig Pace, Mini Balakrishnan, Nathan Thomsen, Herbert Kuster, Dominique Braun, Huldrych F. Günthard, Sean E. Collins, Romas Geleziunas, Christian Callebaut

426  VARIANT SELECTION, CHARACTERIZATION, AND IMPACT ON ANTIBODY SARS-CoV-2 NEUTRALIZATION
Nicole Kallewaard, Beverly A. Heinz, Robert W. Siegel, Peter Vaillancourt, Bryan E. Jones, Dylan M. Johnson, Viktoriya Borisevich, Thomas W. Geisbert, Robert W. Cross, Andrew C. Adams

Science Spotlights™-I2  NEW DEVELOPMENTS IN TRANSMITTED AND ACQUIRED DRUG RESISTANCE

427  MONITORING OF HIV DRUG RESISTANCE AMONG SEROCONVERTERS ON PrEP IN KENYA
Bhavna Chohan, Everline Bosek, Irene Mukui, Sarah Masyuko, Mary Mugambi, John Kinuthia, Dorcus Abuya, Barbra A. Richardson, Lisa Levy, Lauren Kudrick-Downey, John W. Mellors, Urvi Parikh

428  ULTRASENSITIVE HIV-1 DRUG-RESISTANCE ANALYSIS IN THE DISCOVER PrEP TRIAL
Stephanie Cox, Urvi Parikh, Amy Heaps, Jay Goetz, John W. Mellors, Moupalii Das, Christian Callebaut

429  IMPACT OF M184V ON THE VIROLOGICAL EFFICACY OF SWITCH TO 3TC/DTG IN REAL LIFE
Maria M. Santoro, Daniele Armenia, Elisa Teyssou, José Ramón Santos, Charlotte Charpentier, Sidonie Lambert-Niclot, Andrea Antinori, Christine Katlama, Diane Descamps, Carlo F. Perno, Vincent Calvez, Roger Paredes, Francesca Ceccherini-Silberstein, Anne Genevieve Marcelin, for the LAMRES Study Group

430  HIV WITH TRANSMITTED DRUG RESISTANCE IS DURABLY SUPPRESSED BY B/F/TAF AT WEEK 144
Rima K. Acosta, Grace Q. Chen, Silvia Chang, Ross Martin, Xinxin Wang, Hailin Huang, Diana Brainard, Jason Hindman, Sean E. Collins, Hal Martin, Kirsten L. White

431  DRUG RESISTANCE DURING LOW-LEVEL HIV VIREMIA SUPPORTS LOWERING THRESHOLD FOR SWITCH
Jennifer A. Brown, Alain Amstutz, Bienvengu L. Nsakala, Ulrike Seeburg, Fiona Vanobberghen, Josephine Muhiwre, Thomas Klimkait, Niklaus D. Labhardt

432  EVALUATION OF COMBINATIONS OF CLINICAL INTEGRASE MUTATIONS ON InSTI RESISTANCE
Peter K. Cheung, Aniqah Shahid, Winnie K. Dong, Katherine J. Lepik, Mark A. Brockman, Zubrina L. Brumme, Chanson Brumme
PUBLIC AVAILABILITY OF HIV POL SEQUENCES AND ART HISTORIES IN ACQUIRED HIVDR STUDIES

Soo-Yon Rhee, Michael R. Jordan, Seble Kassaye, Vinie Kouamou, David Katzenstein, Robert W. Shafer

ANALYSIS OF INTRAHOST gag-Pol EVOLUTION WITH NOVEL SINGLE-MOLECULE SEQUENCING METHOD

Christian M. Gallardo, Shiyi Wang, Daniel J. Montiel-Garcia, Susan J. Little, Davey M. Smith, Andrew L. Routh, Bruce E. Torbett

A MULTIPLEXED HIV DRUG RESISTANCE (DR) ASSAY TO SURVEY HIVDR MUTATIONS IN POL REGION


SIMULTANEOUS HIV QUANTIFICATION AND HIVDR DETECTION BY A SEMICONDUCTOR BIOCHIP SYSTEM

Kirsten A. Johnson, Janin Nouhin, Ellen A. LaPrade, Benjamin A. Pinsky, Jessica A. Ebert, Tran A. Van, Arun A. Manickam, Arjang A. Hassibi, Robert W. Shafer

DRUG RESISTANCE MUTATIONS IN HIV PROVIRUS ARE ASSOCIATED WITH HYPERMUTATIONS

Yijia Li, Behzad Etemad, Ruth Dele-Oni, Radwa Sharaf, Ce Gao, Xu Yu, Jonathan Li

HIV-1 DNA GENOTYPING IS OFTEN VARIABLE IN REPEAT TESTING FROM SINGLE BLOOD DRAWS

Michelle L. D’Antoni, Kristen Andreatta, Rima K. Acosta, Hui Liu, Yongwu Shao, Kirsten L. White

REINFECTION WITH THE HEPATITIS C VIRUS IN MEN WHO HAVE SEX WITH MEN

Christoph Boesecke, Knud C. Schewe, Thomas Lutz, Stefan Mauss, Stefan Christensen, Sonia Jain, Feng He, Michael Sabranski, Stephan Grunwald, Markus Bickel, Natasha K. Martin, Jürgen K. Rockstroh, Patrick Ingiliz

COST-EFFECTIVENESS OF HCV TESTING STRATEGIES FOR HCV ELIMINATION AMONG MSM IN THE US

Antoine Chaillon, Louis MacGregor, Peter Vickerman, Daniel Fierer, Natasha Martin

HIV/HCV COINFECTION TRENDS IN SPAIN (2015-2019)

Chiara Fanciulli, Juan Berenguer, Carmen Busca Arenzana, María Jesús Vivancos, María Jesús Tellez, Louderes Domínguez, Pere Domingo, Jordi Navarro, Jesús Santos, José A. Iribarren, Luis Morano, Marta De Miguel, Inmaculada Jarrín, Juan González-Garcia, for the GeSIDA 8514 Study Group

NO CHANGE IN INCIDENCE OF RECENTLY ACQUIRED HCV IN HIV+ MSM IN GERMANY (NOCO COHORT)

Patrick Ingiliz, Natasha Martin, Thomas Lutz, Knud C. Schewe, Stefan Mauss, Stefan Christensen, Sonia Jain, Feng He, Martin Daemmer, Axel J. Schmidt, Michael Sabranski, Axel Baumgarten, Markus Bickel, Jürgen K. Rockstroh, Christoph Boesecke
443  HEPATITIS C CASCADE OF CARE IN HIV/HCV-COINFECTED PERSONS IN EUROPE IN THE DAA ERA

Olga Fursa, Amanda Mocroft, Jeffrey V. Lazarus, Sarah Amele, Jens D. Lundgren, Raimonda Matulionyte, Line D. Rasmussen, Jürgen K. Rockstroh, Milosz Parczewski, David Jilich, Santiago Moreno, Anna Vassilenko, Karine Lacombe, Lars Peters, for the EuroSIDA Study Group

444  ADEQUATE DACLATASVIR EXPOSURES IN CHILDREN 14-35 KG WITH AVAILABLE ADULT FORMULATION

Tim R. Cresssey, Maggie Abbassi, Marc Lallemant, Giuseppe Indolfi, Mogeb Al-Nahari, Sarah Farid, Philippa Easterbrook, Martina Penazzato, Manal H. El-Sayed

445  FAILURE TO ACHIEVE HCV MICROELIMINATION AMONG PLWH IN SPAIN

Alejandro Gonzalez-Serna, Juan Macias, Rosario Palacios, Cristina Gómez-Ayerbe, Francisco Tellez, Antonio Rivero-Juarez, Marta Fernandez-Fuertes, Jesús Santos, Luis M Real, Gonzalez-Domenech Carmen Maria, Jesus Gomez-Mateos, Juan A. Pineda

446  SELF-TESTING FOR HCV: MULTICOUNTRY EVIDENCE ON USABILITY AND ACCEPTABILITY

Elena Ivanova Reipold, Thi Thuy Van Nguyen, Gamal Shiha, Ketevan Stvilia, Aliza Monroe-Wise, Cheng Wang, Muhammad Jamil, Cheryl C. Johnson, Philippa Easterbrook

447  DRUG-USE STIGMA AND HEPATITIS C VIRUS INFECTION AMONG PWID IN INDIA

Eshan U. Patel, Sunil S. Solomon, Gregory M. Lucas, Allison M. McFall, Aylur K. Srikrishnan, Muniratnam S. Kumar, Oliver Laeyendecker, David C. Celentano, David L. Thomas, Thomas Quinn, Shruti H. Mehta

448  ACCESS TO HCV CARE AMONG HIV/HCV-COINFECTED PEOPLE WHO INJECT DRUGS ACROSS CANADA

Charlotte Lanièce Delaunay, Mathieu Maheu-Giroux, Gayatri Marathe, Sahar Saeed, Curtis Cooper, Sharon Walmsley, Joseph Cox, Mark Hull, Valérie Martel-Laferrière, Marina B. Klein

449  FREQUENT HBsAg CLEARANCE DURING TENOFOVIR THERAPY IN HIV/HBV COINFECTION

Charles Béguelin, Bernard Surial, Eveline Hofmann, Matthias Cavassini, Huldrych F. Günthard, Manuel Battegay, Enos Bernasconi, Patrick Schmid, Alexandra L. Calmy, Franziska Suter-Riniker, Andri Rauch, Gilles Wandeler, for the Swiss HIV Cohort Study

450  HBV REPLICATION DURING TENOFOVIR THERAPY IS FREQUENT IN HIV/HBV COINFECTION

Eveline Hofmann, Bernard Surial, Matthias Cavassini, Huldrych F. Günthard, Manuel Battegay, Enos Bernasconi, Patrick Schmid, Alexandra L. Calmy, Franziska Suter-Riniker, Andri Rauch, Gilles Wandeler, Charles Béguelin, for the Swiss HIV Cohort Study

451  HEPATITIS B SEROPROTECTION AMONG YOUNG ADULTS LIVING WITH PERINATALLY ACQUIRED HIV

Florence Bada, Patrick Ryscavage
HEPATITIS DELTA INFECTIONS AMONG PERSONS WITH HIV IN EUROPE

Charles Béguelin, Andrew Atkinson, Anders Boyd, Karolin Falconer, Nikolai Kirkby, Franziska Suter-Riniker, Huldrych F. Günthard, Jürgen K. Rockstroh, Amanda Mocroft, Andri Rauch, Lars Peters, Gilles Wandeler, for the EuroSIDA and SHCS Study

MECHANISMS OF HEPATIC INJURY

RPV ACTIVATES STAT1 IN STELLATE CELLS TO REGULATE LIVER INJURY IN PLWHIV AND NAFLD

Maria Luisa Montes, Carmen Busca Arenzana, Angela B. Moragrega, Nadezda Apostolova, Antonio Oliveira, Luz Martin Carbonero, Eulalia Valencia, Victoria Moreno, Jose I. Bernardino, Ignacio Perez-Valero, Juan González-García, Juan V. Espluges, Jose R. Arribas, Ana Blas-Garcia

RELATIONSHIP BETWEEN ALCOHOL USE AND SUSTAINED VIROLOGIC RESPONSE TO HCV DAA THERAPY

Emily J. Cartwright, Chloe Pierret, Christopher T. Rentsch, Caroline Minassian, Janet P. Tate, David A. Fiellin, Amy Justice, Vincent Lo Re

APPLICATION OF THE NOVEL FIBROSCAN-AST SCORE IN AN HIV-MONInfECTED COHORT

Jenny Bischoff, Wenyi Gu, Christoph Boesecke, Jan-Christian Wasmuth, Carolynne Schwarze-Zander, Kathrin Van Bremen, Raphael Mohr, Jonel Trebicka, Jürgen K. Rockstroh

ARE MODERN ANTIRETROVIRALS HEPATOTOXIC? SIGNALS IN PATIENTS STARTING ART IN NA-ACCORD


IMPACT OF BINGE DRINKING ON MORTALITY AND LIVER DISEASE IN THE SWISS HIV COHORT STUDY

Bernard Surial, Nicolas Bertholet, Jean-Bernard Daeppen, Katharine E. Darling, Alexandra Calmy, Huldrych F. Günthard, Marcel Stöckle, Enos Bernasconi, Patrick Schmid, Andri Rauch, Hansjakob Furter, Gilles Wandeler, for the Swiss HIV Cohort Study

HIV/HCV COINFECTION INDUCES PRO-INFLAMMATORY PLASMA GLYCOMIC SIGNATURES

Jenny Pena Dias, Leila B. Giron, Jane Koshy, Damani A. Piggott, Mohamed Abdel-Mohsen, Todd Brown

MITOCHONDRIAL DNA HAPLOGROUPS AND SPONTANEOUS HCV CLEARANCE: A MULTI-COHORT ANALYSIS

Todd Hulgan, Candelaria Vergara, David Samuels, Priya Duggal, Arthur Y. Kim, for the HCV Genetics Consortium

A SERIAL COMBINATION OF STEATOSIS NONINVASIVE MARKERS IN HIV-MONINFECTED SUBJECTS

Carmen Busca, Matilde Sanchez-Conde, Marta Rosas, Eulalia Valencia, Ana María Moreno-Zamora, Victoria Moreno, Luz Martín-Carbonero, Santiago Moreno, Ignacio Perez-Valero, Jose I. Bernardino, Jose R. Arribas, Juan González-García, Antonio Olveira, Maria Luisa Montes

SEX-SPECIFIC INDUCTION OF TRANSCRIPTIONAL RESPONSES TO HCV INFECTION

Guido Massaccesi, Brittany White, Andrea Cox, David L. Thomas, Bryan Bryson, Eileen P. Scully
462 SARS-CoV-2 REPLICATION IN HEPATOCYTE CELL LINES
Kenneth E. Sherman, Suman Pradhan, Susan D. Rouster, Ling Kong, Heidi Meeds, Jason T. Blackard, Gary E. Dean

463 RECENT TRENDS OF HEPATITIS D VIRUS INFECTION AMONG PEOPLE LIVING WITH HIV IN TAIWAN

464 RETROSPECTIVE STUDY OF HEPATITIS A IMMUNIZATION RATES IN PERSONS WITH HIV
Emily T. Ciocca, Kristen A. Staggers, Jennifer Carey, Antone Opekun, F. B. Hollinger, Wendy A. Keitel, Hana M. El Sahly, Robert L. Atmar, Jennifer Whitaker

465 HAV REVACCINATION IN SERONEGATIVE OR SEROREVERTED PLWH AFTER PRIMARY VACCINATION
Guan-Jhou Chen, Hsin-Yun Sun, Yu-Chung Chuang, Sung-Hsi Huang, Wen-Chun Liu, Yi-Ching Su, Sui-Yuan Chang, Chien-Ching Hung

466 LOW RATE OF VACCINATION AND RISK OF INCIDENT HEPATITIS A AMONG HIV-INFECTED MSM
Marta Fernandez-Fuertes, Anaïs Corma-Gomez, Pilar Rincon, Ana Fuentes, Esther Serrano, Alejandro Gonzalez-Serna, Federico Garcia, Luis M Real, Juan A. Pineda, Juan Macias

467 SUCCESSFUL PERITRANSPLANT SOFOSBUVIR-BASED DAA THERAPY IN HIV/HCV-COINFECTED SUBJECTS
Dominic Amara, Marion Peters, Shyam Kotttil, Norah Terrault, Jennifer Husson, Shirish Huprikar, Mark S. Sulkowski, Christine Durand, Rodney Rogers, Joshua Grab, Henry Masur, Peter Stock, for the STOP-CO Investigators

468 PREDICTION MODEL FOR END-STAGE LIVER DISEASE AMONG PEOPLE WITH HIV IN THE NA-ACCORD

469 LIVER STIFFNESS–BASED STRATEGIES FOR VARICEAL BLEEDING PREDICTION AFTER HCV CURE
Anaïs Corma-Gomez, Juan Macias, Luis Morano, Antonio Rivero, Francisco Tellez, Maria José Ríos, Marta Santos, Miriam Serrano, Rosario Palacios, Dolores Merino, Luis M Real, Ignacio De Los Santos, Francisco J. Vera-Méndez, Juan A. Pineda, for the RIS-HEP13 and GEHEP 011 Study Groups

470 MODULATION OF GUT FLORA PROMOTES THE REGRESSION OF ANAL DYSPLASIA IN HIV+ MSM
Eugenio Nelson Cavallari, Letizia Santinelli, Gabriella De Girolamo, Giuseppe P. Innocenti, Claudia Pinacchio, Luigi Celani, Marco Ridolfi, Alessandro Russo, Giancarlo Ceccarelli, Mary A. Venneri, Antonio Ciardi, Carolina Scagnolari, Alessandra Pierangeli, Claudio M. Mastroianni, Gabriella D’Ettorre
471  RISK OF AND RISK FACTORS FOR COLORECTAL CANCER IN MALE VETERANS WITH CONTROLLED HIV
Elizabeth Chiao, Jennifer R. Kramer, Yongquan DONG, Christine M. Hartman, Kathryn Royse, Peter Richardson, Suchismita Raychaudhury, Sarah Ahmed, Donna L. White, Aaron P. Thrift

472  LACK OF TLRs ACTIVATION IN ANAL CELLS OF HIV+ MEN MAY CONTRIBUTE TO HPV PERSISTENCE
Letizia Santinelli, Mirko Scordio, Federica Frasca, Claudia Pinacchio, Gabriella D’Ettorre, Eugenio Nelson Cavallari, Leonardo Sorrentino, Paolo Gozzo, Alessandra Pierangeli, Carolina Scagnolari

473  ANAL HPV CONCORDANCE AND PERSISTENCE: ROLE IN ANAL TUMORS IN WOMEN LIVING WITH HIV
Kevin Weiss, Tinaye Mutetwa, Courtney Chan, Yuxin Liu, Michael M. Gaisa, Keith Sigel

474  MULTIPLE HIGH-RISK AND NONVACCINE HPV TYPES IN HIV+ UGANDAN WOMEN ON LONG-TERM ART
Carol Nakisige, Scott V. Adams, Constance Namirembe, Lazarus Okoche, James Ferrenberg, Andrea Towlerton, Anna Larsen, Jackson Orem, Corey Casper, Lisa M. Frenkel, Thomas S. Ulbrick

Science Spotlights™-K2  CANCER: KAPOSI SARCOMA & KAPOSI SARCOMA–ASSOCIATED HERPESVIRUS, CERVICAL, LUNG, BREAST, LYMPHOMA, AND HEAD & NECK

475  THE PERSISTENCE OF HIV-ASSOCIATED KAPOSI SARCOMA: ANALYSES OF US MEDICARE POPULATION
Ramya Ramaswami, Nick Williams, Kathryn Lurain, Jomy George, Craig Mayer, Robert Yarchoan, Vojtech Huser

476  HPV GENOTYPE AND FAILURE AFTER TREATMENT OF CERVICAL PRECANCER
Christina Carlander, Camilla Lagheden, Carina Eklund, Sara Nordqvist Kleppe, Mensur Dzabic, Philippe Wagner, Pär Säerén, Joakim Dillner

477  CERVICAL CANCER PREVENTION DURING COVID-19 PANDEMIC: THE CRS Epic3-90 PROJECT, ZAMBIA
Mwate J. Chaila, Petronella Lumbala, Memory Kachimbe, Martin Phiri, Bosco Mukanyimi, Linda Mwila Chibesa, Mirriam Selisho, Quagy Siamalambwa, Albert Mwango, Mwayabo J. Kazadi

478  TREATMENT TOXICITY FOR LUNG CANCER PATIENTS WITH AND WITHOUT HIV INFECTION
Keith Sigel, Maria Rodriguez-Barradas, Kimberly Stone, Matthew Goetz, Sheldon Brown, Roger Bedimo, Fatma Shebl, Kristina Crothers, Deborah Marshall, Lesley S. Park

479  GYNAECOLOGICAL AND BREAST CANCERS IN WOMEN LIVING WITH HIV IN SOUTH AFRICA
Tafadzwa G. Dhokotera, Mazvita Muchengeti, Maša Davidović, Eliane Rohner, Victor Olago, Matthias Egger, Elvira Singh, Julia Bohlius

480  PHASE 1 STUDY OF LENALIDOMIDE WITH EPOCH AND RITUXIMAB IN PRIMARY EFFUSION LYMPHOMA
Kathryn Lurain, Ramya Ramaswami, Anaida Widell, Irene Ekwede, Ralph Mangusan, Jomy George, Elaine S. Jaffe, Stefania Pittaluga, Maryalice Stetler-Stevenson, Hao-Wei Wang, Mark J. Roth, Vickie A. Marshall, Denise Whitby, Thomas S. Ulbrick, Robert Yarchoan
481 ALTERED TUMOR MICROENVIRONMENT AND REDUCED SURVIVAL IN HIV+ HEAD AND NECK CANCERS
Syim Salahuddin, Margaret Wu, Javier Perez Irizarry, Teresita Vega, Natalia Isaeva, Kurt Schalper, Wendell G. Yarbrough, Brinda Emu

482 H3K27me3 PREVENTS ABERRANT TRANSCRIPTION AND EPISOME CLEARANCE OF KSHV
Simon Weissmann, Adam Grundhoff

483 PLWH AND CANCER EXHIBIT UNIQUE PATTERN OF ACTIVATED AND EXHAUSTED CD8+ T CELLS
Omkar Chaudhary, Diane Trotta, Xiuping Chu, Chip Bradley, Xun Wang, Jason Okulicz, Ryan C. Maves, Karl Kronmann, Christina Schofield, Jason Blaylock, Brian Agan, Anuradha Ganesan, Brinda Emu

484 TRENDS IN CANCER INCIDENCE AMONG PEOPLE LIVING WITH HIV IN ONTARIO, CANADA, 1997-2018
Ioana Nicolau, Tony Antoniou, Jennifer Brooks, Rahim Moineddin, Curtis Cooper, Michelle Cotterchio, Jennifer Gillis, Claire Kendall, Abigail Kroch, Zak Knowles, Joanne Lindsay, Colleen Price, Kate Salters, Marek Smieja, Ann N. Burchell

485 IMMUNODEFICIENCY AND CANCER IN 3.4 MILLION PEOPLE LIVING WITH HIV IN SOUTH AFRICA
Yann Ruffieux, Mazvita Muchengeti, Matthias Egger, Orestis Efthimiou, Lina Bartels, Victor Ologo, Maša Davidović, Tafadzwa G. Dhokotera, Julia Bohlius, Elvira Singh, Eliane Rohner

486 HIGHER BURNOUT OF ONCOLOGY PROVIDERS COMPARED WITH HIV PROVIDERS IN KENYA
Devon McMahon, Helen Byakwaga, Aggrey Semeere, Miriam Laker-Oketta, Linda Chemtai, Sonya Prasad, Ingrid V. Bassett, Nafatli Busakhala, Jeffrey N. Martin, Esther Freeman

487 RISK OF CANCER BY HIV STATUS AND BIRTH REGION: A NATIONWIDE REGISTER-BASED STUDY
Stina Malmström, Philippe Wagner, Aylin Yilmaz, Pär Sparén, Veronica Svedhem, Christina Carlander

488 ASSOCIATION BETWEEN INTEGRASE INHIBITORS (InSTIs) AND CARDIOVASCULAR DISEASE (CVD)
Bastian Neesgaard, for the RESPOND Study Group

489 INFLAMMATORY AND ATHEROGENESIS MARKERS 148 WEEKS POSTSWITCH TO DTG+RPV IN SWORD-1/-2
Josep María Llibre, Luis Fernando López Cortés, Alicia Aylott, Brian Wynne, Jessica Matthews, Jean A. Van Wyk, Lesley P. Kahl

490 QUINOLINIC ACID IS ASSOCIATED WITH CAROTID INTIMA-MEDIA THICKNESS IN HIV
Corrilynn O. Hileman, Trong-Tuong Nguyen, Jared C. Durieux, Daniela
<table>
<thead>
<tr>
<th>Page</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>491</td>
<td>HIV INFLAMMATORY PATHWAYS DIFFER ACCORDING TO SOCIOECONOMIC INDICES IN MALAWI</td>
<td>Christine Kelly, Willard Tinago, Dagmar Alber, Patricia Hunter, Alejandro García-Leon, Raphael Kamng'ona, Irene Sheha, Mishek Chammudzi, Kondwani Jambo, Jane Mallewa, Alicja Rapala, Patrick Mallon, Nigel Klein, Henry Mwandumba, Saye Khoo</td>
</tr>
<tr>
<td>492</td>
<td>ASSESSING PROTEIN BIOMARKERS’ ROLE IN CVD RISK PREDICTION IN PERSONS WITH HIV (PWH)</td>
<td>Sandra E. Safo, Lillian M. Haine, Jason Baker, Cavan Reilly, Daniel Duprez, James Neaton, Mamta K. Jain, Alejandro Arenas-Pinto, Jiuzhou Wang, Mark N. Polizotto, Therese Staub</td>
</tr>
<tr>
<td>493</td>
<td>ENDOTHELIAL MICROVESICLES: BIOMARKER &amp; MEDIATOR OF ENDOTHELIAL DYSFUNCTION WITH HIV-1</td>
<td>Vinicius Pacheco García, L M. Brewster, Kelly A. Stockelman, Hannah K. Fandil, John W. Treuth, Noah M. DeSouza, Cindy S. Finhaber, Jared J. Greiner, Brian L. Stauffer, Elizabeth Connick, Christopher A. DeSouza</td>
</tr>
<tr>
<td>494</td>
<td>CORONARY ARTERY DISEASE, TRADITIONAL RISK, AND INFLAMMATION AMONG PWH IN REPRIEVE</td>
<td>Udo Hoffmann, Michael T. Lu, Borek Foldyna, Markella V. Zanni, Tricia H. Burdo, Carl Fichtenbaum, E. Turner Overton, Judith A. Aberg, Judith S. Currier, Craig A. Sponseller, Kathleen Melbourne, Pamela S. Douglas, Heather J. Ribaudo, Thomas Mayrhofer, Steven Grinspoon</td>
</tr>
<tr>
<td>495</td>
<td>TREATED HIV INFECTION AND PROGRESSION OF CAROTID ATHEROSCLEROSIS IN RURAL UGANDA</td>
<td>Mark Siedner, Prossy Bibangambah, June-Ho Kim, Alexander Lankowski, Jonathan L. Chang, Isabelle T. Yang, Douglas S. Kwon, Crystal M. North, Virginia A. Triant, Chris T. Longenecker, Brian Ghoshhajra, Linda Hemphill, Samson Okello, for the UGANDAC Study Team</td>
</tr>
<tr>
<td>496</td>
<td>FACTORS ASSOCIATED WITH SYSTEMIC IMMUNE ACTIVATION IN A GLOBAL HIV COHORT</td>
<td>Sara E. Looby, Amy Kantor, Tricia H. Burdo, Judith S. Currier, Carl Fichtenbaum, E. Turner Overton, Judith A. Aberg, Carlos Malvestutto, Gerald S. Bloomfield, Kathleen Fitch, Pamela S. Douglas, Steven Grinspoon, Heathier J. Ribaudo, Markella V. Zanni, for the REPRIEVE Investigators</td>
</tr>
<tr>
<td>497</td>
<td>SEX MODIFIES THE ASSOCIATION BETWEEN HIV AND CORONARY ARTERY DISEASE IN UGANDA</td>
<td>Milana Bogorodskaya, Seunghie Margevicuis, Ciss M. Kittyo, Rashidah Nazzinda, Marcio S. Bittencourt, Geoffrey Erem, Sophie Nalukwago, Moises A. Huaman, Brian Ghoshhajra, Mark Siedner, Steven M. Juchnowski, David A. Zidar, Grace A. McComsey, Chris T. Longenecker</td>
</tr>
<tr>
<td>498</td>
<td>DIET QUALITY BY GLOBAL BURDEN OF DISEASE REGION IN PWH IN THE REPRIEVE TRIAL</td>
<td>Kathleen Fitch, Kristine Erlandson, E. Turner Overton, Sara McCallum, Carl Fichtenbaum, Judith A. Aberg, Emma Kileel, Laura Moran, Anthony Holguin, Markella V. Zanni, Gerald S. Bloomfield, Pamela S. Douglas, Heather J. Ribaudo, Steven Grinspoon, for the REPRIEVE Investigators</td>
</tr>
</tbody>
</table>
NOVEL INSIGHTS IN HIV AND CARDIOVASCULAR DISEASE

HIV INFECTION IS INDEPENDENTLY ASSOCIATED WITH AORTIC ANEURYSMS
Julie Høgh, Michael H. Pham, Andreas D. Knudsen, Rebekka E. Thudium, Marco Gelpi, Per E. Sigvardsen, Andreas E. Fuchs, Jørgen T. Kuhl, Shoaib Afzal, Børge Nordestgaard, Thomas Benfield, Lars Køber, Jan Gerstoft, Klaus F. Kofoed, Susanne D. Nielsen

HIV-1, INSUFFICIENT SLEEP, AND ENDOTHELIAL VASODILATOR FUNCTION
Kelly A. Stockelman, Anthony R. Bain, Cindy S. Firnhaber, Jared J. Greiner, Brian L. Stauffer, Elizabeth Connick, Christopher A. DeSouza

HEROIN USE IS ASSOCIATED WITH HIGH-AORTIC BUT LOW-SPLEEN/MARROW UPTAKE BY PET IN HIV
Corrilynn O. Hileman, Scott E. Janus, Jared C. Durieux, Claire Sullivan, Ann K. Avery, Danielle Labbato, Cheryl Smith, Grace A. McComsey

DE NOVO ELECTROCARDIOGRAPHIC ABNORMALITIES IN WELL-TREATED PERSONS WITH HIV
Andreas D. Knudsen, Claus Graff, Jonas B. Nielsen, Magda T. Thomsen, Thomas Benfield, Jan Gerstoft, Lars Køber, Julie Høgh, Klaus F. Kofoed, Susanne D. Nielsen

WEIGHT GAIN DURING ART

WEIGHT GAIN AFTER SWITCHING DIFFERENT INTEGRASE STRAND TRANSFER INHIBITORS (InSTIs)
Grace A. McComsey, Paul Sax, Keri N. Althoff, Todd Brown, Janna Radtchenko, Helena Diaz-Cuervo, Joshua Gruber, Moti Ramgopal, Steven Santiago, Graeme Moyle, Karam Mounzer, Richard Elion

WEIGHT GAIN AMONG PWH WHO SWITCH TO ART-CONTAINING InSTIs OR TAF
Frank Palella, Qingjiang Hou, Jun Li, Jonathan Mahnken, Kimberly J. Carlson, Marcus Durham, Douglas Ward, Jack Fuhrer, Ellen M. Tedaldi, Richard Novak, Kate Buchacz

WEIGHT AND LIPID CHANGES IN PHASE 3 CABOTEGRAVIR AND RILPIVIRINE LONG-ACTING TRIALS

ASSESSMENT OF OBESITY AND METABOLIC PROFILE BY INTEGRASE INHIBITOR USE IN REPRIEVE
Emma Kileel, Janet Lo, Carlos Malvestutto, Markella V. Zanni, Kathleen Fitch, Carl Fichtenbaum, E. Turner Overton, Nwora Lance Okeke, Princy N. Kumar, Esau Joao, Pamela S. Douglas, Judith A. Aberg, Heather J. Ribaudo, Steven Grinspoon

ASSOCIATION BETWEEN NEWER ANTIRETROVIRALS AND INCREASE IN BODY MASS INDEX IN Respond
Loveleen Bans-Matharu, for RESPOND
508 OBESITY IS HIGHLY PREVALENT IN PEOPLE OF AFRICAN ANCESTRY LIVING WITH HIV IN THE UK
Lisa Hamzah, Rachel K. Hung, Beatriz Santana-Suarez, Zoe Ottaway, Julie Fox, Burns Fiona, Sarah L. Pett, Stephen Kegg, Amanda Clarke, Andrew Ustianowski, Lucy Campbell, Caroline Sabin, Frank A. Post, for the GEN-AFRICA Study Team

509 WEIGHT GAIN AMONG PARTICIPANTS STARTING DOLUTEGRAVIR-BASED HIV REGIMEN IN KENYA
Kassem Bourgi, Susan Ofner, Beverly Musick, Bradley Griffith, Lameck Diero, Winnie Muyindi, Rita Lyamuya, Kara Wools-Kaloustian, Constantin Yianoutsos, Samir Gupta

510 WEIGHT GAIN POST-ART IN HIV+ LATINOS/AS DIFFERS IN THE US, CANADA, AND LATIN AMERICA
Lara Coelho, Cathy A. Jenkins, Bryan Shepherd, Jean W. Pape, Fernando Mejia, Denis Padgett, Brenda Crabtree Ramirez, Beatriz Grinsztejn, Keri N. Althoff, John Koethe, Vincent Marconi, Phyllis Tien, Amanda Willig, Catherine McGowan, Peter F. Rebeiro

511 CHARACTERISTICS OF HIV+ AND HIV- PATIENTS UNDERGOING BARIATRIC SURGERY: OBEVIH STUDY
Valérie Pourcher, Yasmine Dudoit, Jacqueline Capeau, Franck Bocarra, Cathia Soulie, Aude Ndoaoumougue, Frédéric Charlotte, Véronique Bérézat, Anne Genevieve Marcelin, Gilles Peytavin, Marie-Christine Boutron-Ruault, Dominique Costagliola, Christine Katlama, Lambert Assoumou, Guillaume Pourcher

512 METABOLOMIC SIGNATURES DIFFERENTIATE WOMEN WHO GAIN WEIGHT WITH INTEGRASE INHIBITORS
Cecile D. Lahiri, Anandi N. Sheth, Cyra C. Mehta, Renata M. Shaw, Vilinh Tran, Young-Mi Go, Dean P. Jones, Thomas R. Ziegler, Igho Ofotokun, Jessica A. Alvarez

513 URINE MITOCHONDRIAL DNA, WEIGHT LOSS, AND BODY COMPOSITION IN OLDER ADULTS WITH HIV
Carrie Johnston, Eugenia Siegler, Michelle Rice, Heather Derry, Katie Hootman, Yuan-Shan Zhu, Chelsie Burchett, Mary Choi, Marshall J. Glesby

514 IN VITRO MODEL TO ASSESS ANTIRETROVIRAL THERAPY ON ADIPOCYTE BIOLOGY
R. Taylor Pickering, Archana Asundi, Nina Lin

515 INTEGRASE INHIBITORS TARGET MITOCHONDRIA IN BROWN ADIPOCYTES DISRUPTING THERMOGENESIS
Ikrak Jung, Sunghjee Jin, Becky Tu-Sekine, Fredrick Anokye-Danso, Todd Brown, Sangwon F. Kim

Science Spotlights™-M2 TYPE 2 DIABETES DURING ART

516 INCIDENT DIABETES ASSOCIATED WITH INTEGRASE STRAND TRANSFER INHIBITOR INITIATION
Jane O’Halloran, John Sahrmann, Margaret Olsen, William Powderly

517 PREDICTED 10-YEAR RISKS OF CARDIOVASCULAR DISEASE AND DIABETES IN THE ADVANCE TRIAL
Laura Hindley, Kaitlyn Mccan, Simiso Sokhela, Nomathemba Chandiwana, Francois Venter, Celicia M. Serenata, Andrew Hill
518 RISK FACTORS FOR PROGRESSION FROM PREDIABETES TO DIABETES IN PERSONS WITH HIV
Mary Clare C. Masters, Yajing Bao, Katherine Tassiopoulos, Jingyan Yang, E. Turner Overton, Scott Letendre, Todd Brown, Frank Palella, Kristine Erlandson

519 HYPERGLYCEMIA AND DIABETES MELLITUS IN PERSONS LIVING WITH AND WITHOUT HIV IN AFRICOS
David Chang, Allahna Esber, Nicole Dear, Michael Iroezindu, Isaac Tsikhutsu, Valentine Singoei, Hannah Kibuuka, Emmanuel Bahemana, Trevor A. Crowell, Christina Polyak, Julie Ake, Catherine Godfrey

520 SEX DIFFERENCES IN DIABETES PREVELANCE AMONG PERSONS WITH HIV IN THE UNITED STATES
Morgan Birabaharan, David Kaelber, Thomas Martin

521 MITOCHONDRIAL DNA HAPLOGROUPS AND RISK OF DIABETES IN VETERANS WITH AND WITHOUT HIV
Todd Hulgan, Suman Kundu, David Samuels, Samuel Bailin, Ke Xu, Kaku So-Armah, Adeel Butt, Mariana Gerschenson, Matthew Goetz, Russell Tracy, Vincent Marconi, Amy Justice, Matthew Freiberg, John Koethe

522 RELATIONSHIP OF T-CELL MITOCHONDRIAL GENE EXPRESSION AND DIABETES IN PERSONS WITH HIV
Samuel Bailin, Todd Hulgan, Celestine Wanjalla, John Koethe, David Samuels

523 CD4+ T EFFECTOR MEMORY CD45RA+ CELLS ARE ASSOCIATED WITH DIABETES IN PERSONS WITH HIV
Samuel Bailin, Suman Kundu, Melissa Wellons, Matthew Freiberg, Margaret Doyle, Russell Tracy, Amy Justice, Kaku So-Armah, Celestine Wanjalla, Alan Landay, Simon Mallal, John Koethe

Science Spotlights™-M3 EPIDEMIOLOGY OF COMORBIDITIES

524 CONVERGENCE OF INFECTIOUS AND NONCOMMUNICABLE DISEASES IN RURAL SOUTH AFRICA
Emily B. Wong, Stephen Olivier, Rezign Gunda, Olivier Koole, Kathy Baisley, Diego Cuadros, Frank Tanser, Alison D. Grant, Kobus Herbst, Janet Seeley, Willem A. Hanekom, Thombi Ndung’u, Mark Siedner, Deenan Pillay, for the Vukuzazi Team

525 COMORBIDITY BURDEN IN PEOPLE LIVING WITH HIV IN THE UNITED STATES
Misti L. Paudel, Girish Prajapati, Erin K. Buysman, Swarnali Goswami, Jianbin Mao, Kimberly McNiff, Princy N. Kumar

526 HIV DIFFERENTIALLY IMPACTS AGE-RELATED COMORBIDITY BURDEN AMONG US WOMEN AND MEN
Lauren F. Collins, Frank Palella, Cyra C. Mehta, JaNae Holloway, Valentina Stosor, Jordan Lake, Todd Brown, Kathryn Anastos, Seble Kassaye, Adaora Adimora, Mirjam- Colette Kempf, Susan L. Koletar, Phyllis Tien, Igbo Ofotokun, Anandi N. Sheth
<table>
<thead>
<tr>
<th>Page</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>527</td>
<td>Effects of Switch from 3DR to 2DR on Inflammatory Biomarkers</td>
<td>Sergio Serrano-Villar, María Rosa López-Huertas, Daniel Jiménez, Javier Martínez-Sanz, Raquel Ron, Luis Fernando López Cortés, José-Ramón Blanco, Victor Asensi, David Dalmau, María José Galindo, Santiago Moreno, for the Spanish AIDS Research Network (CORS)</td>
</tr>
<tr>
<td>528</td>
<td>Soluble Immune Costimulatory Molecules Are Predictive of Non-AIDS Events</td>
<td>Thomas A. Premeaux, Carlee B. Moser, Ashley McKhann, Stephen Yeung, Alina Pang, Micheal Corley, Alan Landay, Sara Gianella, Lishomwa Ndhlovu</td>
</tr>
<tr>
<td>529</td>
<td>Plasma Galectin-9 as a Predictor of Non-AIDS Events During Suppressive Art</td>
<td>Thomas A. Premeaux, Carlee B. Moser, Ashley McKhann, Martin Hoenigl, Michael M. Lederman, Alan Landay, Sara Gianella, Lishomwa Ndhlovu</td>
</tr>
<tr>
<td>531</td>
<td>Lower Plasma Phosphocholine Abundance Is Associated with NAFLD in PWH</td>
<td>Curtis L. Gabriel, Fei Ye, Run Fan, Celestine Wanjalla, Mona Mashayekhi, Samuel Baillie, Jane Ferguson, John Koethe</td>
</tr>
<tr>
<td>532</td>
<td>Independent Associations of TNF-Alpha and IL-1 Beta with Emphysema in HIV Infection</td>
<td>Rebekka F. Thudium, Hedda Ringheim, Andreas Ronit, Thomas Benfield, Amanda Mocroft, Jan Gerstoft, Marius Traseid, Alvaro H. Borges, Sisse R. Ostrowski, Jørgen Vestbo, Susanne D. Nielsen</td>
</tr>
<tr>
<td>533</td>
<td>Association of Nadir CD4/CD8 with CVD and Non-AIDS-Defining Cancers in the DC Cohort</td>
<td>Letumile R. Moeng, Morgan Byrne, Anne Monroe, Vishnu Priya Mallipeddi, Michael A. Horberg, Amanda Castel, Ronald Wilcox, for the DC Cohort Executive Committee</td>
</tr>
<tr>
<td>534</td>
<td>Epigenetic Aging Changes in a Cohort of Aviremic HIV-Infected Adults</td>
<td>Andrés Esteban-Cantos, Javier Rodriguez-Centeno, Gabriel Saiz-Medrano, Rocío Montejano, Rosa de Miguel, Pilar Barruz, Julián Nevado, Beatriz Mena-Garay, Jose I. Bernardino, Julen Cadiñanos, Eulalia Valencia, Rafael Mican, Mayo Mayoral-Muñoz, Jose R. Arribas, Berta Rodes</td>
</tr>
<tr>
<td>536</td>
<td>Serum Level of Cell-Free DNA Fragments Is Associated with Frailty and Severity of HIV</td>
<td>Jing Sun, Lolita S. Nidadavolu, Jacquie Astemborski, Damani A. Piggott, Thomas Laskow, Shruti H. Mehta, Todd Brown, Gregory D. Kirk, Peter Abadir, for the AIDS Linked to the IntraVenous Experience (ALIVE)</td>
</tr>
</tbody>
</table>
537 PREVALENCE AND DETERMINANTS OF FRAILTY IN PLHIV AGED 70+: ANRS SEPTAVIH STUDY
Clotilde Allavena, Hubert Blain, Xian Abulizi, Mariem Raho Moussa, Laurence Slama, Faroudy Boufassa, Christine Katlama, François Raffi, Carole Cagnot, Pierre Delobel, Charles Cazanave, Fabrice Bonnet, Pascal Pugliese, Alain Makinson, Laurence Meyer

538 CARDIOVASCULAR RISK SCORE ASSOCIATIONS WITH FRAILTY IN WIHS AND MACS

539 BEYOND PAIN: PRESCRIPTION OPIOID USE IN THE WOMEN’S INTERAGENCY HIV STUDY
Adam W. Carrico, Lorie Benning, Kathleen Weber, Anjali Sharma, Michael Plankey, Deborah Jones Weiss, Mirjam-Colette Kempf, Bradley Aouizerat, Tracey Wilson, Joel Milam, Adora Adimora, Gina Wingood, Mardge Cohen

540 SAFETY OF TAF IN PATIENTS WITH A HISTORY OF PROXIMAL RENAL TUBULOPATHY ON TDF
Lucy Campbell, Lisa Hamzah, Amanda Samarawickrama, Alan Winston, Deborah Williams, Rachael Jones, Margareta A. Johnson, Birgit Barbini, Ben Cromarty, Frank A. Post, for the FANTA Trial Team

541 RENAL/BONE OUTCOMES AFTER LONG-ACTING CABOTEGRAVIR + RILPIVIRINE IN ATLAS + ATLAS-2M

542 HIV IS ASSOCIATED WITH A HIGHER RISK OF COVID-19 DIAGNOSIS BUT NO ADVERSE OUTCOMES
Michael E. Tang, Thaidra Gaufin, Ryan Anson, Edward R. Cachay

543 COVID-19 CASES & HOSPITALIZATIONS IN A US MULTISITE COHORT OF PEOPLE WITH HIV
Adrienne E. Shapiro, Rachel A. Bender Ignacio, Bridget M. Whitney, Joseph A. Delaney, Robin M. Nance, H. Nina Kim, Jeanne C. Keruly, Greer Burkholer, Sonia Napravnik, Kenneth H. Mayer, Allison R. Webel, Heidi Crane, Mari M. Kitahata, Edward R. Cachay, for the CNICS Investigator Team

544 COVID-19 IN HOSPITALIZED HIV-POSITIVE AND HIV-NEGATIVE PATIENTS: A MATCHED STUDY
Cristina Diez, Jorge Del Romero-Raposo, Rafael Mican, Juan Lopez, Ana Delgado-Hierro, Lucio Jesús F. García-Fraile, Maria Saumoy, Gloria Samperiz, Sonia Calzado, Jose R. Arribas, Santiago Moreno, Juan González-Garcia, Immaculada Jarrín, Juan Berenguer, for the CoRIS Research Group

545 CHARACTERISTICS AND OUTCOMES OF COVID-19–RELATED HOSPITALIZATION AMONG PLWH
546  RISK FACTORS FOR HOSPITALIZATION IN PEOPLE WITH HIV AND COVID-19
Lauren K. Barbera, Kevin F. Kamis, Mona H. Abdo, Katie A. Kozacka, Edward M. Gardner, Samantha MaWhinney, Sarah E. Rowan, Kristine Erlandson

547  COMORBIDITY BURDEN IS ASSOCIATED WITH HOSPITALIZATION FOR COVID-19 AMONG PWH
Caitlin A. Moran, Nora Oliver, Brittany V. Szabo, Lauren F. Collins, Minh L. Nguyen, Sarita Shah, Abeer Moanna, Jonathan Colasanti, Valeria D. Cantos Lucio, Wendy S. Armstrong, Anandi N. Sheth, Igbo Ofotokun, Colleen F. Kelley, Vincent Marconi, Cecile D. Lahiri

548  CHARACTERIZING COVID-19 PRESENTATION AND CLINICAL OUTCOMES IN HIV PATIENTS IN THE US
George A. Yendewa, Jaime A. Perez, Kayla A. Schlick, Heather A. Tribout, Grace A. McComsey

549  PREVALENCE AND FACTORS ASSOCIATED WITH SARS-CoV-2 ANTIBODIES IN A SPANISH HIV COHORT
Juan Berenguer, Cristina Diez, María Martín-Vicente, Rafael Mican, María Jesús Pérez-Elias, Lucio Jesús F. García-Fraile, Francesc Vidal, Inés Suárez-Garcia, Daniel Podzamczer, Juan C. López, Jose R. Arribas, Santiago Moreno, Juan González-Garcia, Salvador Resino, Inmaculada Jarrín

Science Spotlights™-N2  SARS-CoV-2: MORE THAN A RESPIRATORY VIRUS

550  MYOCARDIAL INJURY AS A PREDICTOR OF MORTALITY AND ADVERSE OUTCOMES IN COVID-19
Gavin Mannmathan, Debbie Falconer, Zakee Abdi, Samuel Conway, Athanasios Kosovitsas, Alan Hunter, Callum Little, Sabine Kinloch-de Loes, Colette Smith, Margarate A. Johnson, Roby D. Rakhit

551  HIGH RATE OF PERSISTENT SYMPTOM 4 MONTHS AFTER COMMUNITY-MANAGED COVID-19 INFECTION
David Darley, Greg Dore, Lucette A. Cysique, Jeff Masters, Anthony Byrne, Bruce Brew, Philip Cunningham, Anthony Kelleher, Gail Matthews, for the ADAPT Study Group

552  COGNITIVE DEFICITS ARE NOT A BYPRODUCT OF ANXIO-DEPRESSIVE SYMPTOMS IN COVID-19
Lucette A. Cysique, Yasmin Allen-Davidian, David Darley, Anthony Byrne, Kay Wilhelm, Greg Dore, Gail Matthews, Bruce Brew

553  EVALUATING FACTORS MEDIATING THE RELATIONSHIP BETWEEN MALE SEX AND COVID-19 SEVERITY
Randy Stalter, Vidya Atluri, Fan Xia, Katherine K. Thomas, Kristine Lan, Alex Greninger, Rena Patel

554  LONG-TERM SEQUELA OF SARS-CoV-2 INFECTION IN A RETROSPECTIVE NEW YORK CITY COHORT
Sherif Shoucri, Matthew A. Adan, Lawrence Purpura, Clare DeLaurentis, Deborah Theodore, Michael T. Yin, Magdalena Sobieszczyk, Delivette Castor, Jason Zucker, for the Columbia Longitudinal COVID Group

555  SARS-CoV-2 RNA LEVELS CORRELATE WITH SYMPTOM DURATION BUT NOT SEVERITY IN OUTPATIENTS
Kara W. Chew, Carlee B. Moser, Jonathan Li, Robert Coombs, Eric S. Daar, David A. Wohl, Evgenia Aga, Justin Ritz, Arzhang Cyrus Javan, Joseph J. Eron, Judith S. Currier, Michael Hughes, Davey M. Smith, for the ACTIV-2/A5401 Study Team
Science Spotlights™-01  TUBERCULOSIS SCREENING AND DETECTION

556 ROUTINIZATION OF TB INFECTION SCREENING WITH CD4 AND VIRAL LOAD MONITURING IN BRAZIL
Lelia H. Chaisson, Paula Travassos, Silvia Cohn, Solange Cavalcante, Valeria Saraceni, Renata Spener-Gomes, Leda F. Jamal, Ana P. Loch, Jose V. Madruga, Marcelo Cordeiro-Santos, Jonathan Golub, Betina Durovni, for the PREVINE-TB Research Group

557 ASSESSMENT OF TUBERCULOSIS DISEASE ACTIVITY IN MTB-INFECTED HIV PATIENTS OVER TIME

558 M. TUBERCULOSIS EXOSOME DETECTION FOR TB DIAGNOSIS IN CHILDREN LIVING WITH HIV
Sylvia LaCourse, Wenshu Zheng, Jaclyn Escudero, Lisa Cranmer, Irene Njuguna, Dalton Wamalwa, Elizabeth Maleche-Obimbo, Christopher Lyon, Grace John-Stewart, Tony Hu

559 SERUM MARKERS AND INTEGRATIVE MULTI-OMICS OF TB DIAGNOSIS IN ADVANCED HIV
Sonya Krishnan, Artur T. Queiroz, Amita Gupta, Nikhil Gupte, Gregory P. Bisson, Johnstone Kumwenda, Kogieleum Naidoo, Lerato Mohapi, Vidya Mave, Rosie Mngqibisa, Javier R. Lama, Mina C. Hosseinipour, Bruno B. Andrade, Petros Karakousis, for the ACTG A5274 REMEMBER and NWCS 414 Study Team

Science Spotlights™-02  TUBERCULOSIS PREVENTION AND TREATMENT

560 OUTCOMES OF ISONIAZID PREVENTIVE THERAPY AMONG CHILDREN LIVING WITH HIV IN KENYA
Dickens O. Onyango, Courtney M. Yuen, Samuel Gurrion, Jerphason O. Mecha, Daniel Matemo, Elizabeth Oele, John Kinuthia, Grace John-Stewart, Sylvia LaCourse

561 RISK STRATIFICATION FOR IDENTIFYING OPTIMAL TREATMENT DURATION IN ALL MDR-TB PATIENTS
Maria Garcia-Cremades, Natasha Strydom, Jonathon R. Campbell, Payam Nahid, Dick Menzies, Rada Savic

562 FINAL RESULTS OF THE NIX-TB CLINICAL STUDY OF BPaL REGIMEN FOR HIGHLY RESISTANT TB
Francesca Conradie, Andreas Diacon, Nosipho Ngubane, Daniel Everitt, Angela M. Crook, Genevieve Wills, Pauline J. Howell, Jerry Nedelman, Morounfolu Olugbosi, Mengchun Li, Joanna Moreira, Eugene Sun, Melvin Spigelman

Science Spotlights™-03  CRYPTOCOCCAL MENINGITIS DETECTION AND OUTCOMES

563 VALIDATION OF CLINIC-BASED POINT-OF-CARE TESTING FOR CRYPTOCOCCAL ANTIGEN SCREENING
564 POINT-OF-CARE CRYPTOCOCCAL ANTIGEN SCREENING FOR PREVENTING MENINGITIS AND MORTALITY

565 CRYPTOCOCCAL MENINGITIS AND CLINICAL OUTCOMES IN PERSONS WITH HIV ACROSS THE GLOBE
Anna Person, Brenda Crabtree Ramirez, Ahra Kim, Fernanda Maruri, Gilles Wandeler, Richard Moore, Darma Imran, Kinh Van Nguyen, Elizabeth Naliya, Winnie Muyindike, Bryan Shepherd, Catherine McGowan, for IeDEA

Science Spotlights™-P1 MATERNAL VIRAL LOAD AND ART ADHERENCE: INSIGHTS AND INTERVENTIONS
566 RCT OF 2-WAY VS 1-WAY SMS MESSAGING TO IMPROVE EFFICACY OF PMTCT-ART IN KENYA
John Kinuthia, Keshet Ronen, Jennifer A. Unger, Wenwen Jiang, Daniel Matemo, Trevor Perrier, Osborn Lusi, Bhavna Chohan, Alison L. Drake, Barbra A. Richardson, Grace John-Stewart

567 IMPACT OF MODIFIED STANDARD-OF-CARE FOR VIROLOGIC FAILURE IN ART-EXPERIENCED WOMEN
Mercy T. Mutambanengwe-Jacob, Tendayi Gowerayi, Tariro D. Chawana, Petronella Matibe, Bernadette V. Malunda, Mary G. Fowler, Taha E. Taha, Tsungai Chipato, K. Rivet Amico, Charles C. Maponga, Justice F. Gumbo, Nonhlanhla Yende-Zuma, Jim Aizire, Lynda Stranix-Chibanda, for the Zimbabwe PROMOTE Study Team

568 MATERNAL VL TESTING IN BREASTFEEDING FOR TARGETED INFANT HIV TESTING: A SIMULATION
Maia Lesosky, Elaine J. Abrams, Tracy Glass, Mustafa Shuaib, Janet Raboud, Andrea Ciaramello, Shaffiq Essajee, Diane V. Havlir, Catherine A. Koss, Anthony Ogwu, Roger Shapiro, Lara Vojnov, Landon Myer

569 ANTIRETROVIRAL THERAPY ADHERENCE DURING & POST BREASTFEEDING USING TFV LEVELS IN HAIR
Teacher G. Nematadzira, Pamela Murnane, Peter Bacchetti, Hideaki Okochi, Regina Tallerico, Alexander Louie, Vongai M. Chanaiva, Tichaona Vhembo, Mercy T. Mutambanengwe-Jacob, Tsungai Chipato, Monica Gandhi, Lynda Stranix-Chibanda, for the PROMISE Study Team

570 NRTI-SPARING STRATEGY TO PREVENT PERINATAL HIV TRANSMISSION, ANRS 168 MONOGEST TRIAL
Laurent Mandelbrot, Roland Tubiana, Pierre-Henri Frange, Véronique Avettand-Fenoël, Gilles Peytavin, Ana Canestri, Philippe Morlat, Cécile Brunet, Jeanne Sibiude, Delphine Peretti, Véronique Chambrin, Amélie Chabrol, Eida Bui, Lucie Marchand, Josiane Warszawski

Science Spotlights™-P2 CHRONIC COMORBIDITIES IN PREGNANT WOMEN WITH HIV
571 MATERNAL WEIGHT AND ADVERSE PREGNANCY OUTCOMES AMONG WOMEN ON ART AT CONCEPTION
Rebecca Zash, Ellen Caniglia, Modiegi Diseko, Gloria Mayondi, Judith Mabuta, Rebecca Lucket, Justus Hofmeyr, Chelsea Morroni, Doreen Ramogola-Masire, Paige L. Williams, Chloë Zera, Joseph Makhema, Shahin Lockman, Roger Shapiro
572 PREDICTED LONG-TERM ADVERSE BIRTH AND CHILD HEALTH OUTCOMES IN THE ADVANCE TRIAL
Evangelia E. Baxevanidi, Sumbul Asif, Ambar Qavi, Andrew Hill, Francois Venter, Fairlie Lee, Masebole Masenya, Celicia M. Serenata, Simiso Sokhela, Nomathemba Chandiwana

573 ANTIRETROVIRAL THERAPY CLASS AND GESTATIONAL WEIGHT GAIN: RESULTS FROM PHACS SMARTT
Jennifer Jao, Carly Broadwell, Paige L. Williams, Ellen G. Chadwick, Lisa Haddad, Denise Jacobson, Kathleen M. Powis, Lynn M. Yee, Deborah Kacanek, for the Pediatric HIV/AIDS Cohort Study (PHACS)

574 CARDIOMETABOLIC HEALTH IN HIV+ AND HIV- PREGNANT SOUTH AFRICAN WOMEN
Angela Bengtson, Hlengiwe Madlala, Zandile Maqwatini, Azetta Fisher, Landon Myer

575 TIMING OF ART INITIATION IS ASSOCIATED WITH HYPERTENSIVE DISORDERS OF PREGNANCY
Ellen G. Chadwick, Denise Jacobson, Lisa Haddad, Jennifer Jao, Kathleen M. Powis, Deborah Kacanek, Rebecca Zash, Alexandra DiPerna, Lynn M. Yee, for the Pediatric HIV/AIDS Cohort Study

576 THE RISK OF GESTATIONAL HYPERTENSION WITH USE OF DOLUTEGRAVIR AT CONCEPTION
Rebecca Zash, Ellen Caniglia, Gloria Mayondi, Modiegi Diseko, Judith Mabuta, Denise Jacobson, Katherine Johnson, Mompati Mmalane, Joseph Makhema, Shahin Lockman, Roger Shapiro

577 TRAJECTORIES OF PERINATAL DEPRESSION SYMPTOMS IN KENYAN WOMEN LIVING WITH HIV
Osborn Lusi, Anna Larsen, Keshet Ronen, Barbra A. Richardson, Wenwen Jiang, Bhavna Chohan, Daniel Matemo, Jennifer A. Unger, Alison L. Drake, John Kinuthia, Grace John-Stewart

578 ANTENATAL PROGESTERONE PROTECTS AGAINST FETAL GROWTH RESTRICTION IN WOMEN WITH HIV
Madelyn Conner, Bellington Vwalika, Stephen Cole, Bethany Freeman, Chileshe Mabula-Bwalya, Marc Peterson, Pooja Saha, Elizabeth Stringer, Margaret P. Kasaro, Jeff Stringer, Joan T. Price

579 VAGINAL MICROBIOME AND INFLAMMATION PREDICT PRETERM BIRTH IN ZAMBIAN WOMEN WITH HIV
Joan T. Price, Bellington Vwalika, Michael France, Humphrey Mwape, Katelyn J. Rittenhouse, Jacques Ravel, Madelyn Conner, Margaret P. Kasaro, Kristina De Paris, Jeff Stringer

580 PREGNANCY RATES & CLINICAL OUTCOME COMPARISONS AMONG WOMEN LIVING WITH HIV: HPTN 052
Sahar Z. Zangeneh, Ethan A. Wilson, Surbahi Ahluwalia, Deborah Donnell, Ying Q. Chen, Beatriz Grinsztejn, Marineide G. Melo, Sheela V. Godbole, Mina C. Hosseinipour, Taha E. Taha, Johnstone Kumwenda, Marybeth McCauley, Myron S. Cohen, Karin Nielsen-Saines, for the HPTN 052 Study Team
581 INCREASED C-SECTIONS AND PRETERM BIRTHS IN SARS-CoV-2 INFECTION DURING PREGNANCY
Itziar Carrasco, Mar Muñoz-Chapuli, Sara Vigil-Vazquez, David Aguilera-Alonso, Concepción Hernández, Monica Riazia, Marta Pareja, Olga Sanz, Beatriz Pérez-Seoane, Juan Lopez, Elena Márquez, Sara Domínguez-Rodríguez, Juan Antonio De León Luis, Manuel Sánchez-Luna, María Luisa Navarro

582 PREGNANCY OUTCOMES OF WOMEN POSITIVE FOR SARS-CoV-2 COMPARED TO WOMEN TESTED NEGATIVE
Jeremie Mattern, Alexandre J. Vivanti, Christelle Vauloup-Fellous, Luce Landraud, Laurent Mandelbrot, Alexandra Benachi, Olivier Picone, Jeanne Sibiude

583 COMPROMISED SARS-CoV-2 NEUTRALIZING ANTIBODY RESPONSE IN CORD BLOOD VERSUS MOTHERS

584 THE ANTIRETROVIRAL PREGNANCY REGISTRY: 30 YEARS OF MONITORING FOR CONGENITAL ANOMALIES
Jessica D. Albano, William R. Short, Angela E. Scheuerle, Karen Beckerman, Lynne Mofenson, Vani Vannappagari

585 NATIONAL EVALUATION OF MALAWI’S PMTCT PROGRAM: 24-MONTH HIV-EXPOSED INFANT OUTCOMES
Monique Van Lettow, Joep J. Van Oosterhout, Erik Schouten, Andreas Jahn, Thokozani Kalua, Rose Nyirenda, Megan Landes

586 PREVENTING VERTICAL HIV TRANSMISSION IN THE UK: SUCCESSES AND EMERGING CHALLENGES
Helen Peters, Kate Francis, Laurette Bukasa, Rebecca Sconza, Laura Smeaton, Sharon Webb, Claire Thorne

587 PRETERM BIRTH, BREASTFEEDING, ANTENATAL ARV REGIMEN, AND 24-MONTH HIV-FREE SURVIVAL
Mary G. Fowler, Mauricio Pinilla, Sufia Dadabhai, Maxensia Owor, Lynda Stranix-Chibanda, Patricia Flynn, Taha E. Taha, Lameck Chinula, Ayi Violari, Dhaya Moodley, Katie McCarthy, Renee Browning, Sean Brummel, Lynne Mofenson, for the IMPAACT 1077 “PROMISE” Team

588 TRENDS IN HIV PREVALENCE AMONG PREGNANT WOMEN IN BOTSWANA: AN OPPORTUNITY FOR PrEP?
Andrew Kapoor, Aamirah Mussa, Modiegi Diseko, Gloria Mayondi, Judith Mabuta, Mompati Mmalane, Joseph Makhema, Chelsea Morroni, Rebecca Zash, Roger Shapiro, for the Botswana Harvard AIDS Institute

589 CLINIC EXPERIENCES ASSOCIATED WITH HIV OUTCOMES AMONG YOUNG MOTHERS LIVING WITH HIV
Elona Toska, Lucie Cluver, Siyainai Zhou, Christina Laurenzi, Lorraine Sherr
<table>
<thead>
<tr>
<th>Science Spotlights™-Q1</th>
<th>HEALTH OUTCOMES OF HIV-EXPOSED UNINFECTED CHILDREN AND YOUTH</th>
</tr>
</thead>
<tbody>
<tr>
<td>591 IMMUNOLOGIC PREDICTORS OF NEURODEVELOPMENT IN HIV-EXPOSED AND -UNEXPOSED CHILDREN</td>
<td>Alka Khaitan, Jeong H. Jang, We Li, Eren Oyungu, Qigui Yu, Megan McHenry</td>
</tr>
<tr>
<td>592 GROWTH FALTERING AND DEVELOPMENTAL DELAYS IN HIV-EXPOSED UNINFECTED INFANTS IN UGANDA</td>
<td>Reshma Sirajee, Andrea L. Conroy, Sophie Namasopo, Robert O. Opoka, Stephanie Lavoie, Sarah Forgie, Bukola O. Salami, Michael T. Hawkes</td>
</tr>
<tr>
<td>593 MARKERS OF RESILIENCE IN YOUNG ADULTS WITH PERINATAL HIV EXPOSURE OR INFECTION</td>
<td>Patricia A. Sirois, Yanling Huo, Molly Nozyce, Patricia A. Garvie, Lynnette L. Harris, Kathleen Malee, Robin McEvoy, Claude A. Mellins, Sharon L. Nichols, Renee Smith, Katherine Tassiopoulos, for the Pediatric HIV/AIDS Cohort Study (PHACS)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Science Spotlights™-Q2</th>
<th>CHARACTERIZING THE VIRAL RESERVOIR AND IMMUNE RESPONSE IN PEDIATRIC HIV INFECTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>594 DISCOVERY OF LARGE CLONES IN CHILDREN CARRYING PROVIRUSES CONSISTING OF A SINGLE LTR</td>
<td>Johannes C. Botha, Mary-Grace Katusiime, Michael J. Bale, Mark F. Cotton, Mary F. Kearney, John W. Mellors, Gert Van Zyl</td>
</tr>
<tr>
<td>595 TOTAL HIV DNA LEVELS CORRELATE WITH PLASMA IL-2 LEVELS IN THAI INFANTS BUT NOT ADULTS</td>
<td>Julie Mitchell, Thanyawee Puthanakit, Kenneth Dietze, Marta Massanella, Pope Kosalaraksa, Suparat Kanjanavanit, Thitiporn Borkird, Piyarat Suntrattiwong, Panadda Sawangsinth, Mark de Souza, Jintanat Ananworanich, Merlin Robb, Nicolas Chomont, Lydie Trautmann, for the HIVNAT209 Study Group</td>
</tr>
<tr>
<td>596 FASTER INITIAL VIRAL DECAY IN FEMALE CHILDREN LIVING WITH HIV</td>
<td>Sara Domínguez-Rodríguez, Miquel Serna-Pascual, Caroline Foster, Paolo Palma, Eleni Nastouli, Anita De Rossi, Javier Seoane, Paolo Rossi, Carlo Giaquinto, Alfredo Tagarro, Pablo Rojo, for the EPIICAL Consortium</td>
</tr>
<tr>
<td>597 INCREASED IMMUNE ACTIVATION AND EXHAUSTION IN VERTICALLY HIV-1-INFECTED YOUNG ADULTS</td>
<td>Laura Tarancon-Diez, Itziar Carrasco, Elena Vázquez Alejo, Santiago Jiménez de Ory, Tílal Sainz, Miren A. Apilanez, Pablo Rojo, Sara Guillén, José Tomás Ramos, María Ángeles Muñoz-Fernández, María Luisa Navarro</td>
</tr>
<tr>
<td>598 VIRAL-RESERVOIR LANDSCAPE IN EARLY-TREATED VERTICALLY HIV-INFECTED ADOLESCENTS</td>
<td>Libera Sessa, Xiaodong Lian, Ce Gao, Nicola Cotugno, Alessandra Ruggiero, Xu G. Yu, Paolo Palma, Mathias Lichterfeld</td>
</tr>
</tbody>
</table>
599  AUTOLOGOUS INFANT ADCC RESPONSES CORRELATE WITH LOWER MTCT AND BETTER OUTCOMES
Allison S. Thomas, Yvetane Moreau, Manish Sagar

Science Spotlights™-Q3  ARVs AND bNabs FOR CHILDREN AND ADOLESCENTS

600  Dolutegravir and Viral Load Suppression Among Pediatric Patients in Care in Zambia
Shilpa S. Iyer, Jake Pry, Godwin Nyirenda, Mwansa Lumpa, Carolyn Bolton, Michael E. Herce, Kevin M. Zambia, Mwangela Mubiana-Mbewe

601  Switching Efavirenz to Rilpivirine in Virologically Suppressed Adolescents with HIV
Wanatpreeya Phongsamart, Watsamon Jantarabenjakul, Sasitorn Chantaratin, Suvarn Anugulruengkitt, Piyarat Sunlarttiwong, Pope Kosalaraks, Alan Maleesatharn, Kulkanya Chokephaibulkit

602  Mindfulness to Improve ART Adherence and Acceptance in Young Living with HIV: An RCT
Erica Sibinga, Lindsey Webb, Deanna Kerrigan, Vicki Tepper

603  Randomized Controlled Trial of an Adherence Intervention in Young Living with HIV
K. Rivet Amico, Jane C. Lindsey, Michael Hudgens, Ronald Dallas, Keith J. Horvath, Amanda R. Dunlap, Rachel Goolsby, Megan Mueller Johnson, Barbara Heckman, Jessica R. Crawford, Elizabeth Secord, Murli Purswani, Daniel Reiden, Aditya Gaur, for the ATN 152 TERA Study Team

604  IMPAACT 2014 24-Week PK and Safety of Doravirine/3TC/TDF in Adolescents with HIV-1
Ann J. Melvin, Brookie Best, Petronella Muresan, Sarah Pasyar, Hedy Teppler, Kelly Yee, Katie McCarthy, Rachel Scheckter, Hong Wan, Lina De Montigny, Linda Aurpibul, Pradtsana Ounchanum, Avy Violari, Nicole Tobin, Ellen Townley

605  Abacavir Dosing in Neonates from Birth: A Pharmacokinetic Analysis
Adrie Bekker, Edmund Capparelli, Avy Violari, Mark F. Cotton, Ruth Mathiba, Andrew A. Wiznia, Renee Browning, Jack Moyer, Bobbie Graham, Eric Decloedt, Helena Rabie, Mark Mirochnick, Tim R. Cressy, for the IMPAACT P1106 team

606  Dose Optimisation of Long-Acting Injectables in Neonates via PBPK Modelling
Fazila S. Bunglawala, Nicolas Cottura, Maiara C. Montantha, Hannah Kinvig, Edmund Capparelli, Mark Mirochnick, Marco Siccardi

607  Optimizing Dolutegravir Initiation in Neonates Using Population Pharmacokinetic Model
Joseph Piscitelli, Mina Nikanjam, Jeremiah Momper, Brookie Best, Edward Acosta, Mark Mirochnick, Diana F. Clarke, Edmund Capparelli

608  Population Pharmacokinetics of VRC01LS in Term Infants and Adults
609  SAFETY AND PHARMACOKINETICS OF VRC01LS AND 10-1074 AMONG CHILDREN IN BOTSWANA
Edmund Capparelli, Gbolahan Ajibola, Kenneth Maswabi, Molly Pretorius Holme, Kara Bennett, Kathleen M. Powis, Kelly E. Seaton, Adrian McDermott, Marina Caskey, Lucio Gama, Patrick Jean-Philippe, Joseph Makhema, Daniel R. Kuritzkes, Mathias Lichterfeld, Roger Shapiro

Science Spotlights™-Q4  COMPLICATIONS AND MORTALITY IN CHILDREN AND YOUTH

610  CANCER INCIDENCE IN HIV-POSITIVE CHILDREN: THE SAM STUDY, SOUTH AFRICA (2004-2014)
Natasha Abraham, Lukas Buettikofer, Eliane Rohner, Victor Olago, Matthias Egger, Elvira Singh, Julia Bohlius, Mazvita Muchengeti

611  GROWTH DEFICITS ARE ASSOCIATED WITH AIRFLOW OBSTRUCTION IN PERINATALLY ACQUIRED HIV
Engi F. Attia, Wendy Yu, Denise Jacobson, Elizabeth Maleche-Obimbo, Paige L. Williams, Andrew Colin, Meyer Kattan, Sherry Eskander, Michael H. Chung, Kristina Crothers, for the Pediatric HIV/AIDS Cohort Study (PHACS)

612  SERUM BIOMARKERS IDENTIFY CARDIAC DYSFUNCTION IN YOUTH LIVING WITH HIV
Andrew McCrary, Winstone Nyandiko, Michael J. Muehlbauer, Ibrahim Daud, Nathan M. Thielman, Maggie Nguyen, Swati J. Shah, Gerald S. Bloomfield

613  ASSOCIATIONS OF GUT MARKERS WITH BODY FAT IN YOUTH WITH PERINATALLY ACQUIRED HIV
Saheera Dirajlal-Fargo, Denise Jacobson, Wendy Yu, Ayesha Mirza, Mitchell E. Geffner, Jennifer Jao, Grace A. McComsey, for the Pediatric HIV/AIDS Cohort Study (PHACS)

614  GLOBAL TRENDS IN PEDIATRIC ON-TREATMENT MORTALITY ADJUSTED FOR LOSS TO CARE BIASES
Reshma Kassanjee, Elizabeth Zaniewski, Constantin Yiannoutsos, Sophie Demonde, Andrew Edmonds, Taviyia Sudjariitruk, Jorge Pinto, Désiré Lucien Dahourou, Rachel C. Freeman, Christelle Twizere, Azar Karimnia, James G. Carlucci, Charles Kasozi, Leigh Johnson, for the IeDEA International Epidemiology Databases to Evaluate AIDS (IeDEA) Collaboration

615  MORTALITY IN CHILDREN & YOUTH (<25 YEARS) WHO STARTED ART BUT ARE LOST TO CARE
Patience Nyakato, Morna Cornell, Benedikt Christ, Nanina Anderegg, Josephine Muhairwe, Laura Jefferys, Janneke Van Dijk, Monique Van Lettow, Cleophas Chimbetete, Sam J. Phiri, Michael J. Vinikoor, Matthias Egger, Marie Ballif, Mary-Ann Davies

Science Spotlights™-Q5  COVID-19 IN CHILDREN

616  MICROBIOLOGICAL FEATURES AND FOLLOW-UP OF NEONATES BORN TO MOTHERS WITH COVID-19
Sara Vigil Vázquez, Itziar Carrasco, Alba Pérez Pérez, Alicia Hernanz-Lobo, Ángela Manzanarex, Elena Márquez, Olga Sanz, Beatriz Pérez-Seoane, Álvaro Solaz, Maria Concepción Ortiz Barquero, Monica Riala, Marta Pareja, Manuel Sánchez-Luna, Maria Luisa Navarro, for the GESNEO-COVID
617 SAFETY AND EFFICACY OF REMDESVIR IN A PEDIATRIC COVID-19 POPULATION
Flor Munoz, William Muller, Amina Ahmed, David Kimberlin, Ana Mendez-Echevarria, Janet S. Chen, Mari Nakamura, William Pomputius, Zongbo Shang, Henry N. Hulter, Catherine O’Connor, Heather Maxwell, Kathryn Kersey, Diana Brainard, Pablo Rojo

618 SARS-CoV-2 VACCINES INDUCE DURABLE NEUTRALIZING ANTIBODIES IN INFANT Rhesus Macaques

619 DIAGNOSTIC ACCURACY OF SARS-CoV-2 ANTIGEN RAPID TEST COMPARED TO REAL TIME PCR IN PED
Serena Villaverde, Sara Dominguez-Rodriguez, Gema Sabrido, MP Romero, Marta Plata, Ana Belén Jiménez, Mar Nuñez, Beatrix Soto, David Molina-Arana, Amanda Bermejo, Manuel Gijón, Begona Pérez-Moneo, Cinta Moraleda, Alfredo Tagarro, for the EPICO-AEP Working Group

620 CLINICAL SYNDROMES CAUSED BY COVID-19 AND A BAYESIAN MODEL TO PREDICT SEVERITY
Alfredo Tagarro, Sara Dominguez-Rodriguez, Serena Villaverde, Miquel Serna-Pascual, Francisco José Sanz-Santaeufemia, Carlos Grasa, Antoni Soriano-Arandes, Jesús Saavedra-Lozano, Victoria Fumadó, Cristina Epaleta, Jose Antonio Alonso, Paula Rodrigue-Molino, Joan Miquel Pujol, Cinta Moraleda, for the EPICO-AEP Working Group

621 ELUCIDATING SARS-CoV-2 T-CELL RESPONSES IN PEDIATRIC COVID-19 AND MIS-C
Vidisha Singh, Veronica Obregon-Perko, Stacey A. Lapp, Anna M. Horner, Alyssa Brooks, Lisa S. Macoy, Laila S. Hussaini, Austin Lu, Theda Gibson, Evan Anderson, Christina A. Rostad, Ann Chahroudi

622 ASYMPTOMATIC SARS-CoV-2 CHILDREN HAVE LOWER INFECTIVITY AND INTACT MEMORY RESPONSES
Nicola Cotugno, Alessandra Ruggiero, Giuseppe R. Pascucci, Bonfante Francesco, Maria Raffaella Petrapha, Bernardi Stefania, Donato Amodio, Piccioni Livia, Daniele Donà, Carlo Giaquinto, Carlo Concato, Petter Bodrin, Paolo Rossi, Anita De Rossi, Paolo Palma

623 HIGH SPECIFIC IMMUNE RESPONSE AND LOW T-CELL ACTIVATION IN CHILDREN WITH COVID-19
Maria Raffaella Petapha, Bonfante Francesco, Paola Costenaro, Francesco Carmona, Anna Cantarutti, Elena Ruffoni, Daniele Donà, Costanza Di Chiara, Marisa Zanchetta, Luisa Barzon, Carlo Giaquinto, Anita De Rossi

624 HIGH AND PERSISTENT NEUTRALIZING ANTIBODIES IN CHILDREN RECOVERED FROM COVID-19
Bonfante Francesco, Paola Costenaro, Anna Cantarutti, Costanza Di Chiara, Chiara Cosma, Alessio Bortolami, Maria Raffaella Petrapha, Matteo Pagliari, Sandra Cozzani, Giovanni Di Salvo, Liviana Da Dalt, Luisa Barzon, Anita De Rossi, Daniele Donà, Carlo Giaquinto

625 ROBUST HUMORAL IMMUNE RESPONSES TO SARS-CoV-2 INFECTION IN CHILDREN
<table>
<thead>
<tr>
<th>Science Spotlights™-R1</th>
<th>COVID-19 EPIDEMIOLOGY</th>
</tr>
</thead>
<tbody>
<tr>
<td>626 SARS-CoV-2 TESTING &amp; POSITIVITY AMONG PERSONS WITH &amp; WITHOUT HIV IN 6 US COHORTS</td>
<td>Lesley S. Park, Kathleen A. McGinnis, Kirsha Gordon, Michael A. Horberg, Celeena R. Jefferson, Lisa Bastarache, Srushti Gangireddy, Michael J. Silverberg, Wendy Leyden, Sonia Napravnik, Deana Agil, Alison G. Abraham, Gypsyamber D’Souza, Keri N. Althoff, for the CIVET Collaboration of the NA-ACCORD of IeDEA</td>
</tr>
<tr>
<td>627 SARS-CoV-2 SEROPREVALENCE AND IgG LEVELS ARE LOWER AMONG PEOPLE LIVING WITH HIV</td>
<td>Matthew Spinelli, Kara A. Lynch, Cassandra A. Yun, Dave Glidden, Michael A. Peluso, Timothy A. Heinrich, Monica Gandhi, Lillian B. Brown</td>
</tr>
<tr>
<td>628 A POPULATION-BASED ANALYSIS OF SARS-CoV-2 AMONG PATIENTS ON ART OR PrEP</td>
<td>Kate Salters, Kiana Yazdani, Paul Sereda, David Moore, Junine Toy, Rolando Barrios, Julio S. Montaner</td>
</tr>
<tr>
<td>629 SEROPREVALENCE OF ANTIBODIES AGAINST SARS-CoV-2 AMONG PEOPLE LIVING WITH HIV (PLWH)</td>
<td>Smitha Gudipati, Monica Lee, Megan Scott, Sean Yaphe, Nicholas Yared, Indira Brar, Joanne Huisting, Norman Markowitz</td>
</tr>
<tr>
<td>630 SUSTAINED SEROPREVALENCE IN HEALTH CARE WORKERS AT A QUATERNARY CENTER, NEW YORK CITY</td>
<td>Delivette Castor, Jason Zucker, Brit Sovic, Marvin Castellon, Deborah Theodore, Jennifer Chang, Shaoyi Zhang, Meredith McNairy, Sade Tukuru, Rusty Greene, Steven Palmer, Xiomara Javier-Espinal, Yumeng Wu, Katherine Meyers, Magdalena Sobieszczyn, for the Clinical Trials Unit</td>
</tr>
<tr>
<td>631 OVERCROWDED HOUSING INCREASES RISK FOR COVID-19 MORTALITY: AN ECOLOGICAL STUDY</td>
<td>Karan Varshney, Jenna Adalbert</td>
</tr>
<tr>
<td>634 SARS-CoV-2 SURVEILLANCE IN 14 HEALTH FACILITIES IN MALAWI</td>
<td>Karam Sachathep, Felix Kayigamba, Lyson Tenthani, Francis M. Ogollah, Katherine Yuengling, Giles Reid, Gili Hrusa, Mathew Kagoli, Anne Chaum-Mwale, Andrew F. Auld, Evelyn Kim, Nellie Wadonda, Alinune Kabaghe, Daniel Payne, Tiffany G. Harris</td>
</tr>
<tr>
<td>635 SARS-CoV-2 TRANSMISSION AMONG FIRST CASES AND THEIR CONTACTS IN KISUMU COUNTY, KENYA</td>
<td>Margaret Mburu, Jayne L. Kulzer, Norton M. Sang, Amy Herman-Roloff, Beth T. Barr, Francesca Odhiambo, Edwin Mulwa, Benard Awuonda, Albert M. Odhiambo, Clayton Onyango, Rachael Joseph, Aoko Appolonia, Craig Cohen, Elizabeth A. Bukusi, Pamela Murnane</td>
</tr>
<tr>
<td>Page</td>
<td>Title</td>
</tr>
<tr>
<td>------</td>
<td>----------------------------------------------------------------------</td>
</tr>
<tr>
<td>636</td>
<td>CUMULATIVE INCIDENCE OF SARS-CoV-2 INFECTION AND EPIDEMIC METRICS, UNITED STATES</td>
</tr>
<tr>
<td>637</td>
<td>RECENT SARS-CoV-2 SEROCONVERSION IN A NATIONAL PROSPECTIVE COHORT OF US ADULTS</td>
</tr>
<tr>
<td>638</td>
<td>US POPULATION-BASED SURVEY OF VACCINE WILLINGNESS AND SARS-CoV-2 ANTIBODY PREVALENCE</td>
</tr>
<tr>
<td>639</td>
<td>SARS-CoV-2 GENETIC DIVERSITY INCREASED AT LEAST 3-FOLD IN THE US IN 2020</td>
</tr>
<tr>
<td>640</td>
<td>PREVALENCE OF ANTI–SARS-CoV-2 ANTIBODIES IN SOUTH AFRICAN BLOOD DONORS</td>
</tr>
<tr>
<td>641</td>
<td>A PROSPECTIVE CASE-COHORT STUDY OF COVID-19 IN PERSONS WITH HIV: COVIH-19 STUDY</td>
</tr>
<tr>
<td>642</td>
<td>DETERMINANTS OF COVID-19 HOSPITAL OUTCOMES IN A LARGE PENNSYLVANIA HEALTH SYSTEM</td>
</tr>
</tbody>
</table>

**HIV EPIDEMIOLOGY**

<table>
<thead>
<tr>
<th>Page</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>643</td>
<td>HIV VIRAL LOAD PATTERNS WITHIN 2 YEARS AFTER DIAGNOSIS IN WASHINGTON, DC</td>
<td>Rupali K. Doshi, Alexandra Campione, Kerri Dorsey, Morgan Byrne, Jenevieve Opoku, Saanjh Boyani, Anne Monroe, Adam J. Visconti, Michael Kharfen</td>
</tr>
<tr>
<td>644</td>
<td>REFINING LATE HIV DIAGNOSIS ESTIMATES USING TESTING HISTORY AND IMMIGRATION DATA</td>
<td>Matthew R. Golden, Susan Buskin, Amy Bennett, Julia C. Dombrowski</td>
</tr>
</tbody>
</table>
646 IMPACT OF AGING ON ART CONTINUATION FOR PERFORMANCE MANAGEMENT AND TARGET SETTING
Jessica Stephens, Lana Lee, Noah Bartlett, Melaku Dessie, Mary Mahy, George K. Siberry

647 PATIENT TRANSFERS BETWEEN PRIMARY CARE ART SERVICES IN THE WESTERN CAPE, SOUTH AFRICA
Jasantha Odayar, Benjamin Chi, Tamsin K. Phillips, Elton Mukonda, Marvin Hsiao, Maia Lesosky, Landon Myer

Science Spotlights™-R3 GEOGRAPHIC AND PHYLOGENETIC TRANSMISSION DYNAMICS

648 PREDICTING RISK OF HIV ACQUISITION IN RURAL SOUTH AFRICA USING GEOGRAPHIC DATA
Allen Roberts, Diego Cuadros, Alain Vandormael, Dickman Gareta, Ruanne Barnabas, Kobus Herbst, Frank Tanser, Adam Akullian

649 GEOSPATIAL RISK PROFILES PREDICT INCIDENT-HIV AREAS IN HYPERENDEMIC AFRICAN NATION
Neena M. Philip, Gina S. Lovasi, Rejoice Nkambule, Frank Tanser, Quarraisha Abdool Karim, Jessica Justman, Barun Mathema

650 SEXUAL-AFFILIATION-NETWORK ANALYSIS TO INFORM VENUE-BASED HIV INTERVENTIONS IN PERU
Alexander Lankowski, Jose Hidalgo, Robinson Cabello, Hugo Sanchez, Ann C. Duerr

651 PHYLOGENETICS REVEAL SHIFTING PATTERNS IN HIV-1 SPREAD IN QUEBEC FROM 2002 TO 2019
Bluma G. Brenner, Ruxandra-Ilinca Ibanescu, Jean-Pierre Routy, Réjean Thomas, Cécile Tremblay, Nadine Kronfl, Bertrand Lebouché, Nathan Osman, Isabelle Hardy, Jean-Guy Baril, Joanne Otis, Michel Roger, for the Montreal Primary HIV Infection Cohort

652 DYNAMICS OF HIV TRANSMISSION BETWEEN HIGH-RISK POPULATIONS IN TJUANA
Heather A. Pines, Sanjay R. Mehta, Daniela Abramovitz, Alicia Harvey-Vera, Thomas L. Patterson, Claudia Rafful, Gudelia Rangel, Steffanie Strathdee, Antoine Chaillon

653 HIV MOLECULAR TRANSMISSION NETWORKS SENSITIVITY TO DATA COMPLETENESS
Sepideh Mazrouee, Ricardo Mora, Rocío Carrasco-Hernandez, Michelle Carr, Natascha Del Vecchio, Kayo Fujimoto, Marlene McNeeese, Camden J. Hallmark, Joel Wertheim

Science Spotlights™-R4 DISPARITIES AND STRUCTURAL FACTORS AFFECTING HIV CARE OUTCOMES

654 TRENDS AND DISPARITIES IN ACHIEVING VIRAL SUPPRESSION IN THE UNITED STATES, 2012-2018
Elizabeth Humes, Jennifer Lee, Jun Li, David B. Hanna, Vincent Marconi, Jonathan Colasanti, Heidi Crane, Mari M. Kitahata, Ronald J. Bosch, Sarita Shah, Michael J. Silverberg, Keri N. Althoff, Richard Moore, Kate Buchacz, for the North American AIDS Cohort Collaboration on Research and Design (NA-ACCORD) of IeDEA

655 HIV CARE OUTCOMES AMONG AMERICAN INDIAN/ALASKA NATIVES IN THE UNITED STATES, 2018
Sophie Sembajwe, Andria Apostolou, Jeffrey McCollum, Azfar-E-Alam Siddiqi, Xiaohong Hu, Irene Hall
656  STRUCTURAL FACTORS ASSOCIATED WITH HIV CARE FOR BLACK PEOPLE WITH DIAGNOSED HIV, 2017
Joseph E. Logan, Nicole Crepaz, Feijun Luo, Xueyuan Dong, Zanetta Gant, Allison Ertl, Candace Giord, Nimeshkumar Patel, Chan Jin, Alexandria Balaji, Patricia Sweeney

657  HOUSING AND HIV OUTCOMES AMONG TRANSGENDER WOMEN IN SOUTH AFRICA
Tonia Poteat, L Leigh Van der Merwe, Allanise Cloete, Dee Adams, Mannat Malik, Andrea Wirtz

658  FOOD INSECURITY AND LOWER VIRAL SUPPRESSION IN BURMESE MIGRANTS LIVING WITH HIV
Carl Fredrik Sjöland, Patou Musumari Masika, Arunrat Tangmunkongyorakul, Linda Aurpibul, Kriengkrai Srithanaviboonchai, Masahiro Kihara, Susanne Rautiainen

659  DISTANCE TO HIV TREATMENT CENTER AND ASSOCIATION WITH ART USE AMONG MEN IN UGANDA
Darix S. Kigozi, Fred Nalugoda, Godfrey Kigozi, Victor Ssempijja, Hadijja Nakawooya, Joseph Kagaayi, Anthony Ndyanabo, Tom Lutalo, David Sserwadda, Steven Reynolds, Lisa Mills, Michelle Adler, Ronald Gray

660  REASONS FOR NONDISCLOSURE OF HIV-POSITIVE STATUS TO HEALTH CARE PROVIDERS, MOZAMBIQUE
Laura Fuente-Soro, Antía Fiqueroa-Romero, Sheila Fernández-Luis, Orvalho Augusto, Elisa Lopez-Varela, Edson Bernardo, Paula Paz, Stanley C. Wei, Peter Kerndt, Tacila Nhampossa, Denise Naniche

661  DEPRESSION AND HIGHER EDUCATION ARE DRIVERS OF HIV STIGMA IN A SOUTH AFRICAN TOWNSHIP
Megan F. Meyer, Paul K. Drain, Sean Galagan, Sabina Govere, Bernadette Gosnell, Mahomed-Yunus Moosa

662  THE TREATMENT GAP FOR MENTAL DISORDERS IN PEOPLE LIVING WITH HIV IN SOUTH AFRICA

663  HEALTH DISPARITIES DUE TO NONADHERENCE TO ANTIPSYCHOTICS IN PLWH WITH SCHIZOPHRENIA
Sony Subedi, Ni Gusti Ayu Nanditha, Hiwot Tafessu, Martin St-Jean, Julius Elefante, Thomas L. Patterson, William G. Honer, Julio S. Montaner, Viviane D. Lima

664  OPIOID USE DISORDER, AGONIST THERAPY, AND MORTALITY AMONG PEOPLE LIVING WITH HIV
Nalin Dhillon, Audrey G. Tung, Jason Trigg, Martin St-Jean, Viviane D. Lima, Ni Gusti Ayu Nanditha, Julio S. Montaner, Rolando Barrios, Kate Laird, Monica Ye, Cole Stanley, Taylor McLinden, Kate Salters

665  SEXUAL HEALTH SERVICES FOR PEOPLE WHO ENGAGE IN EXCHANGE SEX: NEEDS AND OPPORTUNITIES
Medhavi Bole, Christine Khosropour, Matthew R. Golden, Sara Glick, Lindley Barbee, Shireesha Dhanireddy, Julia C. Dombrowski

Science Spotlights™-R5 STIGMA, MENTAL HEALTH, AND SUBSTANCE USE: IMPACT ON OUTCOMES

660  REASONS FOR NONDISCLOSURE OF HIV-POSITIVE STATUS TO HEALTH CARE PROVIDERS, MOZAMBIQUE
Laura Fuente-Soro, Antía Fiqueroa-Romero, Sheila Fernández-Luis, Orvalho Augusto, Elisa Lopez-Varela, Edson Bernardo, Paula Paz, Stanley C. Wei, Peter Kerndt, Tacila Nhampossa, Denise Naniche

661  DEPRESSION AND HIGHER EDUCATION ARE DRIVERS OF HIV STIGMA IN A SOUTH AFRICAN TOWNSHIP
Megan F. Meyer, Paul K. Drain, Sean Galagan, Sabina Govere, Bernadette Gosnell, Mahomed-Yunus Moosa

662  THE TREATMENT GAP FOR MENTAL DISORDERS IN PEOPLE LIVING WITH HIV IN SOUTH AFRICA

663  HEALTH DISPARITIES DUE TO NONADHERENCE TO ANTIPSYCHOTICS IN PLWH WITH SCHIZOPHRENIA
Sony Subedi, Ni Gusti Ayu Nanditha, Hiwot Tafessu, Martin St-Jean, Julius Elefante, Thomas L. Patterson, William G. Honer, Julio S. Montaner, Viviane D. Lima

664  OPIOID USE DISORDER, AGONIST THERAPY, AND MORTALITY AMONG PEOPLE LIVING WITH HIV
Nalin Dhillon, Audrey G. Tung, Jason Trigg, Martin St-Jean, Viviane D. Lima, Ni Gusti Ayu Nanditha, Julio S. Montaner, Rolando Barrios, Kate Laird, Monica Ye, Cole Stanley, Taylor McLinden, Kate Salters

665  SEXUAL HEALTH SERVICES FOR PEOPLE WHO ENGAGE IN EXCHANGE SEX: NEEDS AND OPPORTUNITIES
Medhavi Bole, Christine Khosropour, Matthew R. Golden, Sara Glick, Lindley Barbee, Shireesha Dhanireddy, Julia C. Dombrowski
666 METHAMPHETAMINE USE AND HIV/STI RISK AMONG USERS OF SUBSTANCE USE TREATMENT PROGRAMS
Jessica Sherman, Christina Dyar, Ethan Morgan

667 CANNABIS USE ASSOCIATED WITH DECREASED ART ADHERENCE IN AGING PEOPLE WITH HIV
Jennifer A. Manuzak, Janeway Granche, Katherine Tassiopoulos, Ronald J. Ellis, Karl Goodkin, Anjali Sharma, Kristine Erlandson, for the ACTG A5322 Study Team

668 A WEB TOOL TO PROJECT LOCAL IMPACT OF INTERVENTIONS TO END HIV EPIDEMICS IN THE US
Anthony T. Fojo, Melissa Schnure, Parastu Kasaie, David Dowdy, Maunank Shah

669 MODEL-BASED COMPARISON OF THE CONTRIBUTION OF KEY POPULATIONS TO HIV EPIDEMICS
Ross D. Booton, Kate M. Mitchell, James Stannah, Romain Silhol, Dobromir Dimitrov, Jeffrey Eaton, Stefan Baral, Deborah Donnell, Marie-Claude Boily, for the Modeling KP and HIV Epidemics Working Group

670 AGING AND THE HIV EPIDEMIC AMONG MSM IN THE US: A COMPARISON OF 2 SIMULATION MODELS
Emily P. Hyle, Parastu Kasaie, Eli L. Schwamm, Cameron Stewart, Krishna P. Reddy, Lucas Gerace, Pamela Pei, Elizabeth Humes, Fatma Shebl, Kenneth Freedberg, Rochelle P. Walensky, Keri N. Althoff

671 CALIBRATION OF THE VACS INDEX 2.0 FOR ESTIMATING MORTALITY AMONG PWH IN NORTH AMERICA
Kathleen A. McGinnis, Amy Justice, Richard Moore, Michael J. Silverberg, Keri N. Althoff, Maile Karris, Viviane D. Lima, Heidi Crane, Michael A. Horberg, Marina B. Klein, Stephen Gange, Kelly Gebo, Angel Mayor, Janet P. Tate, for the North American AIDS Cohort Collaboration on Research and Design (NA-ACCORD) of IeDEA

672 PREDICTIVE MODELS OF ART RESPONSES AMONG ACUTELY INFECTED INDIVIDUALS
Robert Paul, Andrew Belden, Jintanat Ananworanich, Kyu Cho, Carlo Sacdalan, Eugene Kroon, Lishomwa Ndhlovu, Lydie Trautmann, Somporn Tipsuk, Duangathai Suttichom, Donn J. Colby, Nittaya Phanuphak, Sandhya Vasan, Serena S. Spudich, for the SEARCH 010/RV254 Study Team

673 DEVELOPING A PREDICTIVE MODEL FOR HIV CLINICAL CARE DISENGAGEMENT
Monica Borges, Charles Burns, Mehri McKellar, Nwora Lance Okeke

674 PARTNER TESTING AMONG PREGNANT WOMEN OFFERED HIV RETESTING IN KENYA
Wenwen Jiang, Peninah Kitao, Shiza Farid, Daniel Matemo, Anjuli Wagner, Cheryl C. Johnson, Grace John-Stewart, John Kinuthia, Alison L. Drake, David Katz

675 INNOVATIVE QUALITY APPROACH TO IMPROVE HIV RAPID TESTING IN SOUTH AFRICA
Karidia Diallo, Mireille B. Kalou, Makhanya Makhosazana, Adeboye Adelekan, Leigh Berrie, Kembra N. Lee, Kassahun Ayalew, Joseph Honwani, Dumisani Mhongo, Robert Molale, Anil Kalan, Amanda Mohlane, Bandile Ndlazi, Peter Manyike
676 HIV RAPID TESTING AND CARE OUTCOMES IN ENDING THE HIV EPIDEMIC JURISDICTIONS
Anne H. Peruski, Nivedha Panneer

677 HIV SELF-TESTING AND RISK BEHAVIORS AMONG MEN WHO HAVE SEX WITH MEN IN 23 US CITIES
Cedric Bien-Gund, Pamela A. Shaw, Christine Agnew Brune, Kathleen Brady, Robert Gross

678 USE OF MULTI-ASSAY ALGORITHMS TO IDENTIFY RECENT HIV INFECTIONS: HPTN 071/POPART
Wendy Grant-McAuley, Ethan Klock, Oliver Laeyendecker, Yaw Agyei, Ethan A. Wilson, William Clarke, Autumn Breaud, Ayana Moore, Helen Ayles, Peter Bock, Deborah Donnell, Sarah Fidler, Richard Hayes, Susan Eshleman, for the HPTN 071 (PopART) Study Team

679 HIV RECENCY TESTING, A TOOL FOR HIV HOT SPOT MAPPING: CRS EpiC3-90 EXPERIENCE, ZAMBIA
Linda Mwila Chibesa, Albert Mwango, Towela N. Mfune, Sabe Mwape, Mwate J. Chaila, Bosco Mukanyimi, Daines Nsofwa, Keith Mweebo, Elyssa Stoops, Peter Minchella, Samuel Yingst, Aaron Shibemba, Failes Mwamba Zulu, Mwabayho J. Kazadi

680 EVALUATION OF A RAPID TEST ALGORITHM TO ESTIMATE HIV INCIDENCE: HPTN 071/PopART
Ethan Klock, Ethan A. Wilson, Reinaldo Fernandez, Denni Lennon, Ayana Moore, Barry Kosloff, Anneen Van Deventer, Helen Ayles, Peter Bock, Deborah Donnell, Sarah Fidler, Richard Hayes, Susan Eshleman, Oliver Laeyendecker, for the HPTN 071 (PopART) Study Team

681 COMPARISON OF ASANTE AND SWIFT HIV RAPID RECENCY OF INFECTION ASSAYS
Haley Schmidt, Reinaldo Fernandez, Eshan U. Patel, Charles Morrison, Ronald Galiwango, Joseph Kagaayi, M. Kate Grabowski, Aaron Tobian, Andrew Redd, Thomas Quinn, Oliver Laeyendecker

682 IMPACT OF EARLY VIRAL SUPPRESSION ON HIV INCIDENCE ASSAYS: HPTN 071 (POPART)
Wendy Grant-McAuley, Ethan Klock, Oliver Laeyendecker, Estelle M. Piwowar-Manning, Ethan A. Wilson, William Clarke, Autumn Breaud, Ayana Moore, Helen Ayles, Peter Bock, Deborah Donnell, Sarah Fidler, Richard Hayes, Susan Eshleman, for the HPTN 071 (PopART) Study Team

683 MISSED HIV & HCV SCREENING IN EMERGENCY-DEPARTMENT PATIENTS WITH OPIOID-USE DISORDER
Michael S. Lyons, Marek C. Chawarski, Richard Rothman, Lauren Whiteside, Ethan Cowan, Lynne D. Richardson, Kathryn Hawk, Judith I. Tsui, Robert P. Schwartz, Patrick O’Connor, Gail D’Onofrio, David A. Fiellin, Jennifer E. Edelman

684 SUSTAINED 97% HIV TESTING RATE IN THE EMERGENCY DEPARTMENT: THE NEW GOLD STANDARD
Linda Cheyenne Vaccari, Sarah Parry, Deborah Kirkham, Steven Pike, Leslie Perry, Andrew Widdowson, Sarah Horne, Ian Cormack
685 HIV/STI TESTING AND PrEP ELIGIBILITY AMONG WOMEN INCARCERATED IN AN URBAN COUNTY JAIL
Jui Desai, Ank Nijhawan, Douglas Krakower, Barry-Lewis Harris, Dena Taherzadeh

686 ARE WE REACHING THE AT-RISK PATIENT POPULATIONS FOR HIV AND OTHER STIS?
Christoph Boesecke, Torben Kimhofer, Christopher Tocha, Oliver Schubert, Rainer Rybak, Klaus Kuhlen, Christoph Klaes, Jürgen K. Rockstroh

687 DECREASED HIV TESTING BEFORE HIV DIAGNOSIS AMONG BLACKS/AFRICAN AMERICANS: US 2013–18
Sonia Singh, Xueyuan Dong, Laurie Linley

688 TIMELY HIV CASE AND SEQUENCE REPORTING FOR CLUSTER DETECTION: UNITED STATES
Kathryn Curran, Neeraja Saduvala, Laurie Linley, Anne H. Peruski, Anne Marie France, Alexandra M. Oster

689 THE PLASMA SEPARATION CARD (PSC): A SUITABLE ALTERNATIVE TO PLASMA HIV-1 VIRAL LOAD
Katrina Sleeman, Lucia Hans, Guoqing Zhang, Stephen Jadczak, Lynette Makuwaza, Renelle Peloakgosi-Shikwambani, Mackenzie Hurlston Cox, Heather Alexander, Sergio Carmona, Clement Zeh

690 CORONACHEK SARS-CoV-2 POINT-OF-CARE ANTIBODY TEST PERFORMANCE IN UGANDA AND BALTIMORE
Owen R. Baker, M. Kate Grabowski, Ronald Galiwango, Aminah Nalumansi, Jennifer Serwanga, William Clarke, Yu-Hsieh Hsieh, Richard Rothman, David Serwadda, Joseph Kagaayi, Tom Lutalo, Steven J. Reynolds, Pontiano Kaleebu, Thomas Quinn, Oliver Laeyendecker

691 COST-EFFECTIVENESS OF SARS-CoV-2 RAPID ANTIGEN TESTING IN LOW-RESOURCE SETTINGS
Sarah J. Girdwood, Sergio Carmona, Emma Hannay, Brooke Nichols

692 CAN'T WORK FROM HOME: POOLED NUCLEIC ACID TESTING OF LABORATORY WORKERS DURING COVID
Stephen A. Rawlings, Brianna Scott, Laura Layman, Pramod Naranatt, Roy Heitsley, Caroline Ignacio, Magali Porrahcia, Sara Gianella, Antoine Chaillon, Davey M. Smith

693 NEUTRALIZING ANTIBODY DECAY IN PATIENTS WITH MILD OR ASYMPTOMATIC COVID-19 INFECTION
Adele Boccuto, Francesca Gatti, Renzo Scaggiante, Eliana Modolo, Daniela Zago, Monica Basso, Filippo Dragoni, Niccolò Bartolini, Ilaria Vicenti, Maurizio Zazzi, Saverio G. Parisi

694 SARS-CoV-2 TESTING IN FLORIDA, ILLINOIS, AND MARYLAND: ACCESS AND BARRIERS
Steven J. Clipman, Amy Wesolowski, Shruti H. Mehta, Smisha Agarwal, Sarah E. Cobey, Sunil S. Solomon, Derek A. Cummings

695 SIGNIFICANT IMPACT OF COVID-19 ON THE FIRST PillARS OF THE HIV CARE CONTINUUM
Kathryn S. Hensley, Carljijn Jordans, Jan E. Van Beek, Marion E. Vriesde, Jeroen J. Van Kampen, Charles A. Boucher, Femke P. Mollema, Elisabeth H. Gisolf, Rachida El Moussaoui, Gonneke Hermanides, Renee N. Finkenflügel, Bart J. Rijnders, Annelies Verbon, Casper Rokx
<table>
<thead>
<tr>
<th>Page</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>697</td>
<td>WITHDRAWN</td>
<td></td>
</tr>
<tr>
<td>698</td>
<td>PrEP EFFICACY OVER THE FIRST 3 YEARS OF IMPLEMENTATION IN FRANCE: A NATIONWIDE STUDY</td>
<td>Marc-Florent Tassi, Emeline Laurent, Guillaume Gras, Lot Florence, Francis Barin, Karl Stefic, Leslie Grammatico-Guillon</td>
</tr>
<tr>
<td>699</td>
<td>A NOVEL APPROACH TO MEASURE PrEP UPTAKE AMONG POPULATIONS WITH PERSISTENT HIV RISK</td>
<td>Preeti Pathela, Saba Qasmieh, Monica Gandhi, Elliot Rozen, Harris Goldstein, Hideaki Okochi, Kelly Jamison, Addie Crawley, Joan Berman, Betsy Herold, Denis Nash</td>
</tr>
<tr>
<td>702</td>
<td>PrEP USE AND REFERRAL: BLACK PARTNERS OF PEOPLE WITH HIV IN PARTNER SERVICES, 2019</td>
<td>Shubha Rao, Mesfin Mulatu, Hui Zhang Kudon, Wei Song, Michele Rorie</td>
</tr>
<tr>
<td>704</td>
<td>OPTIMIZING HIV PREVENTION EFFORTS TO ACHIEVE EHE INCIDENCE TARGETS</td>
<td>Evin Jacobson, Katherine A. Hicks, Justin Carrico, David Purcell, Timothy Green, Jonathan Mermin, Paul Farnham</td>
</tr>
<tr>
<td>705</td>
<td>PREDICTORS OF PrEP UPTAKE IN A SEXUAL HEALTH CLINIC WITH IMMEDIATE PrEP INITIATION</td>
<td>Gabriel Wagner, Kuan-Sheng Wu, Alina Burgi, Susan J. Little</td>
</tr>
<tr>
<td>706</td>
<td>THE M-CUBED APP TO IMPROVE HIV PREVENTION AND CARE OUTCOMES IN MSM: RESULTS OF AN RCT</td>
<td>Patrick S. Sullivan, Rob Stephenson, Sabina Hirshfield, Shelby Mullin, Christina Mehta, Ryan J. Zahn, José A. Bauermeister, Mary Ann Chissi, Martin Downing, Deborah Gelaude, Keith J. Horvath, Eli Rosenberg, Aaron J. Siegler, Gordon Mansergh, for the MMI Research Group</td>
</tr>
</tbody>
</table>
708 GLOBAL AND REGIONAL ESTIMATES OF THE CONTRIBUTION OF HSV-2 TO INCIDENT HIV INFECTIONS
Romain Silhol, Helen Coupland, Rebecca Baggaley, Lori Miller, Lisa Staadecker, Sami Lynne Gottlieb, James Stannah, Katherine M. Turner, Peter Vickerman, Richard Hayes, Philippe Mayaud, Katharine J. Looker, Marie-Claude Boily

709 DAILY DOXYCYCLINE IN MSM ON PreP FOR PREVENTION OF SEXUALLY TRANSMITTED INFECTIONS
Troy Grennan, Mark Hull, Saira Mohammed, Tessa Tattersall, Joshua Edward, Amit Gupta, Michelle K. Dennehy, Marc Romney, Muhammad Morshed, Wendy Zhang, Sidhant Gullani, Jason Trigg, Viviane D. Lima, Julio S. Montaner, Reka Gustafson

710 TENOFOVIR HAIR LEVELS SIMILAR AMONG PREGNANT AND POSTPARTUM PreP USERS
Jillian Pintye, Monica Gandhi, John Kinuthia, Felix Abuna, Mary Marwa, Salphine Watoyi, Ben Ochieng, Daniel Odinga, Joshua Stern, Laurén Gomez, Nancy Mwongeli, Hideaki Okochi, Julia Dettinger, Grace John-Stewart, Jared Baeten

711 THE IMPACT OF VIOLENCE ON PreP ADHERENCE AMONG US CISGENDER WOMEN AT RISK FOR HIV

712 SEXUAL VIOLENCE AND PreP USE AMONG MSM IN 23 US CITIES: NHBS, 2017
Jincong Freeman, Johanna Chapin-Bardales, Susan Cha, Cyprian Wejnert, Amy Baughner, for the NHBS Study Group, Division of HIV/AIDS Prevention

713 PREDICTORS OF PreP ADHERENCE AND RETENTION IN US CISGENDER WOMEN AT RISK FOR HIV

714 WEEKLY ORAL TENOFOVIR ALAFENAMIDE PROTECTS MACAQUES FROM VAGINAL SHIV INFECTION
Ivana Massud, Kenji Nishiura, Susan Ruone, Angela Holder, Chuong Dinh, Shanon Ellis, Kristen Kelley, George Khalil, Walid Heneine, Gerardo Garcia-Lerma, Charles Dobard

715 PHARMACOKINETICS OF TAF/EVG RECTAL INSERTS IN MACAQUES AND IMPACT OF RECTAL WASH
Natalia Makarova, Tyana Singletary, M.M. Peet, James Mitchell, Angela Holder, Chuong Dinh, Walid Heneine, Gerardo Garcia-Lerma, Meredith Clark, James Smith, Gustavo Doncel

716 ACCEPTABILITY AND CHOICE FOR 3 PLACEBO PRODUCTS USED WITH RECEPTIVE ANAL SEX
José A. Bauermeister, Ryan Tingler, Albert Liu, Suwat Chariyalertsak, Craig Hoesley, Pedro Gonzales, Ken Ho, Noel Kayange, Thesla Palanee-Phillips, Sherri Johnson, Jillian Zemanek, Cindy Jacobson, Gustavo Doncel, for the MTN-035 Protocol Team for the Microbicide Trials Network
717  **LONG-ACTING HIV CAPSID INHIBITOR EFFECTIVE AS PrEP IN A SHIV RHESUS MACAQUE MODEL**
Elena Bekerman, Samuel J. Vidal, Derek Hansen, Bing Lu, Kelly Wang, Abishek Chandrashekar, Jim Zheng, William Rowe, Darryl Kato, Christian Callebaut, Wade Blair, Tomas Cihlar, Stephen Yant, Romas Gelezunus, Dan Barouch

---

718  **INFUSION REACTIONS IN THE PHASE 2B ANTIBODY MEDIATED PREVENTION (AMP) STUDIES**
Simbarashe Takuva, Shelly Karuna, Michal Juraska, Erika Rudnicki, Srilatha Edupuganti, Majia Anderson, Robert De La Grecca, Martin R. Gaudinski, Margarita M. Gomez Lorenzo, David Burns, Myron S. Cohen, Lawrence Corey, Kathy Mngadi, Nyaradzo M. Mgodi, for the AMP Study Teams

---

719  **INJECTION NETWORKS AND HIV PREVENTION SERVICES AMONG PEOPLE WHO INJECT DRUGS IN INDIA**
Neia Prata Menezes, Allison M. McFall, Aylur K. Srikrishnan, Canjeevaram K. Vasudevan, Anand Santhanam, Sunil S. Solomon, David C. Celentano, Gregory M. Lucas, Shruti H. Mehta

---

720  **PREVALENCE & DETERMINANTS OF EARLY SEX RESUMPTION POSTCIRCUMCISION (RAKAI, UGANDA)**
Alex Daama, Dorean Nabukalu, Edward N. Kankaka, Doreen Tuhebwe, Absalom Ssettuba, Fred Nalugoda, Tom Lutalo, Joseph Kagaayi, Gertrude F. Nakigozi, Michelle Adler, Lisa Mills, Ronald Gray, Maria Wawer, Godfrey Kigozi

---

721  **RISK FOR REPEAT STI EPISODES AMONG KENYAN ADOLESCENT GIRLS AND YOUNG WOMEN**
Melody Wang, Kenneth Tapia, Lynda M. Oluoch, Murugi Micheni, Stacy Selke, Catherine Kiptinness, Bhavna Chohan, Anna Wald, Kenneth Nigure, Nelly R. Mugo, Alison C. Roxby

---

722  **BACTERIAL VAGINOSIS TRENDS AMONG ADOLESCENTS BEFORE AND AFTER SEXUAL ACTIVITY**
Alison C. Roxby, Bhavna Chohan, Kenneth Tapia, Stacy Selke, Melody Wang, Catherine Kiptinness, Lynda M. Oluoch, Kenneth Nigure, Anna Wald, Nelly R. Mugo

---

723  **HIV PrEP COUNSELING AMONG BLACK YOUTH DIAGNOSED WITH BACTERIAL STI, 2014-2019**
Dovie L. Watson, Pamela A. Shaw, Danielle T. Petsis, Julia Pickel, José A. Bauermeister, Ian Frank, Sarah M. Wood, Robert Gross

---

724  **HIV AND SYPHILIS IN THE DISTRICT OF COLUMBIA**
Kaitlin Liroff, Seble Kassaye, Amanda B. Spence, Princy N. Kumar, Madhuri Natarajan, Rachel Harold, Kerri Dorsey, Rupali K. Doshi, Adam J. Visconti
725 WITHDRAWN

726 DISPARITIES IN FAMILY PLANNING AMONG WOMEN LIVING WITH HIV IN THE SOUTHEASTERN US
Manasa R. Bhatta, Aihua Bian, Jamison Norwood, Bryan Shepherd, Jeffrey Nelson, Imani Ransby, Megan Turner, Timothy Sterling, Jessica L. Castilho

727 THE PREVALENCE AND CLUSTERING OF MENOPAUSAL SYMPTOMS IN WOMEN LIVING WITH HIV
Hajra Okhai, Caroline Sabin, Katharina Haag, Lorraine Sherr, Rageshri Dhairyawan, Richard Gilson, Burns Fiona, Shema Tariq

728 LONG-ACTING COFORMULATED BIODEGRADABLE IMPLANT FOR HIV PREVENTION AND CONTRACEPTION
Linying Li, Archana Krovi, Chasity Norton, Pafio Johnson, Guadalupe Jimenez, Christine Areson, Ariane Van der Strat, Leah Johnson

729 ENSURING HIV SERVICE CONTINUITY DURING THE COVID-19 PANDEMIC IN KAMPALA, UGANDA
Esther M. Nasuuna, Muganzi Alex, Grace Namayanja, Nakade Shamim, Kavuma Paul, Rhoda M. Mwondha, Donna Kabatesi, Nelson Kalema, Kigozi Joana

730 IMPACT OF COVID-19 ON HIV PREVENTION AND CARE INDICATORS IN SAN FRANCISCO, CA
Hyman Scott, Elise S. Mara, Sharon Pipkin, Jen Hecht, Jason Bena, Janessa Broussard, Diane V. Havlir, Susan P. Buchbinder, Ling Hsu

731 IMPACT OF COVID-19 ON PrEP PRESCRIPTIONS IN THE UNITED STATES: A TIME SERIES ANALYSIS
Ya-Lin A. Huang, Weiming Zhu, Athena Kourtis, Irene Hall, Karen W. Hoover

732 IMPACT OF COVID-19 AMONG PEOPLE LIVING WITH HIV IN THE AFRICAN COHORT STUDY (AFRICOS)
Nicole Dear, Allahna Esber, Ajay Parikh, Emma Duff, Michael Iroezindu, Emmanuel Bahemana, Hannah Kibuuka, John Owuoth, Jonah Maswai, Trevor A. Crowell, Christina Polyak, Julie Ake

733 POTENTIAL IMPACT OF COVID-19-RELATED DISRUPTIONS ON HIV IN YAOUNDÉ, CAMEROON
Romain Silhol, Kate M. Mitchell, Sharmistha Mishra, Lily Geidelberg, Anna Bowring, Christina Mukanavire, Sheree Schwartz, Dobromir Dimitrov, Mathieu Maheu-Giroix, Iliassine Mfochive Njindam, Serge C. Billong, Daniel Levitt, Peter Vickerman, Stefan Baral, Marie-Claude Boily

734 VISIT COMPLETION DURING THE TELE MEDICINE TRANSITION IN EARLY MONTHS OF THE PANDEMIC
Walid El-Nahal, Nikki Shen, Catherine Lesko, Jeanne C. Keruly, Kelly Gebo, Bryan Lau, Anthony T. Fojo, Richard Moore, Geetanjali Chander
735  MODELLING THE IMPACT OF COVID-19-RELATED DISRUPTIONS ON HIV IN THE UNITED STATES
Kate M. Mitchell, Dobromir Dimitrov, Romain Silhol, Lily Geidelberg, Mia Moore, Albert Liu, Chris Beyrer, Kenneth H. Mayer, Stefan Baral, Marie-Claude Boily

736  THE IMPACT OF COVID-19 RESTRICTIONS ON HIV SERVICES AMONG KEY POPULATIONS IN NIGERIA
Moses Katbi, Adefisayo Adedoyin, Helina Meri, Kent Klindera, Adeoye Adegbaye, Abdulmalik Abubakar, Amalachukwu Ukaere, Abdulasmad Salihu, Wole Fajemisin, Segun K. Fatoye, Rachel Goldstein

737  COVID-19 PANDEMIC IMPACT ON ACCESS TO HIV SERVICES FOR KEY POPULATIONS IN INDIA
Allison M. McFall, Shrutti H. Mehta, Jon Kawatachi, Sunil S. Solomon, Aylur K. Srikrishnan, David C. Celentano, Gregory M. Lucas

738  HIV TREATMENT/RETENTION IN SUB-SAHARAN AFRICA BEFORE AND DURING THE COVID-19 PANDEMIC
Danielle Fernandez, Catherine Godfrey, Sherri L. Pal, Ikwo Oboho, George K. Siberry, Hammad Ali

739  IMPACT OF COVID-19 ON COMMERCIAL LABORATORY TESTING FOR HIV IN THE UNITED STATES
Kevin P. Delaney, Praveena Jayanthi, Brian Emerson, Weiming Zhu, Marc A. Pitasi, Ya-Lin A. Huang, Kathleen P. Hartnett, Karen W. Hoover

740  PROJECT CoRECT (COOPERATIVE REENGAGEMENT CLINICAL TRIAL): FINAL CONNECTICUT RESULTS
Merceditas Villanueva, Janet Miceli, Constance Carroll, Suzanne Speers, Lisa Nichols, Heidi Jenkins, Frederick Altice

741  IMPACT OF COVID-19 PANDEMIC ON HIV CARE IN BRAZIL
Ana Roberta P. Pascom, Nazle Veras, Rosana Elisa G. Pinho, Isabelo O. Pereira, Lais M. Aquino, Marcelo A. De Freitas, Gerson Fernando M. Pereira

742  HOME SPO2 MONITORING OF PATIENTS WITH COVID-19: THE MATER CVC PROJECT

743  CHANGES IN ACCESS TO CARE FOR WOMEN LIVING WITH HIV DURING THE COVID-19 PANDEMIC
Caitlin Bernard, John M. Humphrey, Julie Thorne, Shukri Hassan, Victor Omodi, Beatrice Jakait, Kara Wools-Kaloustian, Rena Patel, Mercy Maina

744  BARRIERS IMPACTING TELEHEALTH MEDICAL-APPOINTMENT ADHERENCE AMONG PLWHA
Nicole Ennis, Laura Armas, Seyram Butame

745  COVID-19 IMPACT ON THE COST OF INDEX TESTING HIV CASE DETECTION IN 5 INDIAN DISTRICTS

746  SYNDROMIC SURVEILLANCE FOR COVID-19 AND HEALTH CARE ACCESS AMONG ART PATIENTS, MALAWI
Thulani Maphosa, Thoko C. Kalua, Brittney N. Baack, Evelyn Kim, Joram L. Sunguti, Anne Chauma-Mwale, Rhoderick Macheke, Alice N. Maida, Andrew S. Azman, Andrew F. Auld, Suzgo Zimba, Harrid Nkhoma, Rachel Kanyenda, Rose Nyirenda, Godfrey Woelk
747  UPSCALING HIV PREEXPOSURE PROPHYLAXIS IMPLEMENTATION DURING COVID-19 PANDEMIC
Tamirirashe C. Mahwire, Nthabiseng Koloane, Jacqueline Burgess, Ziyanda Makaba, Claire Serrao, Todd Malone, for the Provincial Departments of Health Mpumalanga KwaZulu-Natal South Africa

748  IMPACT OF LOCKDOWN RESTRICTIONS DUE TO COVID-19 PANDEMIC ON HIV CARE IN ITALY
Andrea Antoni, Alessandro Tavelli, Cristina Mussini, Andrea Gori, Franco Maggiolo, Antonella Castagna, Francesca Ceccherini-Silberstein, Sergio Lo Caputo, Massimo Puoti, Carmela Pinnetti, Valeria Calvino, Enrico Girardi, Carlo F. Perno, Antonella D’Arminio Monforte, Alessandro Cozzi-Lepri

749  INTERVENTIONS TO IMPROVE HEADCOUNT DURING COVID-19 LOCKDOWN IN SOUTH AFRICA
Dhirisha Naidoo, Nthabiseng Koloane, Claire Serrao, Taryn Arthur, Nireshni Naidoo, Nonhlhanhla Sokhulu, Oyebola Oyebanji, Gugu Xaba, Ntombifikile Thekiso, Calvin Moyana, Todd Malone, for the Department of Health

750  COMPARISON OF COMMUNITY TESTING OUTCOMES OVER SOUTH AFRICAN COVID-19 LOCKDOWN LEVELS
Jacqueline Burgess, Stephanie Berrada, Hilton Julius, Claire Serrao, Dhirisha Naidoo, Nthabiseng Koloane, Shuabe Rajap, Todd Malone, for the Mpumalanga and KwaZulu-Natal Provincial Research Group

751  A SURVEY-BASED PILOT STUDY TO ASSESS THE EFFECTS OF COVID-19 ISOLATION ON OLDER PLWH
Lauren Smith, Hannah Walsh, Jennifer Chiarella, Julian Weiss, Serena S. Spudich, Shelli F. Farhadian

752  HIV AMBULATORY CARE DURING COVID-19 PANDEMIC IN US: VISITS AND VIRAL LOAD TESTING
Ellen M. Tedaldi, Qingjiang Hou, Carl Armon, Frank Palella, Jun Li, Gina Simoncini, Jack Fuhrer, Cynthia Mayer, Kimberly J. Carlson, Kalliope Chagaris, Kate Buchacz

753  HITS: A COMMUNITY-RANDOMIZED TRIAL TO INCREASE LINKAGE TO CARE IN RURAL SOUTH AFRICA
Hae-Young Kim, Thulile Mathenjwa, Maryam Shahmanesh, Janet Seeley, Phillippa Matthews, Sally Wyke, Nuala McGrath, Oluwafemi Adeagbo, Maxime Inghels, Handurugamage M. Yapa, Thembelihle Zuma, Adrian Dobra, Ann Blanford, Till Bärnighausen, Frank Tanser

754  WOMEN ARE LESS LIKELY TO RECEIVE DOLUTEGRAVIR-BASED FIRST-LINE ART IN SOUTH AFRICA
Jienchi Dorward, Yukteshwar Sookrally, Kelly Gate, Thokozani Khubone, Lara Lewis, Christopher C. Butler, Hope Ngobese, Nigel Garrett

755  POPULATION IMPACT OF COMMUNITY-BASED ART IN SOUTH AFRICA: A MODELING ANALYSIS
Cara Bayer, Maitreyi Sahu, Allen Roberts, Roger Ying, Darcy Rao, Heidi Van Rooyen, Alastair Van Heerden, Thulani Ngubane, Philip Joseph, Ruanne Barnabas

756  COACH MPILO: A PEER-SUPPORT INTERVENTION TO IMPROVE MEN’S ART LINKAGE & RETENTION
Shawn T. Malone, Mbuzeleni Hlongwa, Kristen Little, Nina Hasen, Melissa Levy, Lucy Clutton, Sunny Sharma, Paris Pitsillides, Chuka Onaga
757 COVERAGE OF VIRAL LOAD MONITORING DURING PREGNANCY IN SOUTH AFRICA, NATIONAL SURVEY
Selamawit A. Woldesenbet, Tendesayi Kufa-Chakezha, Samuel Manda, Adrian Puren

758 PREDICTORS OF VIRAL LOAD NONSUPPRESSION AT 6 MONTHS OF ART: SHARE STUDY 2015-2017
Samuel Sendagala, Rose B. Nakityo, Grace Namayanja, Marjorie S. Najjengo, Arthur B. Sekiziyivu, Elizabeth A. Bancroft, Andrew Kambugu

759 COVID-19 SEVERITY AND MORTALITY AMONG HOSPITALIZED PATIENTS IN ZAMBIA
Peter Minchella, Davies Kampamba, Megumi Itoh, Duncan Chanda, Jonas Hines, Sombo Fwoloshi, Mary A. Boyd, Kotev Nkozi, Lameck Chirwa, Aggrey Mweemba, Suilanji Sivile, Khozya D. Zymbo, Simon Agolory, Lloyd Mulenga

760 HIV CARE OUTCOMES AMONG ASIANS WITH DIAGNOSED HIV INFECTION: UNITED STATES, 2018
Sonia Singh, Xueyuan Dong, William Adih, Nicole Crepaz

761 RETENTION AND VIRAL LOAD SUPPRESSION AMONG ADULTS LIVING WITH HIV ON ART IN LESOTHO

762 IMPACT OF IMMEDIATE ART FOR PATIENTS WITH KNOWN HIV EXPERIENCING A GAP IN HIV CARE
Catherine Pearson, Katerina Christopoulos, Pierre-Cedric Crouch, Noelle LeTourneau, Manami Diaz Tsuzuki, Patricia Defechereux, Jason Bena, Kelvin Moore, Colton Schmitto, Elise S. Mara, Ling Hsu, Susan Scheer, Robert Grant, Janessa Broussard

763 DIFFERENCES IN SEXUAL BEHAVIORS BEFORE AND AFTER UNIVERSAL TEST AND TREAT IN UGANDA
Brendah Nansereko, Fred Abogadu, Alex Daama, Fred Makumbi, Edward N. Kankaka, Joseph Kagaayi, Gertrude F. Nakigozi, David Sserwadda, Nelson Ssewankambo, Michelle Adler, Tom Lutalo, M. Kate Grabowski, Godfrey Kigozi

764 APPLYING MACHINE LEARNING TO ROUTINE HIV DATA: PREDICTING MISSED CLINIC VISITS
Mhairi Maskew, Lucien De Voux, Kieran Sharpey-Schafer, Thomas Crompton, Jacqui Miot, Sydney Rosen

765 VALIDATING A RETENTION-IN-CARE METRIC TO INFORM EFFORTS FOR PREVENTING HIV DEATH
David B. Hanna, Rachael Lazar, Lindsay Zielinski, perminder Khosa, Mindy S. Ginsberg, Denis Nash, Kathryn Anastos, Uriel R. Felsen, Sarah L. Braunstein

Science Spotlights™-Y3 DIFFERENTIATED SERVICE DELIVERY

766 ECONOMIC EVALUATION OF DIFFERENTIATED SERVICE DELIVERY OF HIV TREATMENT IN ZIMBABWE
Brooke Nichols, Mariet Benade, Salome Kuchukhidze, Kudakwashe Takarinda, Nicoletta Mahbena-Ngorima, Ashraf Grimwood, Sydney Rosen, Geoffrey Fatti
767  PATIENT COSTS IN A DIFFERENTIATED SERVICE DELIVERY INTERVENTION IN NORTHWEST TANZANIA

Nwanneka Okere, Lucia Corball, Sabine Hermans, Denise Naniche, Tobias Rinke de Wit, Gabriela Gomez

768  CHANGES IN HIV DIFFERENTIATED CARE UTILIZATION DURING THE COVID-19 PANDEMIC IN ZAMBIA

Youngji Jo, Sydney Rosen, Amy Huber, Muya Mwansa, Mpande Mwenechanya, Priscilla Lumano-Mulenga, Bevis Phiri, Hilda Shakwelele, Prudence Haimbe, Brooke Nichols

769  PREDICTORS OF CHOOSING COMMUNITY-BASED ANTIRETROVIRAL THERAPY PICK-UP IN SOUTH AFRICA

Ingrid V. Bassett, Joyce Yan, Sabina Govere, Anele R. Khumalo, Nompuumelelo Ngobese, Zinhle M. Shazi, Mpilonhle Nzuza, Bridget A. Bunda, Nafisa J. Wara, Ashley Stickwisch, Danielle Zions, Hilary Thulare, Laura M. Bogart, Robert A. Parker

770  C2C: DIFFERENTIATED CARE INCREASES HIV CARE AFTER PRISON RELEASE IN SOUTH AFRICA

Christopher Hoffmann, Jill Owczarzak, Stefan Baral, Colleen Hanrahan, Tonderai Mabuto

Science Spotlights™-Y4  PREEXPOSURE PROPHYLAXIS

771  TRANSMISSION IMPACT OF PrEP UPTAKE IN URBAN CENTERS IN BRAZIL: A MODELING STUDY

Paula M. Luz, Vijeta Deshpande, Pooyan Kazemian, Justine Scott, Fatma Shebl, Cristina Pimenta, Gerson Fernando M. Pereira, Claudio Struchiner, Beatriz Grinsztejn, Valdilea Veloso, Kenneth Freedberg, David Paltiel

772  MODELING PrEP IMPACT AND COST-EFFECTIVENESS BASED ON THE ImPrEP DEMONSTRATION PROJECT

Annick Borquez, Keliaka A. Konda, Oliver A. Elorreaga, Ximena Gutierrez, Juan V. Guanira, Sonia Flores, Gino M. Calvo, Carlos F. Caceres

773  HIV RISK-PREDICTION MODEL USING ELECTRONIC HEALTH RECORD DATA IN A SOUTHERN COHORT

Charles Burns, Leland Pung, Daniel Witt, Michael Gao, Mark Sendak, Douglas Krakower, Julia Marcus, Nwora Lance Okeke, Meredith E. Clement

Science Spotlights™-YS  KEY POPULATIONS

774  INVESTMENT IN A KEY POPULATION HIV PROGRAM IN NIGERIA: A COST-EFFECTIVENESS ANALYSIS


775  PROJECTED IMPACT OF TARGETED PrEP AND VIRAL SUPPRESSION AMONG MSM IN 4 US CITIES

Melissa Schnure, Parastu Kasaie, David Dowdy, Maunank Shah, Anthony T. Fojo

776  HIV CASCADE OF CARE AMONG MEN WHO HAVE SEX WITH MEN IN CANADA’S 3 LARGEST CITIES

David Moore, Zishan Cui, Shayna Skakoon-Sparling, Jordan Sang, Justin Barath, Lu Wang, Nathan Lachowsky, Joseph Cox, Gilles Lambert, Syed W. Noor, Daniel Grace, Jody Jollimore, Alan Lal, Trevor Hart
SCIENCE SPOTLIGHT™ SESSIONS, BY CATEGORY

A. Virology of HIV or SARS-CoV-2
   A1 Virology of SARS-CoV-2
   A2 Virology of HIV

B. Pathogenesis of HIV or SARS-CoV-2: Human Studies and Animal Models
   B1 Animal models for HIV infection
   B2 Host response to SARS-CoV-2
   B3 Outcomes of SARS-CoV-2 infection
   B4 HIV and the gut microbiome
   B5 Natural control of HIV infection
   B6 Host effects on HIV infection
   B7 Non-T-cell effects of HIV infection
   B8 HIV and T cells
   B9 HIV-cell interaction in vivo

C. HIV-Associated Tumor Viruses
   C1,K1 Cancer: anal cancer and HPV

D. Host Immune Responses, Vaccines, and Immunotherapies: HIV or SARS-CoV-2
   D1 Evolution of antibody responses to SARS-CoV-2 infection
   D2 Cellular immune responses to SARS-CoV-2
   D3 Novel vaccine concepts
   D4 Neutralizing antibodies during infection
   D5 The importance of tissue residency
   D6 Checking out checkpoints

E. HIV reservoirs, latency, and curative strategies, including therapeutic vaccines and gene therapy
   E1 Dynamics of the HIV reservoir
   E2 Mechanisms of HIV latency
   E3 Interventions to target the viral reservoir and delay viral rebound
   E4 HIV reservoirs in cells and tissues
   E5 Controllers and posttreatment controllers
   E6 Assays to measure and characterize HIV persistence

F. Neuropathogenesis and neurologic complications of HIV, SARS-CoV-2, or both in adults
   F1 Neuromaging and associated biomarkers
   F2 Biomarkers and neurocognitive status
   F3 Comorbidities and neurocognitive outcomes
   F4 Treatment effects on neurologic outcomes
   F5 CNS reservoirs, escape, and consequences
   F6 CNS and peripheral nervous system: models and markers of pathogenesis

G. Clinical Pharmacology in Adults
   G1 Advances in adherence testing
   G2 Effects of drug disposition in the CSF, lymph nodes, lung, and genital tract
   G3 Drug-drug interactions: from predictions to management
   G4 New approaches to optimize drug dosing: long acting and beyond
H. ANTIVIRAL THERAPY: PRECLINICAL DATA, RANDOMIZED TRIALS, EFFICACY, AND EFFECTIVENESS STUDIES IN HIV OR SARS-CoV-2 IN ADULTS

H1 NOVEL TREATMENTS FOR SARS-CoV-2: STARTING AT THE BENCH
H2 SARS-CoV-2 TREATMENT: CLINICAL INTERVENTIONS
H3 ANTIRETROVIRAL THERAPY IN THE DEVELOPING WORLD
H4 LONG-ACTING THERAPY: THE TIME HAS COME
H5 ANTIRETROVIRAL THERAPY: INSIGHTS FROM OBSERVATIONAL STUDIES
H6 CLINICAL TRIALS OF ANTIRETROVIRAL THERAPY: TREATMENT NAIVE AND SWITCH

I. RESISTANCE OF HIV OR SARS-CoV-2 TO SMALL MOLECULES AND ANTIBODIES IN ADULTS

I1 NEW DRUGS, OLD DRUGS, AND NEW RESISTANCE MECHANISMS
I2 NEW DEVELOPMENTS IN TRANSMITTED AND ACQUIRED DRUG RESISTANCE
I3 NEW RESISTANCE TECHNOLOGIES: ADVANTAGES AND LIMITATIONS

J. HEPATITIS VIRUSES AND LIVER COMPLICATIONS IN ADULTS

J1 HCV: THERAPEUTICS AND PROGRESS TOWARD ELIMINATION
J2 HEPATITIS B: NO LONGER PLAN B
J3 MECHANISMS OF HEPATIC INJURY
J4 HEPATITIS A
J5 HEPATITIS AND LIVER TRANSPLANTATION

K. AIDS-RELATED MALIGNANCIES

K1 CANCER: ANAL CANCER AND HPV
K2 CANCER: KAPOSI SARCOMA & KAPOSI SARCOMA-ASSOCIATED HERPESVIRUS, CERVICAL, LUNG, BREAST, LYMPHOMA, AND HEAD & NECK
K3 CANCER: RISK, EPIDEMIOLOGY, AND CARE

L. CARDIOVASCULAR COMPLICATIONS OF HIV INFECTION AND ANTIRETROVIRAL THERAPY

L1 BIOMARKERS OF INFLAMMATION, ART, AND ATHEROSCLEROSIS OR CARDIOVASCULAR DISEASE
L2 GLOBAL STUDIES OF CARDIOVASCULAR DISEASE IN HIV
L3 NOVEL INSIGHTS IN HIV AND CARDIOVASCULAR DISEASE

M. OTHER COMPLICATIONS OF HIV INFECTION AND ANTIRETROVIRAL THERAPY IN ADULTS

M1 WEIGHT GAIN DURING ART
M2 TYPE 2 DIABETES DURING ART
M3 EPIDEMIOLOGY OF COMORBIDITIES
M4 INFLAMMATION AND COMORBIDITIES DURING ART
M5 FRAILTY AND FUNCTIONAL STATUS
M6 RENAL AND BONE DISEASES

N. CLINICAL COMPLICATIONS OF COVID-19 DISEASE IN ADULTS

N1 WHEN VIRUSES COLLIDE: HIV AND SARS-CoV-2
N2 SARS-CoV-2: MORE THAN A RESPIRATORY VIRUS

O. TUBERCULOSIS AND OTHER OPPORTUNISTIC INFECTIONS, INCLUDING THE IMPACT OF HIV OR SARS-CoV-2 IN ADULTS

O1 TUBERCULOSIS SCREENING AND DETECTION
O2 TUBERCULOSIS PREVENTION AND TREATMENT
O3 CRYPTOCOCCAL MENINGITIS DETECTION AND OUTCOMES
P. PEDIATRICS AND ADOLESCENTS
P1 MATERNAL VIRAL LOAD AND ART ADHERENCE: INSIGHTS AND INTERVENTIONS
P2 CHRONIC COMORBIDITIES IN PREGNANT WOMEN WITH HIV
P3 UNDERSTANDING AND IMPROVING PREGNANCY OUTCOMES
P4 EVOLVING INSIGHTS INTO PMTCT SERVICES

Q. HIV, SARS-CoV-2, OR BOTH IN INFANTS, CHILDREN, AND ADOLESCENTS
Q1 HEALTH OUTCOMES OF HIV-EXPOSED UNINFECTED CHILDREN AND YOUTH
Q2 CHARACTERIZING THE VIRAL RESERVOIR AND IMMUNE RESPONSE IN PEDIATRIC HIV INFECTION
Q3 ARVs AND bNAbS FOR CHILDREN AND ADOLESCENTS
Q4 COMPLICATIONS AND MORTALITY IN CHILDREN AND YOUTH
Q5 COVID-19 IN CHILDREN

R. EPIDEMIOLOGY OF HIV AND COVID-19 IN ADULTS
R1 COVID-19 EPIDEMIOLOGY
R2 HIV EPIDEMIOLOGY
R3 GEOGRAPHIC AND PHYLOGENETIC TRANSMISSION DYNAMICS
R4 DISPARITIES AND STRUCTURAL FACTORS AFFECTING HIV CARE OUTCOMES
R5 STIGMA, MENTAL HEALTH, AND SUBSTANCE USE: IMPACT ON OUTCOMES
R6 MODELING HIV OUTCOMES

T. HIV AND COVID-19 TESTING IN ADULTS: NEW DIAGNOSTICS, POPULATION STUDIES, AND SCALE-UP
T1 RAPID HIV TESTING AND SELF TESTING
T2 RECENCY ASSAYS AND INCIDENCE ESTIMATION
T3 ROUTINE HIV TESTING
T4 SARS-CoV-2 TESTING AND EFFECT OF COVID-19 ON HIV SCREENING

V. HIV PREVENTION AND COVID-19 INTERVENTIONS IN ADULTS
V1 LESSONS AND CHALLENGES IN ORAL PrEP IMPLEMENTATION
V2 PrEP ADHERENCE AND CONTROL OF STIs
V3 NEW PrEP AGENTS AND FORMULATIONS
V4 HIV PREVENTION: CIRCUMCISION AND IDUs

X. CONTRACEPTION, SEXUALLY TRANSMITTED INFECTIONS, AND REPRODUCTIVE HEALTH IN ADULTS
X1 REPRODUCTIVE HEALTH AMONG ADOLESCENTS AT RISK OF HIV
X2 EPIDEMIOLOGY OF SYphilIS AND HIV COINFECTION: THE MORE THINGS CHANGE...
X3 ISSUES IN HIV AND WOMEN’S REPRODUCTIVE HEALTH

Y. IMPLEMENTATION AND SCALE-UP OF PREVENTION AND TREATMENT FOR HIV AND IMPACT OF COVID-19 ON HIV-RELATED PROGRAMS
Y1 EFFECT OF COVID-19 ON HIV SERVICES
Y2 THE HIV CARE CASCADE
Y3 DIFFERENTIATED SERVICE DELIVERY
Y4 PREEXPOSURE PROPHYLAXIS
Y5 KEY POPULATIONS
CROI FOUNDATION

The CROI Foundation is a 501(c)(3) not-for-profit professional organization that operates exclusively for the charitable and educational purpose of organizing, promoting, and presenting the annual Conference on Retroviruses and Opportunistic Infections.

Roles and Responsibilities of the CROI Foundation Volunteer Board of Directors

- Works closely with the CROI Program Committee (CROI PC) and the CROI Organizer to accomplish the mission of CROI
- Approves nominations for members of the CROI PC and for the CROI PC Chair and Vice Chairs
- Ensures that the CROI PC is responsible for the scientific program content of CROI
- Enters into and oversees the partner agreement with the CROI Organizer
- Has the sole and absolute discretion to veto any policies, procedures, or actions taken or proposed that would pose a substantial risk of preventing the Foundation at any time from qualifying or continuing to qualify as a 501(c)(3) organization or that might cause the loss of such qualification
- Oversees the long-term financial and administrative integrity of CROI

CROI Foundation Board Members

To view the current members, visit the CROI Foundation webpage.

IAS—USA

The International Antiviral (formerly AIDS) Society—USA (IAS—USA) serves as the Conference Organizer for the logistical planning and organization for CROI in partnership with the CROI Foundation and Program Committee. The mission of the IAS—USA is to improve the prevention, treatment, care, and quality of life for people with or at risk of HIV or other viral infections and their associated health conditions through high-quality, relevant, balanced, and needs-oriented education and information for practitioners and scientists who are actively involved in medical care and research.

To access primary educational and informational programs sponsored by the IAS—USA, please visit the IAS—USA website.

- Live CME courses and webinars
- On-demand webcasts of CME courses and webinars available for CME
- Live and on-demand COVID-19 dialogues
- Topics in Antiviral Medicine™, including the annual CROI review
- Practice guidelines
CROI 2021 PROGRAM COMMITTEE

Scientific Program Committee
The Scientific Program Committee (PC) is a team of experts in their given fields who volunteer to organize the scientific program for CROI. Members are selected based on their area of scientific expertise and their commitment to the mission of the conference. Initial terms are up to 3 years; subsequent terms are based on previous participation and interest level. Members are nominated by the PC and approved by the CROI Foundation Board of Directors. The PC members are responsible for identifying topics and speakers that will ensure innovative programming; strategic planning; abstract review and program development; and organizing, conducting, or convening workshops, symposia, and special sessions.

To view the current members, visit the Scientific Program Committee webpage.

Community Liaison Subcommittee
The Community Liaison Subcommittee is a group of community educators and advocates who provide feedback to the PC about the content and structure of the scientific program in general and specifically related to scientific topics of interest to the HIV/AIDS-affected community.

To view the current members, visit the CROI Community Liaison webpage.

Former Members
The CROI Foundation wishes to thank former members who rotated off the Program Committee in 2021. To view past members, visit the Former CROI Program Committee Members webpage.
EXTERNAL REVIEWERS

We gratefully acknowledge the contributions of those who assisted the scientific program committee by reviewing abstract submissions for CROI 2021. To view current external reviewers, visit the CROI External Reviewers webpage.

SCHOLARSHIP AWARDEES

CROI is committed to supporting new and early-career investigators working in HIV and SARS-CoV-2 research to help them further their education and to network with other researchers in the fields. New Investigator Scholarship awardees are presenting authors on accepted abstracts and have been highly recommended by their mentors. In addition, CROI offers scholarships to international investigators and community educators working in resource-limited countries who would otherwise be unable to attend CROI. Through their applications and letters of recommendation, these awardees have shown that they will greatly benefit from the opportunity to participate in CROI.

For more information, visit the CROI Scholarships webpage.

To view CROI 2021 New Investigator, International Investigator, and Community Educator Scholarship recipients, visit the Scholarship Recipient webpage. Scholarship recipients are also noted on the Virtual Conference Platform.

AFFILIATED OR PROXIMATE ACTIVITIES

For information, visit the Affiliated or Proximate Activities webpage.
EMBARGO POLICIES AND SOCIAL MEDIA

All research presented at CROI 2021 is embargoed until the conclusion of the study's presentation at the conference. CROI Conference embargo policies are designed to ensure that the entire scientific community receives full and accurate information about research presented at the conference simultaneously. Embargo violations can lead to misinformation or incomplete information about research presented at the conference. CROI requests that all conference participants familiarize themselves with these embargo policies, which will be strictly enforced.

- For Oral Abstract presentations, if a study is presented from 2:15 PM to 2:30 PM, as part of a session that begins at 2:00 PM and ends at 3:00 PM, the embargo on that study lifts at 2:30 PM
- Embargoes on Science Spotlight™ presentations lift when the Science Spotlights™ become available to participants, on Saturday, March 6, 2021, at 12:01 AM Eastern Time
- If a study to be presented at CROI 2021 is included in an official CROI press conference that takes place before the scheduled presentation of the study, the embargo on that study lifts at the conclusion of the press conference panel in which the study is featured

No public dissemination of research information from the conference is permitted prior to the lifting of the conference embargo. CROI embargo policies apply to any public dissemination of research information presented at the conference, including electronic publications (eg, blogs) or social media (eg, Twitter, Instagram, Facebook). Individuals or organizations that violate the conference embargo policy may have their conference credentials revoked and may forfeit the opportunity to participate in future conferences.

For additional information regarding the CROI embargo policies, visit the Embargo and Press Release Policies webpage.

CONFERENCE ETIQUETTE

In consideration of the work of the presenters at CROI and the CROI copyright policy, participants may not take images of presentations (eg, Oral Abstract, Science Spotlights™, etc), record any parts of talks, or post data without the presenter's consent.

For information regarding additional CROI policies, visit the Policies webpage.
Abstracts that were submitted in categories designated with the letters S, U, and W were integrated into other categories.

The following colors are used throughout the CROI Program Information Guide to group Science Spotlight™ presentations in their assigned track:

- Basic Science Track = Purple
- Clinical Track = Red
- Epidemiology/Public Health Track = Blue

ABSTRACT PROCESS

Scientific Categories

Basic Science

A. Virology of HIV or SARS-CoV-2
B. Pathogenesis of HIV or SARS-CoV-2: Human Studies and Animal Models
C. HIV-Associated Tumor Viruses
D. Host Immune Responses, Vaccines, and Immunotherapies: HIV or SARS-CoV-2
E. HIV Reservoirs, Latency, and Curative Strategies, Including Therapeutic Vaccines and Gene Therapy
F. Neuropathogenesis and Neurologic Complications of HIV, SARS-CoV-2, or Both in Adults

Clinical

G. Clinical Pharmacology in Adults
H. Therapy: Preclinical Data, Randomized Trials, Efficacy, and Effectiveness Studies in HIV or SARS-CoV-2 in Adults
I. Resistance of HIV or SARS-CoV-2 to Small Molecules and Antibodies in Adults
J. Hepatitis Viruses and Liver Complications in Adults
K. AIDS-Related Malignancies
L. Cardiovascular Complications of HIV Infection and Antiretroviral Therapy
M. Other Complications of HIV Infection and Antiretroviral Therapy in Adults
N. Clinical Complications of COVID-19 Disease in Adults
O. Tuberculosis and Other Opportunistic Infections, Including the Impact of HIV or SARS-CoV-2 in Adults
P. Maternal and Fetal HIV or SARS-CoV-2: Transmission, Prevention, Treatment, Pregnancy, and Postpartum Maternal Health
Q. HIV, SARS-CoV-2, or Both in Infants, Children, and Adolescents

Epidemiology/Public Health

R. Epidemiology of HIV and COVID-19 in Adults
V. HIV Prevention and COVID-19 Interventions in Adults
X. Contraception, Sexually Transmitted Infections, and Reproductive Health in Adults
Y. Implementation and Scale-Up of Prevention and Treatment for HIV and Impact of COVID-19 on HIV-Related Programs
Abstract Content
Author names, institutions, titles, and abstracts in the CROI Program Information Guide, Abstract eBook, Virtual Platform, and other materials are presented largely as provided by the submitting author. The submitting author is responsible for ensuring that all coauthors have reviewed and approved the abstract before submission and for providing the complete and accurate contact information for all authors, including email addresses.

Presenter Responsibilities
Visit the Invited Presenter, Oral Abstract Presenter, and Science Spotlight Presenter webpages for information regarding presenter responsibilities.

Abstract Review Process
For information, visit the Abstract Guidelines and Submission webpage.

Statistics for Abstracts
General Abstracts Submitted ................................................. 1050
General Abstracts Accepted .................................................. 632
   General Oral Abstracts Accepted ........................................ 92
   General Science Spotlight™ Abstracts Accepted ................. 540
Late-Breaking Abstracts Submitted ....................................... 103
Late-Breaking Abstracts Accepted ......................................... 66
   Late-Breaking Oral Abstracts Accepted ............................... 17
   Late-Breaking Science Spotlight™ Abstracts Accepted ........ 49
Total Abstracts Submitted ..................................................... 1153
Total Abstracts Accepted ..................................................... 698

Abstracts Related to SARS-CoV-2 or Special Study Populations
SARS-CoV-2 ........................................................................ 161
Adolescents ........................................................................ 32
Men Who Have Sex With Men (MSM) ................................. 46
People Who Inject Drugs (PWID) ........................................ 13
Transgender Men or Women ............................................... 7
Women ............................................................................. 82

Authors have noted specific populations as the focus of their study, if applicable. Indexes that list abstracts that relate to specific populations are on the CROI Virtual Platform and in the Abstract eBook on the CROI website. These indexes are developed for participants with an interest in these areas.
INDEX OF STUDIES RELATED TO WOMEN

The following index lists abstracts that the authors have noted women or women’s issues as the focus of the study. This index was developed for attendees with an interest in these issues. We encourage you to refer to the Virtual Program for other presentations that may address this subject.

SUNDAY, MARCH 7, 2021

91  PK OF DOSE-ADJUSTED EMERGENCY CONTRACEPTION WITH EFV-BASED ART IN ACTG 5375
93  TENOFOVIR DIPHOSPHATE TO PREDICT FUTURE VIRAEMIA IN POSTPARTUM WOMEN LIVING WITH HIV
98  SEX MODIFIES THE ASSOCIATION BETWEEN INFLAMMATION AND VASCULAR EVENTS IN TREATED HIV
109 LOWER UPTAKE OF Dolutegravir AMONG WOMEN OF REPRODUCTIVE POTENTIAL VS MEN—KENYA
140 SEX/GENDER DIFFERENCES IN TESTING, PRESENTATION, AND OUTCOMES OF SARS-CoV-2 INFECTION
147 PHASE 1 PK, SAFETY, AND ACCEPTABILITY STUDY OF 3-MONTH Dapivirine Vaginal RINGS
149 IMPACT OF COMMON SIDE EFFECTS ON PrEP PERSISTENCE DURING PREGNANCY IN SOUTH AFRICA
152 HSV-2 ACQUISITION IN A RANDOMIZED TRIAL OF CONTRACEPTIVE METHODS AMONG AFRICAN WOMEN
158 TYPE I INTERFERON-ASSOCIATED GENE EXPRESSION PREDICTS TIME TO VIRAL REBOUND ON T1
168 VAGINAL pH PREDICTS CERVICAL INTRAEPITHELIAL NEOPLASIA-2 REGRESSION IN HIV+ WOMEN
171 COVID-19 INFECTION IN HIGH-RISK SOUTH AFRICAN PREGNANCIES WITH AND WITHOUT HIV
175 DoIPHIN2 FINAL RESULTS Dolutegravir VS Efavirenz in Late Pregnancy to 72w Postpartum
176 ANTEPARTUM WEIGHT GAIN AND ADVERSE PREGNANCY OUTCOMES IN IMPAACT 2010
177 SAFETY/EFFICACY OF DTG VS EFV, TDF VS TAF IN PREGNANCY/POSTPARTUM: IMPAACT 2010 TRIAL
178 ADVERSE PREGNANCY OUTCOMES AMONG HIV-INFECTED WOMEN EXPOSED TO ISONIAZID IN BRIEF-TB
230 RESTRICTION OF HIV-1 INFECTION IN SICKLE CELL TRAIT
247 T-CELL IMMUNE DYSREGULATION AND MORTALITY IN WOMEN WITH HIV
248 IMPACT OF REPRODUCTIVE AGING ON IMMUNE FUNCTION IN CISGENDER MEN AND WOMEN WITH HIV
278 CD8+ RESIDENT MEMORY T CELLS CONTROL THE HIV RESERVOIR IN THE CERVICAL MUCOSA
288 IMPACT OF REPRODUCTIVE AGING ON HIV PERSISTENCE IN CISGENDER MEN AND WOMEN WITH HIV
289 SEX DIFFERENTIAL EXPRESSION OF IL-7 AND MARKERS OF HOMEOSTATIC PROLIFERATION
321 SEX-SPECIFIC ASSOCIATIONS BETWEEN CSF MARKERS AND COGNITIVE FUNCTION IN PWH IN UGANDA
322 CIRCULATING INTERMEDIATE MONOCYTES: A COGNITIVE BIOMARKER IN HIV-INFECTED WOMEN
350 PHENOTYPIC CHANGE OF MONOCYTES INDUCED BY PLASMA EXOSOMES FROM HIV(+) WOMEN WITH HAND
362 DORAVIRINE CONCENTRATIONS AND HIV-1 RNA SUPPRESSION IN MALE AND FEMALE GENITAL FLUIDS
368 PHARMACOKINETICS OF 2 CONTRACEPTIVE IMPLANTS AMONG WOMEN ON RILPIVIRINE-BASED ART
418 MISSING DATA, MISSING DIVERSITY: PARTICIPANT DEMOGRAPHICS IN INDUSTRY STUDIES 2010-20
473 ANAL HPV CONCORDANCE AND PERSISTENCE: ROLE IN ANAL TUMORS IN WOMEN LIVING WITH HIV
474 MULTIPLE HIGH-RISK AND NONVACCINE HPV TYPES IN HIV+ UGANDAN WOMEN ON LONG-TERM ART
476 HPV GENOTYPE AND FAILURE AFTER TREATMENT OF CERVICAL PRECANCER
477 CERVICAL CANCER PREVENTION DURING COVID-19 PANDEMIC: THE CRS EpiC3-90 PROJECT, ZAMBIA
479 GYNAECOLOGICAL AND BREAST CANCERS IN WOMEN LIVING WITH HIV IN SOUTH AFRICA
496 FACTORS ASSOCIATED WITH SYSTEMIC IMMUNE ACTIVATION IN A GLOBAL HIV COHORT
497 SEX MODIFIES THE ASSOCIATION BETWEEN HIV AND CORONARY ARTERY DISEASE IN UGANDA
503 WEIGHT GAIN AFTER SWITCHING DIFFERENT INTEGRASE STRAND TRANSFER INHIBITORS (InSTIs)
512 METABOLIC SIGNATURES DIFFERENTIATE WOMEN WHO GAIN WEIGHT WITH INTEGRASE INHIBITORS
515 INTEGRASE INHIBITORS TARGET MITOCHONDRIA IN BROWN ADIPOCYTES DISRUPTING THERMOGENESIS
520 SEX DIFFERENCES IN DIABETES PREVALENCE AMONG PERSONS WITH HIV IN THE UNITED STATES
524 CONVERGENCE OF INFECTIOUS AND NONCOMMUNICABLE DISEASES IN RURAL SOUTH AFRICA
526 HIV DIFFERENTIALLY IMPACTS AGE-RELATED COMORBIDITY BURDEN AMONG US WOMEN AND MEN
539 BEYOND PAIN: PRESCRIPTION OPIOID USE IN THE WOMEN’S INTERAGENCY HIV STUDY
566 RCT OF 2-WAY VS 1-WAY SMS MESSAGING TO IMPROVE EFFICACY OF PMTCT-ART IN KENYA
567 IMPACT OF MODIFIED STANDARD-OF-CARE FOR VIROLOGIC FAILURE IN ART-EXPERIENCED WOMEN
568 MATERNAL VL TESTING IN BREASTFEEDING FOR TARGETED INFANT HIV TESTING: A SIMULATION
569 ANTIRETROVIRAL THERAPY ADHERENCE DURING & POST BREASTFEEDING USING TFV LEVELS IN HAIR
570 NRTI-SPARING STRATEGY TO PREVENT PERINATAL HIV TRANSMISSION, ANRS 168 MONOGEST TRIAL
571 MATERNAL WEIGHT AND ADVERSE PREGNANCY OUTCOMES AMONG WOMEN ON ART AT CONCEPTION
572 PREDICTED LONG-TERM ADVERSE BIRTH AND CHILD HEALTH OUTCOMES IN THE ADVANCE TRIAL
573 ANTIRETROVIRAL THERAPY CLASS AND GESTATIONAL WEIGHT GAIN: RESULTS FROM PHACS SMARTT
574 CARDIOMETABOLIC HEALTH IN HIV+ AND HIV- PREGNANT SOUTH AFRICAN WOMEN
575 TIMING OF ART INITIATION IS ASSOCIATED WITH HYPERTENSIVE DISORDERS OF PREGNANCY
576 THE RISK OF GESTATIONAL HYPERTENSION WITH USE OF DOLUTEGRAVIR AT CONCEPTION
577 TRAJECTORIES OF PERINATAL DEPRESSION SYMPTOMS IN KENYAN WOMEN LIVING WITH HIV
578 ANTENATAL PROGESTERONE PROTECTS AGAINST FETAL GROWTH RESTRICTION IN WOMEN WITH HIV
579 VAGINAL MICROBIOME AND INFLAMMATION PREDICT PRETERM BIRTH IN ZAMBIAN WOMEN WITH HIV
580 PREGNANCY RATES & CLINICAL OUTCOME COMPARISONS AMONG WOMEN LIVING WITH HIV: HPTN 052
581 INCREASED C-SECTIONS AND PRETERM BIRTHS IN SARS-CoV-2 INFECTION DURING PREGNANCY
582 PREGNANCY OUTCOMES OF WOMEN POSITIVE FOR SARS-CoV-2 COMPARED TO WOMEN TESTED NEGATIVE
583 COMPROMISED SARS-CoV-2 NEUTRALIZING ANTIBODY RESPONSE IN CORD BLOOD VERSUS MOTHERS
584 THE ANTIRETROVIRAL PREGNANCY REGISTRY: 30 YEARS OF MONITORING FOR CONGENITAL ANOMALIES
585 NATIONAL EVALUATION OF MALAWI'S PMTCT PROGRAM: 24-MONTH HIV-EXPOSED INFANT OUTCOMES
586 PREVENTING VERTICAL HIV TRANSMISSION IN THE UK: SUCCESSES AND EMERGING CHALLENGES
588 TRENDS IN HIV PREVALENCE AMONG PREGNANT WOMEN IN BOTSWANA: AN OPPORTUNITY FOR PrEP?
599 AUTOLOGOUS INFANT ADCC RESPONSES CORRELATE WITH LOWER MTCT AND BETTER OUTCOMES
607 OPTIMIZING DOLUTEGRAVIR INITIATION IN NEONATES USING POPULATION PHARMACOKINETIC MODEL
674 PARTNER TESTING AMONG PREGNANT WOMEN OFFERED HIV RETESTING IN KENYA
679 HIV RECENCY TESTING, A TOOL FOR HIV HOT SPOT MAPPING: CRS EpiC3-90 EXPERIENCE, ZAMBIA
685 HIV/STI TESTING AND PrEP ELIGIBILITY AMONG WOMEN INCARCERATED IN AN URBAN COUNTY JAIL

701 LOW PROPORTIONS OF LINKAGE & PRESCRIPTIONS OF PrEP IN BLACK WOMEN (THRIVE, 2015-2020)

707 RISK-BASED VS UNIVERSAL PrEP DELIVERY DURING PREGNANCY: A CLUSTER RANDOMIZED TRIAL

710 TENOFOVIR HAIR LEVELS SIMILAR AMONG PREGNANT AND POSTPARTUM PrEP USERS

711 THE IMPACT OF VIOLENCE ON PrEP ADHERENCE AMONG US CISGENDER WOMEN AT RISK FOR HIV

713 PREDICTORS OF PrEP ADHERENCE AND RETENTION IN US CISGENDER WOMEN AT RISK FOR HIV

725 WITHDRAWN

726 DISPARITIES IN FAMILY PLANNING AMONG WOMEN LIVING WITH HIV IN THE SOUTHEASTERN US

727 THE PREVALENCE AND CLUSTERING OF MENOPAUSAL SYMPTOMS IN WOMEN LIVING WITH HIV

728 LONG-ACTING COFORMULATED BIODEGRADABLE IMPLANT FOR HIV PREVENTION AND CONTRACEPTION

743 CHANGES IN ACCESS TO CARE FOR WOMEN LIVING WITH HIV DURING THE COVID-19 PANDEMIC

754 WOMEN ARE LESS LIKELY TO RECEIVE DOLUTEGRAVIR-BASED FIRST-LINE ART IN SOUTH AFRICA

757 COVERAGE OF VIRAL LOAD MONITORING DURING PREGNANCY IN SOUTH AFRICA, NATIONAL SURVEY

773 HIV RISK-PREDICTION MODEL USING ELECTRONIC HEALTH RECORD DATA IN A SOUTHERN COHORT
The following index list presenting authors as of February 18, 2021. Changes to presenting authors after that date are not reflected.

<table>
<thead>
<tr>
<th>Author</th>
<th>Page(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abraham, Natasha</td>
<td>610</td>
</tr>
<tr>
<td>Acharya, Arpan</td>
<td>382</td>
</tr>
<tr>
<td>Acosta, Rima K.</td>
<td>430</td>
</tr>
<tr>
<td>Adeniji, Opeyemi Samson</td>
<td>282</td>
</tr>
<tr>
<td>Allavena, Clotilde</td>
<td>537</td>
</tr>
<tr>
<td>Alrubayyi, Aljawharah Z.</td>
<td>262</td>
</tr>
<tr>
<td>Amara, Dominic</td>
<td>467</td>
</tr>
<tr>
<td>Amico, K. Rivet</td>
<td>603</td>
</tr>
<tr>
<td>Anderson, Albert M.</td>
<td>324</td>
</tr>
<tr>
<td>Anderson, Katherine M.</td>
<td>711</td>
</tr>
<tr>
<td>Anokhin, Boris</td>
<td>196</td>
</tr>
<tr>
<td>Antar, Annukka A.R.</td>
<td>209</td>
</tr>
<tr>
<td>Antinori, Andrea</td>
<td>748</td>
</tr>
<tr>
<td>Arora, Priyanka</td>
<td>369</td>
</tr>
<tr>
<td>Arts, Eric J.</td>
<td>267</td>
</tr>
<tr>
<td>Astorga Gamaza, Antonio</td>
<td>306</td>
</tr>
<tr>
<td>Attia, Engi F.</td>
<td>611</td>
</tr>
<tr>
<td>Ayala-Suarez, Ruben</td>
<td>128</td>
</tr>
<tr>
<td>Bailin, Samuel</td>
<td>522, 523</td>
</tr>
<tr>
<td>Baker, Owen R.</td>
<td>690</td>
</tr>
<tr>
<td>Banga, Riddhima</td>
<td>308</td>
</tr>
<tr>
<td>Bansi-Matharu, Loveleen</td>
<td>507</td>
</tr>
<tr>
<td>Barbera, Lauren K.</td>
<td>546</td>
</tr>
<tr>
<td>Barnabas, Ruanne</td>
<td>111</td>
</tr>
<tr>
<td>Bassett, Ingrid V.</td>
<td>769</td>
</tr>
<tr>
<td>Bauermeister, José A.</td>
<td>716</td>
</tr>
<tr>
<td>Baxevanidi, Evangelia</td>
<td>572</td>
</tr>
<tr>
<td>Bayer, Cara</td>
<td>755</td>
</tr>
<tr>
<td>Béguelin, Charles</td>
<td>449, 452</td>
</tr>
<tr>
<td>Bekerman, Elena</td>
<td>717</td>
</tr>
<tr>
<td>Bekker, Adrie</td>
<td>605</td>
</tr>
<tr>
<td>Benade, Mariet</td>
<td>766</td>
</tr>
<tr>
<td>Bender Ignacio, Rachel A.</td>
<td>252</td>
</tr>
<tr>
<td>Bengtson, Angela</td>
<td>574</td>
</tr>
<tr>
<td>Benn, Paul</td>
<td>402, 541</td>
</tr>
<tr>
<td>Benson, Paul</td>
<td>417</td>
</tr>
<tr>
<td>Berendam, Stella J.</td>
<td>296</td>
</tr>
<tr>
<td>Berenguer, Juan</td>
<td>441, 544</td>
</tr>
<tr>
<td>Bernard, Caitlin</td>
<td>743</td>
</tr>
<tr>
<td>Béguelin, Charles</td>
<td>449, 452</td>
</tr>
<tr>
<td>Bekerman, Elena</td>
<td>717</td>
</tr>
<tr>
<td>Bekker, Adrie</td>
<td>605</td>
</tr>
<tr>
<td>Benade, Mariet</td>
<td>766</td>
</tr>
<tr>
<td>Bennett, Rachel A.</td>
<td>252</td>
</tr>
<tr>
<td>Bengtson, Angela</td>
<td>574</td>
</tr>
<tr>
<td>Benn, Paul</td>
<td>402, 541</td>
</tr>
<tr>
<td>Benson, Paul</td>
<td>417</td>
</tr>
<tr>
<td>Berendam, Stella J.</td>
<td>296</td>
</tr>
<tr>
<td>Berenguer, Juan</td>
<td>441, 544</td>
</tr>
<tr>
<td>Bernard, Caitlin</td>
<td>743</td>
</tr>
<tr>
<td>Bester, Stephanie Marie</td>
<td>420</td>
</tr>
<tr>
<td>Bhatta, Manasa R.</td>
<td>726</td>
</tr>
<tr>
<td>Bien-Gund, Cedric</td>
<td>677</td>
</tr>
<tr>
<td>Birabaharan, Morgan</td>
<td>520</td>
</tr>
<tr>
<td>Biradar, Shivkumar</td>
<td>200</td>
</tr>
<tr>
<td>Bischoff, Jenny</td>
<td>455</td>
</tr>
<tr>
<td>Blach-Lombarte, Oscar</td>
<td>281</td>
</tr>
<tr>
<td>Blanco, Jose L.</td>
<td>641</td>
</tr>
<tr>
<td>Blumenthal, Jill</td>
<td>713</td>
</tr>
<tr>
<td>Boesecke, Christoph</td>
<td>499, 686</td>
</tr>
<tr>
<td>Bogorodskaya, Milana</td>
<td>497</td>
</tr>
<tr>
<td>Bole, Medhavi</td>
<td>665</td>
</tr>
<tr>
<td>Booton, Ross D.</td>
<td>669</td>
</tr>
<tr>
<td>Borges, Monica</td>
<td>673</td>
</tr>
<tr>
<td>Borquez, Annick</td>
<td>772</td>
</tr>
<tr>
<td>Boswell, Kristin L.</td>
<td>117</td>
</tr>
<tr>
<td>Botha, Johannes C.</td>
<td>594</td>
</tr>
<tr>
<td>Bourgi, Kassem</td>
<td>509</td>
</tr>
<tr>
<td>Brenner, Bluma G.</td>
<td>651</td>
</tr>
<tr>
<td>Bricker, Katherine M.</td>
<td>204</td>
</tr>
<tr>
<td>Brown, Jennifer A.</td>
<td>400, 431</td>
</tr>
<tr>
<td>Bunglawala, Fazila Sadi</td>
<td>606</td>
</tr>
<tr>
<td>Burgess, Jacqueline</td>
<td>750</td>
</tr>
<tr>
<td>Burgos-Cibrian, Joaquin</td>
<td>405</td>
</tr>
<tr>
<td>Busca Arenzana, Carmen</td>
<td>460</td>
</tr>
<tr>
<td>Cai, Yanhui H.</td>
<td>220</td>
</tr>
<tr>
<td>Calantone, Nina</td>
<td>240</td>
</tr>
<tr>
<td>Calcagno, Andrea</td>
<td>335</td>
</tr>
<tr>
<td>Capoferri, Adam A.</td>
<td>639</td>
</tr>
<tr>
<td>Capparelli, Edmund</td>
<td>609</td>
</tr>
<tr>
<td>Carlander, Christine</td>
<td>476</td>
</tr>
<tr>
<td>Carrasco, Itziar</td>
<td>318, 616</td>
</tr>
<tr>
<td>Carrasco-Hernandez, Rocio</td>
<td>251</td>
</tr>
<tr>
<td>Carnic, Adam W.</td>
<td>539</td>
</tr>
<tr>
<td>Cartwright, Emily Jeanne</td>
<td>454</td>
</tr>
<tr>
<td>Casazza, Joseph P.</td>
<td>160, 193</td>
</tr>
<tr>
<td>Castillo-Mancilla, Jose R.</td>
<td>92</td>
</tr>
<tr>
<td>Castor, Deliveste</td>
<td>630</td>
</tr>
<tr>
<td>Cavallari, Eugenio</td>
<td>470</td>
</tr>
<tr>
<td>Cerrillo, Ildefonso Sanchez</td>
<td>216, 269</td>
</tr>
<tr>
<td>Chadwick, Ellen Gould</td>
<td>575</td>
</tr>
<tr>
<td>Chaila, Mwate Joseph</td>
<td>477</td>
</tr>
<tr>
<td>Chaisson, Leila H.</td>
<td>556</td>
</tr>
<tr>
<td>Chang, Phillip</td>
<td>340</td>
</tr>
<tr>
<td>Chang, David</td>
<td>519</td>
</tr>
<tr>
<td>Chan, Joy C.</td>
<td>435</td>
</tr>
<tr>
<td>Chaudhary, Omkar</td>
<td>244, 483</td>
</tr>
<tr>
<td>Chen, Athena</td>
<td>275</td>
</tr>
<tr>
<td>Chen, Benjamin K.</td>
<td>302</td>
</tr>
<tr>
<td>Chen, Juan-Houj</td>
<td>465</td>
</tr>
<tr>
<td>Cheung, Peter K.</td>
<td>432</td>
</tr>
<tr>
<td>Chew, Kara W.</td>
<td>396, 555</td>
</tr>
<tr>
<td>Chiao, Elizabeth</td>
<td>471</td>
</tr>
<tr>
<td>Chibesa, Linda Miwila</td>
<td>679</td>
</tr>
<tr>
<td>Chinula, Lameck</td>
<td>177</td>
</tr>
<tr>
<td>Chiu, Chris Y.H.</td>
<td>280</td>
</tr>
<tr>
<td>Chohan, Bhavana</td>
<td>427</td>
</tr>
<tr>
<td>Chomont, Nicolas</td>
<td>298</td>
</tr>
<tr>
<td>Cioica, Emily T.</td>
<td>464</td>
</tr>
<tr>
<td>Clement, Meredith</td>
<td>773</td>
</tr>
<tr>
<td>Clipman, Steven J.</td>
<td>694</td>
</tr>
<tr>
<td>Clough, Erin</td>
<td>346</td>
</tr>
<tr>
<td>Coelho, Lara</td>
<td>510</td>
</tr>
<tr>
<td>Cohen, Myron S.</td>
<td>121</td>
</tr>
<tr>
<td>Coiras, Mayte</td>
<td>159</td>
</tr>
<tr>
<td>Colby, Donn J.</td>
<td>179, 408</td>
</tr>
<tr>
<td>Collazo-Rodriguez, Bryan</td>
<td>350</td>
</tr>
<tr>
<td>Collins, Lauren F.</td>
<td>526</td>
</tr>
<tr>
<td>Collora, Jack A.</td>
<td>287</td>
</tr>
<tr>
<td>Conner, Madelyn</td>
<td>578</td>
</tr>
<tr>
<td>Connolly, Stephen P.</td>
<td>742</td>
</tr>
<tr>
<td>Cooley, Sarah</td>
<td>319</td>
</tr>
<tr>
<td>Corma-Gomez, Anais</td>
<td>469</td>
</tr>
<tr>
<td>Corritori, Suzana</td>
<td>390</td>
</tr>
<tr>
<td>Cossarini, Francesca</td>
<td>219</td>
</tr>
<tr>
<td>Cottura, Nicolas</td>
<td>374</td>
</tr>
<tr>
<td>Cotugno, Nicola</td>
<td>622</td>
</tr>
<tr>
<td>Council, Olivia D.</td>
<td>344</td>
</tr>
<tr>
<td>Cox, Stephanie</td>
<td>428</td>
</tr>
<tr>
<td>Cruwels, Herta</td>
<td>403</td>
</tr>
<tr>
<td>Cresey, Tim R.</td>
<td>444</td>
</tr>
<tr>
<td>Cresswell, Fiona</td>
<td>133</td>
</tr>
<tr>
<td>Curran, Kathryn</td>
<td>688</td>
</tr>
<tr>
<td>Cykule, Lucette A.</td>
<td>552</td>
</tr>
<tr>
<td>D’Antoni, Michelle L.</td>
<td>438</td>
</tr>
<tr>
<td>Daama, Alex</td>
<td>720</td>
</tr>
<tr>
<td>Dai, Weiei</td>
<td>293</td>
</tr>
<tr>
<td>Daly, Michele B.</td>
<td>297</td>
</tr>
<tr>
<td>Daniels, Christine</td>
<td>268</td>
</tr>
<tr>
<td>Dapp, Michael</td>
<td>284</td>
</tr>
<tr>
<td>Davy-Mendez, Thibault</td>
<td>410, 411</td>
</tr>
<tr>
<td>De Nicolò, Amedeo</td>
<td>371</td>
</tr>
<tr>
<td>De Waard, Liesl</td>
<td>171</td>
</tr>
<tr>
<td>Dean, Lorraine T.</td>
<td>700</td>
</tr>
<tr>
<td>Dear, Nicole</td>
<td>732</td>
</tr>
<tr>
<td>Delaney, Kevin P.</td>
<td>739</td>
</tr>
<tr>
<td>Desai, Jui</td>
<td>685</td>
</tr>
<tr>
<td>Dhoikerafa, Tatadzwa G.</td>
<td>479</td>
</tr>
<tr>
<td>Di Mascio, Michele</td>
<td>202</td>
</tr>
<tr>
<td>Di Nunzio, Francesca</td>
<td>78</td>
</tr>
<tr>
<td>Diallo, Karidia</td>
<td>675</td>
</tr>
<tr>
<td>Diamond, Tracy</td>
<td>129</td>
</tr>
<tr>
<td>Dias, Joanna</td>
<td>82</td>
</tr>
<tr>
<td>Diaz, Ricardo S.</td>
<td>313</td>
</tr>
<tr>
<td>Dillon, Stephanie</td>
<td>218</td>
</tr>
<tr>
<td>Dinh, Vinh B.</td>
<td>245</td>
</tr>
<tr>
<td>Dirajal-Fargo, Sahera</td>
<td>613</td>
</tr>
<tr>
<td>Dominguez-Rodriguez, Sara</td>
<td>596</td>
</tr>
<tr>
<td>Dorosh, Michael</td>
<td>418</td>
</tr>
<tr>
<td>Dorvil, Nancy</td>
<td>184</td>
</tr>
<tr>
<td>Dorward, Jinchii</td>
<td>754</td>
</tr>
<tr>
<td>Doshi, Rupali K.</td>
<td>643</td>
</tr>
<tr>
<td>Dossani, Zain Y.</td>
<td>310</td>
</tr>
<tr>
<td>Dougau, Michael</td>
<td>122</td>
</tr>
<tr>
<td>Dovel, Kathryn</td>
<td>181</td>
</tr>
<tr>
<td>Drain, Paul K.</td>
<td>564</td>
</tr>
<tr>
<td>Drummeh, Bakary</td>
<td>143</td>
</tr>
<tr>
<td>Du, Li 234</td>
<td></td>
</tr>
<tr>
<td>Dumond, Julie B.</td>
<td>363</td>
</tr>
<tr>
<td>Einkauf, Kevin B.</td>
<td>155</td>
</tr>
<tr>
<td>El Kamari, Vanessa</td>
<td>329</td>
</tr>
<tr>
<td>El-Nahal, Walid</td>
<td>734</td>
</tr>
<tr>
<td>Ellis, Ronald J.</td>
<td>328, 348</td>
</tr>
<tr>
<td>Ennis, Nicole</td>
<td>744</td>
</tr>
<tr>
<td>Enugu, Ajay K.</td>
<td>145</td>
</tr>
<tr>
<td>Esmaeili Zadeh, Elmira</td>
<td>276</td>
</tr>
</tbody>
</table>

Index of Presenting Authors
<table>
<thead>
<tr>
<th>Name</th>
<th>Page(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sendagala, Samuel</td>
<td>758</td>
</tr>
<tr>
<td>Sereti, Irini</td>
<td>237</td>
</tr>
<tr>
<td>Serrano-Villar, Sergio</td>
<td>527</td>
</tr>
<tr>
<td>Sessa, Libera</td>
<td>598</td>
</tr>
<tr>
<td>Sevenier, Derin</td>
<td>352</td>
</tr>
<tr>
<td>Shafer, Robert W</td>
<td>436</td>
</tr>
<tr>
<td>Shapiro, Adrienne</td>
<td>543</td>
</tr>
<tr>
<td>Sharma, Amit</td>
<td>383</td>
</tr>
<tr>
<td>Shaw, Pamela A.</td>
<td>642</td>
</tr>
<tr>
<td>Sherman, Jessica</td>
<td>666</td>
</tr>
<tr>
<td>Sherman, Kenneth</td>
<td>462</td>
</tr>
<tr>
<td>Shiau, Stephanie</td>
<td>332</td>
</tr>
<tr>
<td>Shikuma, Cecilia</td>
<td>333</td>
</tr>
<tr>
<td>Short, William R</td>
<td>584</td>
</tr>
<tr>
<td>Shoucri, Sherif</td>
<td>554</td>
</tr>
<tr>
<td>Shytaj, Iart</td>
<td>394</td>
</tr>
<tr>
<td>Sibinga, Erica</td>
<td>602</td>
</tr>
<tr>
<td>Sibiude, Jeanne</td>
<td>582</td>
</tr>
<tr>
<td>Siedner, Mark</td>
<td>95, 495</td>
</tr>
<tr>
<td>Siegler, Aaron J</td>
<td>638</td>
</tr>
<tr>
<td>Sigal, Alex</td>
<td>263</td>
</tr>
<tr>
<td>Sigel, Keith</td>
<td>478</td>
</tr>
<tr>
<td>Silhol, Romain</td>
<td>708, 733</td>
</tr>
<tr>
<td>Silverberg, Michael J</td>
<td>97</td>
</tr>
<tr>
<td>Simpson, Jennifer</td>
<td>279</td>
</tr>
<tr>
<td>Singh, Sonia</td>
<td>760</td>
</tr>
<tr>
<td>Singh, Vidisha</td>
<td>621</td>
</tr>
<tr>
<td>Sirajee, Reshma</td>
<td>592</td>
</tr>
<tr>
<td>Stojd, Carl Fredrik</td>
<td>658</td>
</tr>
<tr>
<td>Sleeman, Katrina</td>
<td>689</td>
</tr>
<tr>
<td>Smith, Davey M.</td>
<td>632</td>
</tr>
<tr>
<td>Smith, Lauren</td>
<td>751</td>
</tr>
<tr>
<td>Solank, Dipesh</td>
<td>326</td>
</tr>
<tr>
<td>Solomon, Sunil S.</td>
<td>135</td>
</tr>
<tr>
<td>Spearman, Paul</td>
<td>80</td>
</tr>
<tr>
<td>Spinelli, Matthew</td>
<td>354, 627</td>
</tr>
<tr>
<td>Spinner, Christoph</td>
<td>126</td>
</tr>
<tr>
<td>Srivivasula, Sharat</td>
<td>203</td>
</tr>
<tr>
<td>Sridomporn, Salin</td>
<td>745</td>
</tr>
<tr>
<td>Stalter, Randy</td>
<td>553</td>
</tr>
<tr>
<td>Stephens, Jessica</td>
<td>646</td>
</tr>
<tr>
<td>Stockelman, Kelly</td>
<td>500</td>
</tr>
<tr>
<td>Stoddard, Caitlin</td>
<td>261</td>
</tr>
<tr>
<td>Stumpf, Michael</td>
<td>385</td>
</tr>
<tr>
<td>Sullivan, Patrick</td>
<td>636, 706</td>
</tr>
<tr>
<td>Sun, Gis-Hyun</td>
<td>132</td>
</tr>
<tr>
<td>Sun, Jing</td>
<td>103, 536</td>
</tr>
<tr>
<td>Sun, Weiwei</td>
<td>307</td>
</tr>
<tr>
<td>Sundararajan, Radhika</td>
<td>180</td>
</tr>
<tr>
<td>Surial, Bernard</td>
<td>457</td>
</tr>
<tr>
<td>Suzuki, Kazuo</td>
<td>162</td>
</tr>
<tr>
<td>Tagarro, Alfredo</td>
<td>619, 620</td>
</tr>
<tr>
<td>Takek, Simbarashe</td>
<td>718</td>
</tr>
<tr>
<td>Tanaka, Shiho</td>
<td>388</td>
</tr>
<tr>
<td>Tang, Michael E.</td>
<td>542</td>
</tr>
<tr>
<td>Tarancan-Diez, Laura</td>
<td>597</td>
</tr>
<tr>
<td>Tassi, Marc-Florent</td>
<td>698</td>
</tr>
<tr>
<td>Tedaldi, Ellen M.</td>
<td>752</td>
</tr>
<tr>
<td>Telwate, Sushama</td>
<td>191</td>
</tr>
<tr>
<td>Thomas, Allison S.</td>
<td>599</td>
</tr>
<tr>
<td>Thudium, Rebekka</td>
<td>532</td>
</tr>
<tr>
<td>Tinago, Willard</td>
<td>231</td>
</tr>
<tr>
<td>Tiraboschi, Juan M.</td>
<td>256, 358</td>
</tr>
<tr>
<td>Titanji, Boghuma K.</td>
<td>232</td>
</tr>
<tr>
<td>Tokuyama, Minami</td>
<td>115</td>
</tr>
<tr>
<td>Tordoff, Diana M.</td>
<td>138</td>
</tr>
<tr>
<td>Toska, Elena</td>
<td>582</td>
</tr>
<tr>
<td>Townes, Ashley R.</td>
<td>701</td>
</tr>
<tr>
<td>Trombetta, Amelia</td>
<td>205</td>
</tr>
<tr>
<td>Turkova, Anna</td>
<td>174</td>
</tr>
<tr>
<td>Vaccari, Linda Cheyenne</td>
<td>684</td>
</tr>
<tr>
<td>Van Lettow, Monique</td>
<td>585</td>
</tr>
<tr>
<td>VanderVeen, Laurie</td>
<td>128</td>
</tr>
<tr>
<td>Varshney, Karan</td>
<td>631</td>
</tr>
<tr>
<td>Veenhuis, Rebecca</td>
<td>322</td>
</tr>
<tr>
<td>Velu, Vijayakumar</td>
<td>583</td>
</tr>
<tr>
<td>Vergori, Alessandra</td>
<td>242, 334</td>
</tr>
<tr>
<td>Villanueva, Mercedes</td>
<td>740</td>
</tr>
<tr>
<td>Virga, James Q.</td>
<td>222</td>
</tr>
<tr>
<td>Volpe, Karen E.</td>
<td>325</td>
</tr>
<tr>
<td>Wagner, Gabriel</td>
<td>705</td>
</tr>
<tr>
<td>Wallner, Jackson J.</td>
<td>239</td>
</tr>
<tr>
<td>Wang, Melody</td>
<td>721</td>
</tr>
<tr>
<td>Watson, Dovie L.</td>
<td>723</td>
</tr>
<tr>
<td>Weiss, Kevin</td>
<td>473</td>
</tr>
<tr>
<td>Weissman, Simon</td>
<td>482</td>
</tr>
<tr>
<td>White, Jennifer A.</td>
<td>315</td>
</tr>
<tr>
<td>Wichte Salinas, Tomas</td>
<td>233</td>
</tr>
<tr>
<td>Woldemeskel, Beawit</td>
<td>223</td>
</tr>
<tr>
<td>Woldesenbet, Selamawit A.</td>
<td>757</td>
</tr>
<tr>
<td>Wong, Emily B.</td>
<td>524</td>
</tr>
<tr>
<td>Wong, Michelle E.</td>
<td>291</td>
</tr>
<tr>
<td>Workowski, Kimberly</td>
<td>415</td>
</tr>
<tr>
<td>Wu, Yingfeng</td>
<td>761</td>
</tr>
<tr>
<td>Yacoub, Anne D.</td>
<td>337</td>
</tr>
<tr>
<td>Yager, Jenna Lynn</td>
<td>366, 367</td>
</tr>
<tr>
<td>Yang, Jincheng</td>
<td>608</td>
</tr>
<tr>
<td>Yendewa, George A.</td>
<td>548</td>
</tr>
<tr>
<td>Zachareopolou, Penny</td>
<td>158</td>
</tr>
<tr>
<td>Zangeneh, Sahar Z.</td>
<td>580</td>
</tr>
<tr>
<td>Zanni, Markella V.</td>
<td>496</td>
</tr>
<tr>
<td>Zash, Rebecca</td>
<td>571, 576</td>
</tr>
<tr>
<td>Zeuli, John D.</td>
<td>380</td>
</tr>
<tr>
<td>Zhang, Peng</td>
<td>96</td>
</tr>
<tr>
<td>Zhou, Shuntai</td>
<td>384</td>
</tr>
<tr>
<td>Zhou, Xiao-Jian</td>
<td>364</td>
</tr>
<tr>
<td>Zuck, Paul</td>
<td>316</td>
</tr>
</tbody>
</table>