### 35th Annual Symposium on Nonhuman Primate Models for AIDS

**Tuesday, August 22, 2017**

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<tr>
<th>Time</th>
<th>Event</th>
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<tr>
<td>17:00 – 22:00</td>
<td>Registration</td>
<td>Promenade Terrace</td>
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| 18:30 – 19:30 | KEYNOTE ADDRESS - Deborah Persaud, PhD, Johns Hopkins  
99 FROM THE “MISSISSIPPI BABY” TO THE NONHUMAN PRIMATE MODEL: CONTRIBUTIONS TO UNDERSTANDING HIV PERSISTENCE AS A STEP TOWARD CURE | Promenade Hall    |
| 19:30 – 21:30 | Welcome Reception                                                     | Promenade Terrace |
### Scientific Session 1 Interventions: Therapeutic vaccines and functional cures

**Chairs:** Douglas Nixon and Vaiva Vezys

#### 8:45 – 10:30

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<tr>
<th>Time</th>
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<td>8:45 – 9:15</td>
<td><strong>100</strong> HIV: WHERE DID IT COME FROM AND WHERE IS IT GOING?</td>
<td>Promenade Hall</td>
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<td><strong>Douglas Nixon</strong></td>
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<td><em>George Washington University</em></td>
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<td>9:15 – 9:30</td>
<td><strong>101</strong> ANTI-CD20 ANTIBODY MEDIATED B CELL DEPLETION ENHANCES VIRAL CONTROL IN SIV-INFECTED RHESUS MACAQUES</td>
<td>Promenade Hall</td>
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<td><strong>Yoshi Fukazawa</strong></td>
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<td><em>Vaccine and Gene Therapy Institute, Oregon Health &amp; Science University</em></td>
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<td><em>AIDS and Cancer Virus Program, Leidos Biomedical Research, Inc., Frederick National Laboratory</em></td>
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<td>Richard Lum 1,2, Jin Young Bae 1,2, Alden Ho 1,2, Joseph Clock 1,2, Bryan Randall 1,2, Haesun Park 1,2, Alfred Legasse 1,2, Michael Axthelm 1,2, Jeffrey Lifson 1, Afam Okoye 1,2, Louis Picker 1,2</td>
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<td>9:30 – 9:45</td>
<td><strong>102</strong> FULLY MHC-MATCHED ALLOGENEIC HEMATOPOIETIC STEM CELL TRANSPLANTATION IN SIV-INFECTED, CART-SUPPRESSED MAURITIAN CYNOMOLGUS MACAQUES</td>
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<td><strong>Dr. Helen L Wu</strong></td>
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<td><em>Division of Blood and Marrow Transplantation, University of Minnesota</em></td>
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<td>Dr. Benjamin J Burwitz 1, Dr. Shaheeda A Abdulhaaq 2, Christine Shriver-Munsch 3, Tonya Swanson 2, Alfred W Legasse 2, Katherine B Hammond 2, Jason S Reed 2, Mina Northrup 2, Dr. Stephanie J Junell 2, Dr. Gabriela M Webb 2, Dr. Justin M Greene 2, Dr. Benjamin N Bimber 2, Dr. Wolfram Laub 2, Dr. Paul Klevit 2, Dr. Rhonda MacAllister 2, Dr. Michael K Axthelm 2, Dr. Rebecca Ducore 2, Dr. Anne Lewis 2, Dr. Lois Colgin 2, Dr. Theodore R Hobbs 2, Dr. Lauren D Martin 2, Dr. Charles R Thomas 2, Dr. Angela Panoskaltis-Mortari 2, Dr. Gabrielle Meyers 3, Dr. Jeffrey J Stanton 2, Dr. Richard T Maziarz 3, Dr. Jonah B Sacha 1,2</td>
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<td>9:45 – 10:00</td>
<td><strong>103</strong> THE IL-15 SUPERAGONIST ALT-803 DECREASES PLASMA VIRAL LOADS IN SIV INFECTED RHESUS MACAQUES IN THE ABSENCE OF ANTIRETROVIRAL THERAPY</td>
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<td><strong>Dr. Amy Ellis</strong></td>
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<td><em>Department of Pathology and Laboratory Medicine, University of Wisconsin-Madison</em></td>
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<td><em>Department of Microbiology, School of Public Health, University of Minnesota</em></td>
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<td><em>Altar Bioscience Corporation</em></td>
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10:00 – 10:15  104  THE HUMAN IL-15 SUPERAGONIST COMPLEX ALT-803 ACTIVATES NK AND MEMORY T CELLS, REACTIVATES LATENT SIV, AND DRIVES SIV-SPECIFIC CD8+ T CELLS INTO B CELL FOLLICLES
Gabriela Webb1,2, Katherine Hammond1,2, Shengbin Li8, Gwantwa Mwakalundwa8, Justin Greene1,2, Jason Reed1,2, Jeffrey Stanton2, Alfred Legasse1, Byung Park1, Michael Axthelm1, Emily Jeng3, Hing Wong3, James Whitney4,5, Brad Jones6, Douglas Nixon1, Pamela Skinner8, Jonaf Sacha1,2 1Oregon Health & Science University/Vaccine And Gene Therapy Institute, 2Division of Pathobiology and Immunology, Oregon National Primate Research Center, Oregon Health & Science University, 3Altro BioScience Corporation, 4Center for Virology and Vaccine Research, Beth Israel Deaconess Medical Center, Harvard Medical School, 5Ragon Institute of MGH, MIT, and Harvard, 6Department of Microbiology Immunology and Tropical Medicine, 7School of Medicine & Health Sciences, The George Washington University, 8Department of Veterinary and Biomedical Sciences, University of Minnesota

10:15 – 10:30  105  NEXT GENERATION GENE PROTECTION AND RESERVOIR TARGETING APPROACHES FOR HIV CURE
Christopher Peterson1,2, Claire Deleage3, Anjie Zhen4, Andreas Reik5, Michael C. Holmes5, Scott Kitchen6, Jacob D. Estes3, Hans-Peter Kiem1,2 1Fred Hutchinson Cancer Research Center, 2University of Washington, 3AIDS and Cancer Virus Program, Frederick National Laboratory for Cancer Research, Leidos Biomedical Research, Inc., 4UCLA, 5Sangamo Therapeutics

10:30 – 11:00  Coffee Break  Promenade Terrace

11:00 – 12:15  Scientific Session 1 Interventions: Therapeutic vaccines and functional cures (continued)

11:00 – 11:15  106  THERAPEUTIC VACCINES FOR HIV
Dr. Vaiva Vezys1 1University of Minnesota

11:15 – 11:30  107  CONSERVED ELEMENTS (CE) DNA VACCINATION INDUCES CE RESPONSES IN SIV INFECTED, CART TREATED MACAQUES
Paul Munson1,2, Hillary Tunggal1,2, Nika Hajari1,2, Megan O'Connor1,2, Debra Bratt2, James T. Fuller1,2, Drew May2, Solomon Wangari2, Brian Agricola2, Jeremy Smedley2, Xintao Hu3, Barbara K. Felber1, George N. Pavlakis4, James I. Mullins1, Deborah Heydenburg Fuller1,2 1Department of Microbiology, University of Washington, 2University of Washington National Primate Research Center, 3Human Retrovirus Pathogenesis Section, Vaccine Branch, Center for Cancer Research, National Cancer Institute, 4Human Retrovirus Section, Vaccine Branch, Center for Cancer Research, National Cancer Institute

11:30 – 11:45  108  COMPARATIVE ASSESSMENT OF THREE LATENT SIV RESERVOIR REACTIVATION STRATEGIES IN ELITE CONTROLLER RHESUS MACAQUES
Adam Kleinman1, Dr. Ranjit Sivanandham1, Benjamin Policicchio1, Dr. Egidio Brocca-Cofano1, Kevin Raetz2, Tianyu He1, Dr. Cui Ling Xu1, Dr. Paola Sette1, Kathryn Martin1, Ellen Penn1, Dr. Ivona Pandrea1, Dr. Cristian Apetrei1 1University Of Pittsburgh

11:45 – 12:00  109  SIV-SPECIFIC RNA-GUIDED CAS9 NUCLEASES AND PAIRED NICKASES INHIBIT SIV REPLICATION THROUGH PROVIRAL GENOME EDITING
Lisa Smith1, Vida Hodara2, Laura Parodi2, Zhao Lai1, Yi Zou1, Luis Giavedoni2 1University of Texas Health San Antonio, 2Texas Biomedical Research Institute
ADOPTIVE T CELL IMMUNOTHERAPY USING CMV-SPECIFIC T CELLS GENETICALLY MODIFIED WITH AHIV-CAR VECTORS
Chengxiang Wu1, Shan Yu1, Agnus Lo3, Hui Li5, Gautam Sahu4, Preston Marx1, Dorothee von Laer5, Gail Skowron5, George Shaw1, Amitinder Kaur1, Richard Junghans5, Stephen E. Braun1
1TNPRC, 2Tufts University Medical School, 3University of Pennsylvania, 4Roger Williams Medical Center, 5Medizinische Universität Innsbruck

12:15 – 16:00 Poster set up
Promenade Lobby

12:15 - 14:00 Lunch (on your own)

14:00 – 15:45 Scientific Session 2 Prevention: Preventative vaccines, PrEP, microbicides

Chairs: Ann Chahroudi and Matt Reynolds

14:00 – 14:30 200 OVERVIEW OF VACCINE APPROACHES IN ADULT AND INFANT MACAQUES
Ann Chahroudi1
1Emory University

14:30 – 14:45 201 CROSS-SPECIES CMV VACCINATION REVEALS VIRAL DETERMINANTS FOR INDUCTION OF NON-CLASSICAL MHC-E-RESTRICTED T CELLS
Dr. Justin Greene1, Dr. Daniel Malouli1, Dr. Scott Hansen1, Dr. Travis Whitmer1, Abigail Ventura1, Roxanne Gilbride1, Colette Hughes1, Jason Reed1, Dr. Helen Wu1, Luke Uebelhoer1, Jennie Womack1, Matthew Mc Ardle1, Junwei Gao1, Alfred Legasse1, Dr. Michael Axthelm1, Dr. Louis Picker1, Klaus Fruh1, Jonah Sacha1
1Oregon Health & Science University/Vaccine And Gene Therapy Institute, 2Oregon Health & Science University/ Department of Pediatrics

14:45 – 15:00 202 A SINGLE V2 MONOCLONAL ANTIBODY REDUCES LYMPHOID TISSUE VIREMIA AND PARTIALLY PROTECTS MACAQUES AFTER REPEATED SHIV CHALLENGES
Dr. AJ Hessell1, DC Malherbe1, SM McBurney1, S Pandey1, T Cheever1, P Barnette1, WF Sutton1, S Zolla-Pazner1, NL Haigwood1
1Oregon Health & Science University, Oregon National Primate Research Center, 2Icahn Mt. Sinai School of Medicine

15:00 – 15:15 203 AN ORAL PRIME/ BOOST PEDIATRIC VACCINE STRATEGY FOR THE PREVENTION OF HIV TRANSMISSION BY BREAST-FEEDING
Alan Curtis1, Bonnie Phillips1, Neelima Choudhary1, Ryan Tuck1, Koen Van Rompay2, Pamela Kozlowski1, Rama Amara1, Kristina De Paris1
1University Of North Carolina At Chapel Hill, 2California National Primate Research Center, 3Louisiana State University, 4Emory University

15:15 – 15:30 204 A NOVEL SHIV EXPRESSING THE B41 HIV-1 ENV: IMPLICATIONS FOR HIV VACCINE DESIGN AND TESTING
Jessica Smith1, Hui Li1, Wenge Ding1, Shuyi Wang1, Alexander Murphy1, Maho Okumura1, Beatrice H. Hahn1, George M. Shaw1
1Perelman School Of Medicine

15:30 – 15:45 205 DRUG DISTRIBUTION AT SHIV INFECTION SITES IN THE MACAQUE FEMALE REPRODUCTIVE TRACT
Dr. Katarina Halavaty1, Dr. Adina K. Ott1, Dr. Danijela Maric1, Dr. Jonathan T. Su1, Edgar Matias1, Dr. Lara Pereira2, Dr. James M. Smith3, Dr. Patrick F. Kiser1, Dr. Thomas J. Hope4
1Northwestern University, 2Lifesource Biomedical LLC, 3Centers for Disease Control and Prevention
16:15 – 17:30  Scientific Session 2  Prevention: Preventative vaccines, PrEP, microbicides (continued)

16:15 – 16:30  206  ALLOIMMUNIZATION OF MAURITIAN CYNOMOLGUS MACAQUES WITH ALLOGENEIC CELLS FAILS TO PROTECT AGAINST REPEATED, LIMITING-DOSE SIV CHALLENGE
Dr. Matt Reynolds¹
¹UW-Madison

16:30 – 16:45  207  TRACKING FLUOROPHORE-CONJUGATED VRC01 FOLLOWING IV INJECTION IN THE Rhesus Macaque Reveals That Tissue Distribution Is Slow and Can Take Approximately 1 Week to Achieve Steady State.
Dr. Jeffrey R. Schneider¹, Dr. Ann M. Carias¹, Dr. Amarendra Pegu², Dr. Arangassery R. Bastian¹, Dr. Gianguido C. Cianci¹, Dr. Patrick F. Kiser¹, Dr. Ronald S. Veazey¹, Dr. John R. Mascola², Dr. Thomas Hope¹
¹Northwestern University, ²Vaccine Research Center, ³Tulane National Primate Research Center

16:45 – 17:00  208  DNA AND PROTEIN CO-DELIVERY VACCINES USING TLR-4-BASED ADJUVANTS INDUCE POTENT IMMUNE RESPONSES ABLE TO DELAY HETEROLOGOUS SIV ACQUISITION
Barbara Felber¹, Shakti Singh¹, Antonio Valentin¹, Margherita Rosati¹, Eric Ramierz¹, Rami Doueiri¹, Xintao Hu¹, Jenifer Bear¹, Antonio Valentin¹, Margherita Rosati¹, Eric Ramierz¹, Rami Doueiri¹, Xintao Hu¹, Jenifer Bear¹, Antonio Valentin¹, Margherita Rosati¹, Eric Ramierz¹, Rami Doueiri¹, Xintao Hu¹, Jenifer Bear¹, Luis Paredes¹, Shakti Singh¹, Antonio Valentin¹, Margherita Rosati¹, Eric Ramierz¹, Rami Doueiri¹, Xintao Hu¹, Jenifer Bear¹, Luis Paredes¹, Shakti Singh¹, Antonio Valentin¹, Margherita Rosati¹, Eric Ramierz¹, Rami Doueiri¹, Xintao Hu¹, Jenifer Bear¹, Luis Paredes¹, Shakti Singh¹, Antonio Valentin¹, Margherita Rosati¹, Eric Ramierz¹, Rami Doueiri¹, Xintao Hu¹, Jenifer Bear¹, Luis Paredes¹, Shakti Singh¹, Antonio Valentin¹, Margherita Rosati¹, Eric Ramierz¹, Rami Doueiri¹, Xintao Hu¹, Jenifer Bear¹, Luis Paredes¹, Shakti Singh¹, Antonio Valentin¹, Margherita Rosati¹, Eric Ramierz¹, Rami Doueiri¹, Xintao Hu¹, Jenifer Bear¹, Luis Paredes¹, Shakti Singh¹, Antonio Valentin¹, Margherita Rosati¹, Eric Ramierz¹, Rami Doueiri¹, Xintao Hu¹, Jenifer Bear¹, Luis Paredes¹, Shakti Singh¹, Antonio Valentin¹, Margherita Rosati¹, Eric Ramierz¹, Rami Doueiri¹, Xintao Hu¹, Jenifer Bear¹, Luis Paredes¹
¹National Cancer Institute At Frederick, ²NIAID, ³Inovio Pharmaceuticals Inc., ⁴IDRI, ⁵MHRP, ⁶Duke University Medical Center

17:00 – 17:15  209  IMPACT OF A TLR-5 LIGAND AS ADJUVANT ON IMMUNOGENICITY AND EFFICACY OF A RHCMV-SIV VACCINE
Dr. Ellen Sparger¹, Dr. William Chang¹, Dr. Jesse Deere¹, Mr. Hung Kieu¹, Dr. Diego Castillo¹, Dr. Shelley Blozis¹, Dr. Jeffrey Lifson², Dr. Xiaoying Shen³, Dr. Georgia Tomaras³, Dr. Barbara Shacklett¹, Dr. Peter Barry¹
¹University Of California Davis, ²Fredrick National Laboratory, ³Duke Human Vaccine Institute

17:15 – 17:30  210  DISTINCT REPLICATION PATTERNS AND NEUTRALIZING ANTIBODY RESPONSES IN RHESUS MACAQUES INFECTED BY SHIVS BEARING 15 DIFFERENT PRIMARY OR TRANSMITTED/FOUNDER HIV-1 ENVs
Dr. Hui Li¹, Dr. Fang-Hua Lee¹, Mr. Ryan Roark¹, Ms. Jessica Smith¹, Ms. Maho Okumura¹, Mrs. Shuyi Wang¹, Mrs. Wenge Ding¹, Dr. Beatrice Hahn¹, Dr. George Shaw¹
¹University Of Pennsylvania
17:30 – 20:00 Poster Session

**Promenade Lobby**

**Reception**

Posters are listed by poster board number. All poster will be on display in the Promenade Lobby.

1. **THE EFFECTS OF M. TUBERCULOSIS ON SIV EVOLUTION IN A MAURITIAN CYMOMOLGUS MACAQUE CO-INFECTION MODEL**
   Alexis Balgeman\(^1\), Amy Ellis-Connell\(^2\), Katie Zarbock\(^3\), Jaffna Mathiaparanam\(^3\), Mark A. Rodgers\(^3\), Cassandra Updike\(^4\), Tonilynn Baranowski\(^5\), Charles A. Scanga\(^6\), Shelby O’Connor\(^1\)
   \(^1\)University of Wisconsin-Madison, \(^2\)Wisconsin National Primate Research Center, \(^3\)University of Pittsburgh

2. **NOVEL SHIVS BEARING HIV-1 TRANSMITTED/FOUNDER ENVS FOR CURE RESEARCH: REPLICATION, CART SUPPRESSION, RESERVOIRS AND REBOUND**
   Dr. Katharine Bar\(^1\), Anya Bauer\(^1\), Dr. Fang-Hua Lee\(^1\), Dr. Hui Li\(^1\), Dr. George Shaw\(^1\)
   \(^1\)University Of Pennsylvania

3. **SIMULTANEOUS EXPRESSION OF INTERFERON-GAMMA AND INTERLEUKIN-22 FROM INNATE LYMPHOID AND NATURAL KILLER CELLS IN THE COLON OF SIV-INFECTED RHESUS MACAQUES**
   Andrew Cogswell\(^1\), Moriah Castleman\(^2\), Stephanie Dillon\(^2\), Cara Wilson\(^2\), Dr Ed Barker\(^1\)
   \(^1\)Rush University Medical Center, \(^2\)University of Colorado

4. **NOVEL FEATURES OF CRM1-DEPENDENT HIV AND SIV RNA NUCLEAR EXPORT REVEALED USING LIVE CELL IMAGING**
   Ryan Behrens\(^1\), Christina Higgins\(^1\), Nathan Sherer\(^1\)
   \(^1\)McArdle Laboratory for Cancer Research, Institute for Molecular Virology, and Carbone Cancer Center, University of Wisconsin - Madison

5. **NKTT320-INDUCED ACTIVATION OF INVARIANT NATURAL KILLER T-CELLS (INKTS) IN VIVO AND IMPLICATION FOR ITS USE IN MODULATING AIDS PATHOGENESIS**
   Dr. Nell Bond\(^1\), Dr. Shan Yu\(^1\), Dr. Namita Rout\(^1\), Ms. Dollnovan Tran\(^1\), Mrs. Dawn Szeltner\(^1\), Dr. Robert Schaub\(^2\), Dr. Amitinder Kaur\(^1\)
   \(^1\)TNPRC, \(^2\)NKT Therapeutics

6. **CHARACTERIZATION OF VACCINE-INDUCED ANTIBODY RESPONSES**
   Tysheena Charles\(^1\), Samantha Burton\(^1\), Lori Spicer\(^1\), S. Abigail Smith\(^1\), Tiffany Styles\(^1\), Pradeep Reddy\(^1\), Traci Legere\(^1\), Vijayakumar Velu\(^1\), Dr Rama Amara\(^1\), Dr Cynthia Derdeyn\(^1\)
   \(^1\)Emory University

7. **EARLY CNS DAMAGE IN PEDIATRIC SIV INFECTION**
   Heather Carry\(^1\), Bonnie Phillips\(^2\), Koen Van Rompay\(^3\), Angela Amedee\(^4\), Mark Burke\(^1\), Kristina DeParis\(^2\)
   \(^1\)Howard University, \(^2\)UNC Chapel Hill, \(^3\)UC Davis- CNPRC, \(^4\)LSU

8. **HIGH-THROUGHPUT GENERATION OF SIMIAN-HUMAN IMMUNODEFICIENCY VIRUS AND SIMIAN TROPIC HIV REPLICATION-COMPETENT MOLECULAR CLONES**
   Dr. Debashis Dutta\(^1\), Samuel Johnson\(^1\), Alisha Dalal\(^1\), Martin J. Deymier\(^2\), Eric Hunter\(^2\), Siddappa N Byrareddy\(^1\)
   \(^1\)University of Nebraska Medical Center, \(^2\)Emory Vaccine Center, Emory University
10 IMPACT OF MATERNAL IM/IN HIV-ENV IMMUNIZATION DURING PREGNANCY ON POSTNATAL HIV TRANSMISSION.
Maria Dennis, Josh Eudailey, Morgan Parker, Bonnie Philips, Genevieve Fouda, Koen Van Rompay, Kristina DeParis, Sallie Permar
1Duke Human Vaccine Institute, 2UNC, 3UC Davis

11 NIAID REAGENT RESOURCE SUPPORT CONTRACT FOR AIDS VACCINE DEVELOPMENT
Dr. Valerie Fremont, Dr. Rosemarie Mason, Michael Fisher, Dr. Mario Roederer, Dr. Ronald L. Brown
1Quality Biological, 2Vaccine Research Center, NIAID, NIH

12 BI-FUNCTIONAL ENTRY INHIBITORS SENSITIZE MACAQUE-TROPIC HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (HIV-1MT) TO ANTIBODIES GENERATED IN HIV-1MT-INFECTED MACAQUES
Dr. Shigeyoshi Harada, Yuta Hikichi, Dr. Yohei Seki, Dr. Takeshi Yoshida, Dr. Hirotaka Ode, Dr. Yasumasa Iwatani, Dr. Yasuhiro Yasutomi, Dr. Tomoyuki Miura, Dr. Tetsuro Matano, Dr. Hirofumi Akari, Dr. Kuzuhisa Yoshimura
1AIDS Research Center, National Institute of Infectious Diseases, 2Primate Research Institute, Kyoto University, 3National Hospital Organization Nagoya Medical Center, 4Tsukuba Primate Research Center, National Institutes of Biomedical Innovation, Health and Nutrition, 5Institute for Frontier Life and Medical Sciences, Kyoto University

13 MODELING OF NEUTROPHIL, BASOPHIL, AND CLASSICAL MONOCYTE KINETICS BY BRDU PULSE-CHASE LABELING IN YOUNG ADULT AND ELDERLY RHESUS MACAQUES
Ziyuan He, Chie Sugimoto, Carolina Allers, Hideki Fujioka, Elizabeth Didier, Marcelo Kuroda
1Division of Immunology, Tulane National Primate Research Center, 2Center for Computational Science, Tulane University, 3Division of Microbiology, Tulane National Primate Research Center

14 PERSISTENT MEMORY RESPONSE ELICITED BY HIV/SIV CONSERVED ELEMENT GAG PDNA PRIMING VACCINE AND RAPID RECALL UPON DNA OR RMVA VECTOR BOOST
Xintao Hu, Antonio Valentin, Yanhui Cai, Frances Dayton, Valerie Ficca, Margherita Rosati, Patricia Earl, Bernhard Moss, Niranjan Sardesai, James Mullins, George Pavlakis, Barbara Felber
1National Cancer Institute At Frederick, 2NIAID, 3Inovio Pharmaceuticals Inc., 4University of Washington

15 IMPROVING CHARACTERIZATION OF THE FULL MHC GENOMIC REGION IN MACAQUES
Julie A. Karl, Hailey E. Bussan, Trent M. Prall, Roger W. Wiseman, David H. O’Connor
1Department of Pathology and Laboratory Medicine, University of Wisconsin-Madison, 2Wisconsin National Primate Research Center, University of Wisconsin-Madison

16 ISOLATION OF A MONOCLONAL ANTIBODY TO THE RHESUS MACAQUE MHC CLASS I ALLOMORPH MAMU-A1*002
Laurel Kelnhofer, Dr. Matthew Reynolds, Jason Weinfurter
1Department of Pathology and Laboratory Medicine, University of Wisconsin-Madison, 2Wisconsin National Primate Research Center

17 A NON-REdundant, Reference Viral Database (RVDB) To Facilitate High-Throughput Sequencing (HTS) Analysis for Virus Detection
Dr. Norman Goodacre, Ms. Subhiksha Nandakumar, Ms. Aisha Aljanahi, Dr. Arifa Khan
1CBER/FDA, 2Georgetown University
18 **NEGATIVE ASSOCIATION BETWEEN THE OUTCOME OF VAGINAL SHIV CHALLENGE AND SERUM IGM ANTIBODIES INDUCED BY GP140 VACCINATION IN AGED Rhesus Macaques**

**Pam Kozlowski**, Diana Battaglia, Rafiq Nabi, Lori Spicer, Cynthia Derdeyn, Caroline Petitdemange, Sudhir Kasturi, Eric Hunter, Rama Amara, David Masopust, Bali Pulendran

1Louisiana State University Health Sciences Center, 2Emory University and Yerkes National Research Primate Center, 3University of Minnesota

19 **APPLYING RNA PROFILING AND FUNCTIONAL ANALYSIS APPROACHES TO EVALUATE VACCINE-INDUCED ADAPTIVE AND INNATE IMMUNE RESPONSES IN NON-HUMAN PRIMATE SIV CHALLENGE AND PROTECTION STUDIES**

**Dr. Lynn Law**, Richard Green, Jean Chang, Elise Smith, Dr. Connor Driscoll, Dr. Courtney Wilkins, Dr. Michael Gale

1Center for Innate Immunity and Immune Disease, Department of Immunology, University of Washington

20 **SECRETED VERSES TRANSMEMBRANE HIV ENV SOSIP DNA VACCINATION INDUCING B CELLS AND PLASMA BLASTS IN INDIAN Rhesus Macaques**

**Dr. David Leggat**, Dr. Alberto Cagigi, Dr. Luca Schifanella, Mr. Sandeep Narpala, Ms. Madhu Prabhakaran, Miss. Mitzi Donaldson, Dr. Kathryn Foulds, Mr. David Ambrozek, Mr. JP Todd, Dr. Genoveffa Franchini, Dr. Mario Roederer, Dr. Richard Koup, Dr. Adrian McDermott

1Vaccine Research Center, NIH, 2National Cancer Institute, NIH

21 **IMMUNE CELLS DISTRIBUTION DURING SIV INFECTION AND TREATMENT: CHARACTERIZATION OF BONE MARROW AND PERIPHERAL BLOOD IN SIV INFECTED cynomologus Macaques**

**Dr Julien Lemaitre**

1CEA - Université Paris Sud 11 - INSERM U1184, Immunology of viral infections and autoimmune diseases

22 **DEVELOPMENT AND VALIDATION OF FOUR NOVEL SHIV CHALLENGE STOCKS BEARING TRANSMITTED/FOUNDER TIER 2 HIV-1 SUBTYPE A, C OR D ENVs**

**Dr. Hui Li**, Ding Wenge, Dr. Fang-Hua Lee, Dr. Beatrice Hahn, Dr. George Shaw

2University Of Pennsylvania

23 **ENV375 SHIV DESIGN V2.0**

**Dr. Hui Li**, Alexander Murphy, Shuyi Wang, Wenge Ding, Dr. Beatrice Hahn, Dr. George Shaw

1University Of Pennsylvania

24 **EVOLUTION OF T CELL RESPONSES TO RHCMV-VECTORED SIV VACCINE IN PREVIOUSLY RHCMV-NEGATIVE AND -POSITIVE YOUNG MACAQUES**

**Kawthar Machmach**, Gema Méndez-Lagaeres, Amir Ardestchi, Nicole Narayan, William Chang, Jeff Lifson, Peter Barry, Dennis Hartigan-O’Connor

1CNPRC, 2Dept of Medical Microbiology & Immunology, UC Davis, 3Center for Comparative Medicine, School of Veterinary Medicine and School of Medicine, UC Davis, 4AIDS and Cancer Viruses Program, Leidos Biomedical Research, Inc., Frederick National Laboratory, 5Division of Experimental Medicine, Dept of Medicine, UC San Francisco, 6Dept of Pathology and Laboratory Medicine, School of Veterinary Medicine, UC Davis

25 **NHP AIDS RESEARCH SERVICES AT THE WISCONSIN NATIONAL PRIMATE RESEARCH CENTER**


1Wisconsin National Primate Research Center, University of Wisconsin-Madison, 2Department of Pathology and Laboratory Medicine, University of Wisconsin-Madison, 3Department of Pathobiological Sciences, University of Wisconsin-Madison
26 DELAYED SIV INFECTION IN VACCINATED, RECTALLY-CHALLENGED MAMU-B*08+ RHESUS MACAQUES IN THE ABSENCE OF ANTI-ENV HUMORAL RESPONSES

Dr. Mauricio Martins¹, Dr. Young Shin¹, Mr. Lucas Gonzalez-Nieto¹, Mr. Martin Gutman², Ms. Aline Domingues³, Ms. Helen Maxwell³, Dr. Diogo Magnani¹, Mr. Michael Ricciardi¹, Ms. Nuria Pedreño-Lopez¹, Mr. Varian Bailey⁴, Ms. Kim Weisgrau⁵, Dr. John Altman³, Dr. Christopher Parks⁶, Dr. Keisuke Ejima³, Dr. Brandon George³, Dr. David Allison³, Dr. Eva Rakasz⁵, Dr. Saverio Capuano III², Dr. Jeffrey Lifson⁶, Dr. Ronald Desrosiers², Dr. David Watkins¹

¹University Of Miami, ²University of Wisconsin-Madison; Wisconsin National Primate Research Center, ³University of Wisconsin School of Medicine and Public Health, ⁴International AIDS Vaccine Initiative, ⁵University of Alabama at Birmingham, ⁶AIDS and Cancer Virus Program, Leidos Biomedical Research, Inc., Frederick National Laboratory for Cancer Research

27 MODELING THE EVOLUTION OF SIV SOOTY MANGABEY PROGENITOR VIRUS TOWARDS HIV-2 USING HUMANIZED MICE

Dr. Kimberly Schmitt¹, Dr. Dipu Mohan Kumar¹, Mr. James Curlin¹, Ms. Stephanie Feely², Ms. Leila Remling-Mulder¹, Dr. Mark Stenglein¹, Dr. Shelby O’Connor², Dr. Preston Marx², Dr. Ramesh Akkina³

¹Colorado State University, Dept. of Microbiology, Immunology & Pathology, ²Tulane National Primate Research Center, ³University of Wisconsin School of Medicine and Public Health

28 EFFECTS OF SYSTEMIC AND MUCOSAL IMMUNIZATION OF RHESUS MACAQUES WITH SINGLE-CYCLE ADENOVIRUS VECTORS AND ENVELOPE PROTEIN VACCINES

Mr. William Matchett¹, Stephanie S. Anguiano-Zarate¹, Mary E. Barry¹, Guojun Yang², Pramod Nehete³, Siddappa N. Byrareddy³, Delphine C. Malherbe⁴, Nancy L. Haigwood⁴, Francois Villinger⁵, K. Jagannadh Sastry⁵, Michael A. Barry¹

¹Mayo Clinic, ²MD Anderson Cancer Center, ³University of Nebraska Medical Center, ⁴Oregon National Primate Research Center, ⁵New Iberia Research Center

29 CHANGES IN THE IMMUNE SYSTEM DRIVEN BY RHCMV AND ANELLOVIRUS INFECTIONS

Gema Mendez-Lagares¹,², Nicole Narayan¹,², Amir Ardešir¹, David Merriam¹,², Ding Lu¹,², Eric Delwart³,⁴, Dennis Hartigan-O’Connor¹,²,⁵

¹Uc Davis, ²California National Primate Research Center, ³Blood Systems Research Institute, ⁴Department of Laboratory Medicine, ⁵Division of Experimental Medicine

30 INVESTIGATION OF MACROPHAGES SERVING AS A VIRAL RESERVOIR IN PEDIATRIC SAIDS

Dr. Kristen Merino¹, Dr. Chie Sugimoto⁵, Dr. Yanhui Cai¹, Dr. Carolina Allers¹, Dr. Angela Amedee⁴, Dr. Christopher Destache⁶, Dr. Pavan Kumar Prathipati⁵, Dr. Elizabeth S Didier¹, Dr. Marcelo J Kuroda¹

¹Tulane National Primate Research Center, ²Laboratory of International Epidemiology, Dokkyo Medical University, ³HIV-1 Immunopathogenesis Laboratory, Wistar Institute, ⁴LSU HSC School of Medicine, ⁵Creighton University, School of Pharmacy and Health Professions

31 RANTES-DT390 AS A THERAPEUTIC FOR SIV RESERVOIR ELIMINATION

Mr. David Merriam¹, Ms. Connie Chen¹, Dr. Gema Mendez Lagares¹, Dr. Francois Villinger³, Dr. Dennis Hartigan-O’Connor¹

¹UC-Davis, ²University of Louisiana at Lafayette

32 IMMUNOLOGICAL CONTROL OF SIMIAN IMMUNODEFICIENCY VIRUS FOLLOWING AN ADOPTIVE TRANSFER PRIME-PULL STRATEGY

Mariel Mohns¹, Dawn Dudley¹, Justin Greene², Eric Peterson³, David O’Connor¹,³

¹Department of Pathology and Laboratory Medicine, University of Wisconsin-Madison, ²Vaccine and Gene Therapy Institute and Oregon National Primate Research Center, Oregon Health & Science University, ³Wisconsin National Primate Research Center, University of Wisconsin-Madison
33 SCHIV MT145: A NOVEL SHIV BEARING THE ENV OF A PRIMARY CHIMPANZEE SIV STRAIN WITH ANTIGENIC CROSS-REACTIVITY TO HIV-1 V1V2 BNAB EPITOPES

Alexander Murphy1, Dr. Hui Li1, Wenge Ding1, Jessica Smith1, Dr. Beatrice H. Hahn1, Dr. George M. Shaw2
1University Of Pennsylvania

34 NONINVASIVE MONITORING OF CD4 T CELLS AT MULTIPLE MUCOSAL TISSUES AFTER INTRanasal VACCINATION IN RHESUS MACAQUES

Dr. Pramod Nehete1,2, Dr. Stephanie Dorta-Estremera3, Dr. Guojun Yang3, Dr. Hong He4, Bharti Nehete5, Dr. Kathryn Shelton5, Dr. Michael Barry5,6,7,8, Dr. Jagannadha Sastry1,2,3
1The University of Texas MD Anderson Cancer Center, Department of Veterinary Sciences, Bastrop, Texas, TX 78602, 2The University of Texas MD Anderson Cancer Center, Department of Immunology, Houston, Texas, TX 77030, 3The University of Texas Graduate School of Biomedical Sciences at Houston, Houston, TX 77030, 4The University of Texas MD Anderson Cancer Center, Department of Stem Cell Transplantation, Houston, Texas, TX 77030, 5Department of Internal Medicine, Division of Infectious Diseases, Mayo Clinic, Rochester, MN 55902, USA, 6Department of Molecular Medicine, Mayo Clinic, Rochester, MN 55902, USA, 7Department of Immunology, Mayo Clinic, Rochester, MN 55902, USA 8Translational Immunology virology and Biodefense Program, Mayo Clinic, Rochester, MN 55902, USA

35 INDUCTION OF MUTANT EPITOPE-SPECIFIC CD8+ T CELLS IS AN INDICATOR OF THE BEGINNING OF VIRAL CONTROL FAILURE IN SIV CONTROLLERS.

Dr. Takushi Nomura1,2, Dr. Hiroshi Ishii1, Dr. Sayuri Seki1, Dr. Hiroyuki Yamamoto1, Dr. Kazutaka Terahara3, Dr. Tomoyuki Miura4, Dr. Tetsuro Matano5,6,7,8, Dr. Takushi Nomura1,2, Dr. Hiroshi Ishii1, Dr. Sayuri Seki1, Dr. Hiroyuki Yamamoto1, Dr. Kazutaka Terahara3, Dr. Tomoyuki Miura4, Dr. Tetsuro Matano5,6,7,8
1AIDS Research Center, National Institute of Infectious Diseases, 2Center for AIDS Research, Kumamoto University, 3Department of Immunology, National Institute of Infectious Diseases, 4Institute for Frontier Life and Medical Sciences, Kyoto University, 5Institute of Medical Science, University of Tokyo

36 SIMIAN IMMUNODEFICIENCY VIRUS SIVMAC239 INFECTION AND SIMIAN HUMAN IMMUNODEFICIENCY VIRUS SHIV89.6P INFECTION RESULT IN PROGRESSION TO AIDS IN CYNOMOLGUS MACAQUES FROM ASIAN COUNTRY ORIGIN

Dr Tomotaka Okamura1, Dr Yasuhiro Yasutomi2
1Tsukuba Primate Research Center, National Institutes of Biomedical Innovation, Health and Nutrition

37 RETINOIC ACID (RA) UPREGULATES A4B7 ON CD4+ T CELLS AND ACTIVATES LATENT RESERVOIRS

Mr Omalla Olwenyi1,2, Dr Nanda Kishore Routhu1, Dr Neil Sidell2, Dr Aftab A Ansari2, Dr Siddappa N. Byrareddy2
1University Of Nebraska Medical Center, 2Emory University School of Medicine

38 EVALUATING VAGINAL FILM FORMULATIONS AS MULTIPURPOSE PREVENTION TECHNOLOGIES (MPT) IN THE MACAQUE MODEL

Dr. Dorothy Patton1, Yvonne Cosgrove Sweeney1, Dr Lisa Rohan2
1University Of Washington, 2Magee Womens Research Institute

39 HIV/SHIV-SPECIFIC, CCR5-EDITED CAR T-CELLS ENGRAFT AND PERSIST IN ACUTELY INFECTED NONHUMAN PRIMATES

Christopher Peterson1,2, Courtnee Clough3, Malika Hale3, Taylor Mesojednik3, Bryan Sands3, Hans-Peter Kiem1,2,3, Thor A. Wagner2,3, David J. Rawlings2,3, Christopher Peterson1,2, Courtnee Clough3, Malika Hale3, Taylor Mesojednik3, Bryan Sands3, Hans-Peter Kiem1,2,3, Thor A. Wagner2,3, David J. Rawlings2,3
1Fred Hutchinson Cancer Research Center, 2University of Washington, 3Seattle Children’s Research Institute
40 THE OPTIMIZATION OF PEDIATRIC VACCINE REGIMENS TO PREVENT MOTHER-TO-CHILD TRANSMISSION OF HIV THROUGH BREAST MILK
Dr. Bonnie Phillips, Genevieve Fouda, Justin Pollara, Pamela Kozlowski, Anthony Moody, Guido Ferrari, Sallie Permar, Kristina De Paris
Department of Microbiology and Immunology, School of Medicine, University of North Carolina at Chapel Hill, Duke University Medical Center, Duke Human Vaccine Institute, Department of Microbiology, Immunology and Parastitology, Louisiana State University Health Sciences Center

41 FULL-LENGTH KILLER-CELL IMMUNOGLOBULIN-LIKE RECEPTOR TRANSCRIPT DISCOVERY IN INDIAN RHESUS MACAQUES
Trent Prall, Julie Karl, Michael Graham, Hailey Bussen, Cecelia Shortreed, Roger Wiseman, David O’Connor
Wisconsin National Primate Research Center, University Of Wisconsin-Madison, Department of Pathology and Laboratory Medicine, University of Wisconsin-Madison

42 TRACKING NKG2C+ MEMORY AND MEMORY-LIKE NK CELLS IN SIV AND CMV INFECTIONS OF RHESUS MACAQUES
Dr. Daniel Ram, Dr. R. Keith Reeves
Beth Israel Deaconess Medical Center/Harvard Medical School

43 PRESERVED CYTOKINE AND CYTOTOXIC EFFECTOR FUNCTIONS OF GUT MUCOSAL VA1 ΓΔ T CELLS IN SIV-INFECTED MACAQUES
Tulane National Primate Research Center, Tulane University

44 A NOVEL STRATEGY TO ADAPT SHIV-E1 CARRYING ENV FROM AN RV144 VOLUNTEER TO RHESUS MACAQUES: CORECEPTOR SWITCH AND FINAL RECOVERY OF A PATHOGENIC VIRUS WITH EXCLUSIVE R5 TROPISM
Texas Biomedical Research Institute, UT Health San Antonio, Dana-Farber Cancer Institute, Harvard Medical School, Duke University Medical Center, Advanced Biosciences Laboratories Inc., Henry M. Jackson Foundation, Department of Disease Control, Ministry of Public Health, Mahidol University, Armed Forces Research Institute of Medical Sciences

45 NOVEL FULL-LENGTH MAJOR HISTOCOMPATIBILITY COMPLEX CLASS I ALLELE DISCOVERY AND HAPLOTYPE DEFINITION IN PIG-TAILED MACAQUES
Matthew Semler, Roger W. Wiseman, Julie A. Karl, Michael E. Graham, Samantha M. Gieger, David H. O’Connor
Department of Pathology and Laboratory Medicine, University of Wisconsin-Madison, Wisconsin National Primate Research Center, University of Wisconsin-Madison

46 TARGETING CAR T CELLS TO B CELL FOLLICLES TO CURE HIV INFECTION
PJ Skinner, A Hajduckzi, P Haran, MS Pampusch, G Mwakulundwa, S Bolivar-Wagers, DA Vargas-Inchaustegui, EG Rakasz, E Connick, EA Berger
Department of Veterinary and Biomedical Sciences, University of Minnesota, Laboratory of Viral Diseases, National Institutes of Allergy and Infectious Diseases, The National Institutes of Health, Wisconsin National Primate Research Center, University of Wisconsin-Madison, Division of Infectious Diseases, University of Arizona
USE OF QUANTERIX SIMOA ULTRASENSITIVE IMMUNOASSAY FOR ASSESSING RESIDUAL VIRUS IN NON-HUMAN PRIMATE MODELS OF AIDS
Dr. Adrienne E. Swanstrom², Robert Gorelick¹, Guoxin Wu², Bonnie J. Howell², Anitha Vijayagopalan¹, Gregory Q. Del Prete¹, Julian Bess Jr. ¹, Jeffrey D. Lifson¹
¹AIDS And Cancer Virus Program, ²Merck

DISTRIBUTION OF LONG-LIVED AND SHORT-LIVED MACROPHAGES IN THE INTESTINAL TRACT OF SIV-INFECTED RHESUS MACAQUES
Naofumi Takahashi¹, Carolina Allers¹, Cecily Midkiff², Xavier Alvarez², Elizabeth Didier³, Woong-Ki Kim⁴, Marcelo Kuroda¹
¹Division of Immunology, Tulane National Primate Research Center, ²Division of Comparative Pathology, Tulane National Primate Research Center, ³Division of Microbiology, Tulane National Primate Research Center, ⁴Department of Microbiology and Molecular Cell Biology, Eastern Virginia Medical School

DIRECTED HOMING OF ADOPTIVELY TRANSFERRED T-CELLS THROUGH HOMING MARKER TRANSDUCTION
Matthew Trivett¹, Daniel Burke¹, Lori Coren¹, Claire Deleage¹, Greg Del Prete¹, Jake Estes¹, Jeffery Lifson¹, David Ott¹
¹Leidos Biomedical Research, Inc.

FUNCTIONALLY PRESERVED MAIT CELLS ARE ASSOCIATED WITH CONTROLLED SHIV INFECTION
Dr. Amudhan Murugesan, Dr Chris Ibegbu, Dr Tiffany Styles, Sakeenah Hicks, Mr Micheal Sabula, Dr Pradeep Reddy, Andrew Jones, Dr Rama Amara, Dr. Vijayakumar Velu¹
¹Yerkes National Primate Research Center

COMPARING THE EFFECTS OF PROGESTIN-BASED CONTRACEPTION AND LUTEAL PHASE OF THE MENSTRUAL CYCLE ON PUTATIVE HIV SUSCEPTIBILITY GENES IN PIG-TAILED MACAQUES
Dr. Ajay Sundaram Vishwanathan¹, Dr. Steven E Bosinger², Gregory K Tharp², Nirav B Patel², Chunxia Zhao¹, James Mitchell¹, Shanon Ellis¹, Ellen N Kersh¹, Janet M McNicholl¹
¹CDC (Centers For Disease Control & Prevention), ²Yerkes National Primate Research Center, Emory University

OPTIMIZED METHOD FOR EXTRACTING HIGH QUALITY RNA FROM FACS-SORTED, INTRACELLULAR STAINED PRIMARY RHESUS MACAQUE LYMPHOCYTES
Dr. Yichuan Wang¹, Dr. David Ott¹, Matthew Trivett¹, Dr. Jeffrey Lifson¹
¹Leidos Biomedical Research, Inc.

A NOVEL PKC ACTIVATOR, 10-METHYL-APLOG-1 EFFICIENTLY REACTIVATE LATENT HIV-1 IN COMBINATION WITH A BET INHIBITOR JQ1.
Ayaka Washizaki¹, Megumi Murata¹, Yin Pui Tang², Yohei Seki³, Kazuhiro Irie³, Hirofumi Akari³
¹Primate Research Institute, Kyoto University, ²Medical School, University of Exeter, ³Graduate School of Agriculture, Kyoto University

RESOURCES FOR NON-HUMAN PRIMATE MODELS OF ZIKA VIRUS
Andrea Weiler¹, Matthew Aliota², James Weger-Lucarelli³, Matthew Semler¹, Gabriele Barry⁴, Dawn Dudley⁵, Christina Newman⁶, Shelby O'Connor⁷, David O'Connor⁸, Gregory Ebel⁹, Thomas Friedrich¹,²
¹WNPRC, ²UW-Madison Pathobiological Sciences, ³Microbiology, Immunology and Pathology - Colorado State University, ⁴UW-Madison Cellular and Molecular Pathology
55 DOES SIMIAN BETARETROVIRUS (SRV) ANTIBODY IN BABOONS (PAPIO SP.) INDICATE INFECTION?
Joann Yee1, Richard Grant2, Koen Van Rompay1, Jeffrey Roberts1, Joe Simmons1, James Papin4
1California National Primate Research Center, University of California, 2Washington National Primate Research Center, University of Washington, 3Michale E. Keeling Center for Comparative Medicine and Research, University of Texas MD Anderson Cancer Center, 4Department of Pathology, Division of Comparative Medicine, University of Oklahoma Health Science Center

56 A DOSE-ESCALATION STUDY OF PHARMACOLOGIC INHIBITION OF B-CATENIN SIGNALING IN HEALTHY RHESUS MACAQUES
PhD Michelle Zanoni1, PhD Maud Mavigner1, Dr. Jakob Habib1, Dr. Cameron Mattingly3, PhD Kirk Easley1, Dr. H Kouji2, Md. PhD. Ann Chahroudi2
1Emory University, 2PRISM Pharma Co., Ltd.

57 EFFECTS OF RAPAMYCIN ADMINISTRATION ON IMMUNE RESPONSES IN SIV-INFECTED RHESUS MACAQUES
Dr Widade Ziani1, Dr Xiaolei Wang1, Dr Kasi Russell-Lodrigue1, Dr Ronald S. Veazy1, Dr Huanbin Xu1
1TNPRC

58 EFFECTS OF RAPAMYCIN ADMINISTRATION ON IMMUNE RESPONSES IN SIV-INFECTED RHESUS MACAQUES
Dr Widade Ziani1, Dr Xiaolei Wang1, Dr Kasi Russell-Lodrigue3, Dr Ronald S. Veazy1, Dr Huanbin Xu1
1TNPRC

20:00 – 20:30 Poster removal
Promenade Lobby
All posters must be removed at the end of the poster session.
Thursday, August 24, 2017

7:30 – 8:30  Continental Breakfast  Promenade Terrace

8:30 – 10:15  Scientific Session 3 Virus-host interactions and immune responses

Chairs: Mario Roederer and Genevieve Fouda

8:30 – 9:00  300  QUANTIFYING LEUKOCYTE TRAFFICKING IN NHP BY SERIAL INTRAVASCULAR STAINING
*Mario Roederer*,1 Elizabeth Potter1, Kathy Foulds1, Tricia Darrah1, Robert Seder1, Hannah Gideon2, Joanne Flynn2
1VRC, NIAID, NIH, 2University of Pittsburgh

9:00 – 9:15  301  FAILURE TO INDUCE CD11C+ B CELLS IS ASSOCIATED WITH A RAPID PROGRESSOR PHENOTYPE IN ORALLY-INOCULATED SIV-INFECTED INFANT MACAQUES
*Matthew Wood*,1 Megan Templeton1, Adriana Lippy1, Patience Murapa2, Deborah Fuller3, Donald Sodora1,3
1Center For Infectious Disease Research, 2University of Washington, WaNPRC and Department of Microbiology, 3University of Washington, Department of Global Health

9:15 – 9:30  302  CHARACTERIZING THE CHANGES IN INITIAL HIV/SIV INFECTION BY CELL PHENOTYPING AT ANORECTAL MUCOSA OF RHESUS MACAQUES
*Dr. Danijela Maric*,1 Lisette Corbin1, Dr. Ron Veazey2, Dr. Thomas Hope1
1Northwestern University, 2Tulane University

9:30 – 9:45  303  PARADOXICAL MYELOID-DERIVED SUPPRESSOR CELL REDUCTION IN THE BONE MARROW OF SIV CHRONICALLY INFECTED MACAQUES
*Yongjun Sui*,1 Blake Frey1, Yichuan Wang1, Rolf Billeskov1, Shweta Kulkarni1, Katherine McKinnon1, Tracy Rourke1, Linda Fritts1, Christopher Miller2, Jay Berzofsky1
1NIH NCI Vaccine Branch, 2Center for Comparative Medicine, University of California Davis

9:45 – 10:00  304  POLYMORPHISMS IN TETHERIN ARE ASSOCIATED WITH DIFFERENCES IN PEAK VIREMIA DURING ACUTE INFECTION OF RHESUS MACAQUES WITH SIV DELTA-NEF
*Sanath Kumar Janaka*,1 William Neidermeyer2, Ruth Serra-Moreno3, Bin Jia4, James Hoxie5, Ronald Desrosiers6, Paul Johnson7, Jeffrey Lifson8, Steven Wolinsky2, David Evans1
1Department of Pathology and Laboratory Medicine, University of Wisconsin-Madison, 2Department of Microbiology and Immunology, Harvard Medical School, 3Department of Biological Sciences, Texas Tech University, 4Pfizer Inc, 5Department of Medicine, University of Pennsylvania, 6Department of Pathology, Miller School of Medicine, University of Miami, 7Yerkes National Primate Center, 8AIDS and Cancer Virus Program, Leidos Biomedical Research Inc, FNLCR, 9Division of Infectious Diseases, Northwestern University Feinberg School of Medicine

10:00 – 10:15  305  MUTATIONS IN NEF THAT SELECTIVELY DISRUPT TETHERIN ANTAGONISM IMPAIR SIV REPLICATION DURING ACUTE INFECTION OF RHESUS MACAQUES
*Aidin Tavakoli-Tarneh*,1 Dr Sanath Kumar Janaka1, Lauren Callahan1, Ksenia Bashkueva1, Katie Zarbock2, Dr Shelby O’Connor1,2, Kristin Crosno2, Saverio Capuano 3rd2, Dr Ruth Serra-Moreno1, Dr Hajime Uno5, Dr Jeffrey D. Lifson5, Dr David Evans1,2
1Department of Pathology and Laboratory Medicine, University of Wisconsin-Madison, 2Wisconsin National Primate Research Center, 3Department of Biological Sciences, Texas Tech University, 4Department of Biostatistics and Computational Biology, Dana-Farber Cancer Institute, 5AIDS and Cancer Virus Program, Leidos Biomedical Research Inc
10:45 – 10:45  Coffee Break  Promenade Terrace

10:45 – 12:00  Scientific Session 3 Virus-host interactions and immune responses  (continued)

10:45 – 11:00  306  NON-HUMAN PRIMATE MODELS OF HIV MATERNAL AND INFANT IMMUNIZATION  
Genevieve Fouda1  
1Duke Human Vaccine Institute

11:00 – 11:15  307  CD8 T CELLS NOT NECESSARILY REQUIRED FOR CONTROL OF SIV VIREMIA IN MAURITIAN CYNOMOLGUS MACAQUES  
Matthew Sutton1, Alexis Balgeman1, Amy Ellis1, Gabrielle Barry2, Andrea Weiler2, Benjamin von Bredow1, Dane Gellerup2, David Evans1,2, Thomas Friedrich1,3, Shelby O’Connor1,2  
1Department of Pathology and Laboratory Medicine, UW-Madison, 2Wisconsin National Primate Research Center, UW-Madison, 3Department of Pathobiological Sciences, UW-Madison

11:15 – 11:30  308  ASSOCIATION BETWEEN ADIPOSE TISSUE MACROPHAGES AND INFLAMMATION IN SIV-INFECTED RHESUS MACAQUES  
Marissa Fahlberg1, Dr. Elizabeth Didier1, Dr. Marcelo Kuroda1  
1Tulane University

11:30 – 11:45  309  SIMIAN IMMUNODEFICIENCY VIRUS INFECTION LEADS TO THE APPEARANCE OF INTERLEUKIN-18 SECRETING AND CYTOTOXIC NATURAL KILLER-LIKE B-CELLS IN THE MUCOSA OF THE COLON  
Andrew Cogswell1, Moriah Castleman2, Stephanie Dillon2, Cara Wilson2, Ed Barker1  
1Rush University Medical Center, 2University of Colorado

11:45 – 12:00  310  INFUSIONS OF IN VITRO EXPANDED AUTOLOGOUS NK CELLS ON VIRAL LOADS IN SIV INFECTED RHESUS MACAQUES  
Dr. Siddappa Byrareddy1, Robert Russo2, Dr. Dean Lee3, Dr. Aftab Ansari4  
1University of Nebraska Medical Center, 2Emory University School of Medicine, 3Nationwide Children’s Hospital, 4Emory University School of Medicine

12:00 – 14:00  Lunch (on your own)

14:00 – 15:45pm  Scientific Session 4 Genomics: Host and microbiome

Chairs: Brandon Keele and Jeffrey Rogers

14:00 – 14:30  400  USING MOLECULARLY MODIFIED VIRUSES TO TRACK TRANSMISSION AND LATENCY  
Brandon Keele1  
1Frederick National Lab

14:30 – 14:45  401  CLONOTYPE LINEAGE TRACING OF VACCINE-INDUCED B CELLS IN VIVO USING THE BALDR COMPUTATIONAL PIPELINE FOR IMMUNOGLOBULIN RECONSTRUCTION IN SINGLE-CELL RNA-SEQ DATA  
Amit Upadhyay1, Alice Cho2, Amber Wolabaugh1, Robert Kauffman3, Gregory Tharp1, Reem Dawoud1, Nirav Patel1, F. Eun-Hyung Lee2, Jens Wrammert2, Steven Bosingier1  
1Yerkes Nprc/emory University, 2Emory University
14:45 – 15:00  402  DEVELOPMENT OF A RAPID AND SCALABLE METHOD TO BOTH SEQUENCE AND EXOGENOUSLY EXPRESS PAIRED FULL-LENGTH MACAQUE ANTIGEN-SPECIFIC T-CELL RECEPTORS
Dr. Shaheed Abdulhaqq1, Dr. Benjamin Bimber1, Dr. Scott Hansen1, Dr. Helen Wu1, Abigail Ventura1, Dr. Karin Wisskirchen1, Dr. Ulrike Protzer1, Alfred Legasse1, Dr. Michael Axthelm1, Dr. Louis Picket1, Dr. Jonah Sacha1
1Oregon Health & Science University/Vaccine And Gene Therapy Institute, 2Technical University of Munich

15:00 – 15:15  403  HIGHLY RESOLVED LONG READ, SINGLE MOLECULE SEQUENCING OF FULL-LENGTH SIV AND SIV ENV
Ms. Alesia Antoine1, Dr. Ismael Ben Farouc Fofana2, Dr. Gintaras Deikus1, Dr. Robert Sebra2, Dr. Welkin Johnson2, Dr. Melissa Laird Smith1
1Icahn School Of Medicine At Mount Sinai, 2Boston College

15:15 – 15:30  404  INFLAMMATORY INSULT PRIOR TO SIMIAN IMMUNODEFICIENCY VIRUS INFECTION INCREASES ACUTE PHASE PATHOGEN BURDEN
Dr Adam Ericson1, Mr Matthew Semler2, Ms Hailey Bussan2, Mr Trent Prall1, Mr Eric Peterson3, Mr Jason Weinfurter2, Dr Roger Wiseman1,2, Prof David O’Connor1,2
1Wisconsin National Primate Research Center, 2University of Wisconsin

15:30 – 15:45  405  IMPACT OF MICROBIOME MANIPULATION ON SHIV ACQUISITION IN Rhesus Macaques
Dr. Jennifer A. Manuzak1,2, Dr. Tiffany Hensley-McBain1,2, Charlene Miller1,2, Dr. Alexander S. Zeven1,2, Toni M. Gott1,2, Ernesto Coronado1,2, Ryan Cheu1,2, Andrew Gustin1,2, Dr. Elias K. Haddad3, Dr. Deborah H. Fuller1,2, Dr. Nancy L. Haigwood4,5, Dr. Nichole R. Klatt1,2
1University of Washington, 2Washington National Primate Research Center, 3Drexel University, 4Oregon National Primate Research Center, 5Oregon Health and Science University

15:45 – 16:15  Coffee Break
Promenade Terrace

16:15 – 17:30  Scientific Session 4 Genomics: Host and microbiome (continued)

16:15 – 16:30  406  WHOLE GENOME SEQUENCE DATA FOR MACAQUES: IMPLICATIONS FOR AIDS RESEARCH
Jeffrey Rogers1
1Baylor College of Medicine

16:30 – 16:45  407  WHOLE-TRANSCRIPTOME SEQUENCING TO IDENTIFY IMMUNE GENE VARIANTS
Amelia K. Haj1, Julie A. Karl1, Roger W. Wiseman1, David H. O’Connor1
1UW-Madison

16:45 – 17:00  408  CHARACTERIZATION OF MAJOR HISTOCOMPATIBILITY COMPLEX SEQUENCES IN BABOONS
Hailey E. Bussan1, Joe H. Simmonds2, Roger W. Wiseman1,2, Julie A. Karl1, Cecilia G. Shortreed1, Michael E. Graham1, David O’Connor1,2
1Department of Pathology and Laboratory Medicine, University of Wisconsin-Madison, 2Wisconsin National Primate Research Center, University of Wisconsin-Madison, 3MD Anderson Cancer Center, University of Texas

17:00 – 17:15  409  COMPARISON OF THE HOST RESPONSE TO RHCMV/SIV VACCINE VECTORS BETWEEN PROTECTED AND NON-PROTECTED RHESUS MACAQUES
Dr. Courtney Wilkins1, Rich Green1, Dr. Connor Driscoll1, Jean Chang1, Elise Smith1, Dr. Lynn Law1, Dr. Scott Hansen2, Dr. Lewis Picket2, Dr. Michael Gale, Jr.1
1Department of Immunology, Center for Innate Immunity and Immune Disease, University Of Washington, 2Vaccine and Gene Therapy Institute and Oregon National Primate Research Center, Oregon Health & Science University
17:15 – 17:30  **410**  ADAPTATION OF SIV TO BABOON PBMC OR ISOLATED CD4 CELLS: INSIGHTS INTO CELL TYPES REQUIRED FOR BABOON RESISTANCE TO SIV INFECTION  
*Veronica Obregon-Perko*¹,², Laura Parodi², Vida Hodara²,³, Jason T Ladner⁴, Michael R Wiley⁴, Gustavo F Palacios⁴, Luis D Giavedoni²,³  
¹Department of Microbiology, Immunology, and Molecular Genetics, University of Texas Health Science Center, ²Department of Virology and Immunology, Texas Biomedical Research Institute, ³Southwest National Primate Research Center, Texas Biomedical Research Institute, ⁴Center for Genome Sciences, United States Army Medical Research Institute of Infectious Diseases

18:30 – 19:00  DINNER RECEPTION

19:00 – 19:45  DINNER

19:45 – 21:00  DINNER SPEAKER – Dr. Bonnie Mathieson, National Institutes of Health  
**411**  RESEARCH IN NHP ON THE ROAD TO THE END OF AIDS
Friday, August 25, 2017

7:30 – 8:30  Continental Breakfast  Promenade Terrace

8:30 – 10:15  Scientific Session 5 ‘SIV tools’ for other pathogens

Chairs: Koen Van Rompay and Dawn Dudley

8:30 – 9:00  500  JUMPING FROM HIV INTO ZIKA: RESEARCH INTO HIGH GEAR
Dr. Koen Van Rompay1
1California National Primate Research Center, University of California, Davis

9:00 – 9:15  501  A NEW HIV/HBV CO-INFECTION MODEL: HEPATOCYTIC EXPRESSION OF HUMAN SODIUM TAURオCHOLATE COTRANSPORTING POLYPEPTIDE (NTCP) ENABLES HEPATITIS B VIRUS INFECTION OF MACAQUES
Dr. Benjamin Burwitz1,4, Mr. Jochen Wettenegel2, Dr. Martin Muck-Haussi2, Mrs. Katherine Hammond1, Dr. Marc Ringelhan1,3, Dr. Chunkyu Ko2, Mr. Jason Reed1, Mr. Reed Norris2, Dr. Byung Park3, Dr. Sven Moller-Tank6, Dr. Knud Esser1, Dr. Justin Greene1, Dr. Helen Wu1, Dr. Shaheed Abdulhaqq1, Dr. Gabriela Webb1, Mr. William Sutton4, Mr. Alex Klug4, Ms. Tonya Swanson5, Mr. Alfred Legasse4, Dr. Aravind Asokan6, Dr. Nancy Haigwood4, Prof. Ulrike Protzer2,7, Dr. Jonah Sacha1,4
1Vaccine & Gene Therapy Institute, Oregon Health & Science University, 2Institute of Virology, Technical University of Munich, Helmholtz Zentrum München, 3Department of Internal Medicine II, Technical University of Munich, 4Oregon National Primate Research Center, Oregon Health & Science University, 5Public Health & Preventative Medicine, Oregon Health & Science University, 6Gene Therapy Center, The University of North Carolina at Chapel Hill, 7German Center for Infection Research, Munich partner site

9:15 – 9:30  502  PRE-EXISTING SIV INFECTION INCREASES SUSCEPTIBILITY OF MAURITIAN CYNOMOLGUS MACAQUES TO M. TUBERCULOSIS
Mark Rodgers1, Cassandra Updike1, Dr. Amy Ellis3, Alexis Balgeman1, Pauline Maiello1, Dr. Tom Friedrich4, Gabrielle Barry4, Dr. Joshua Mattila2, Dr. Shelby O’Connor3, Dr. Charles A. Scanga1
1University of Pittsburgh School of Medicine, 2University of Pittsburgh Graduate School of Public Health, 3University of Wisconsin-Madison, 4Wisconsin National Primate Research Center

9:30 – 9:45  503  MTB/SIV CO-INFECTION INDUCES DIFFERENTIAL T CELL RESPONSES IN RHESUS MACAQUES
Miss Allison N. Bucsan1,2, Dr. Taylor W. Foreman1,2, Dr. Shabaana A. Khader4, Dr. Jyothi Rengarajan4, Dr. James A. Hoxie5, Dr. Andrew A. Lackner1, Dr. Deepak Kaushal1,2
1Tulane National Primate Research Center, 2Tulane University, 3Washington University, 4Emory University School of Medicine, 5UPenn Center for AIDS Research, University of Pennsylvania

9:45 – 10:00  504  DEVELOPMENT OF A NON-HUMAN PRIMATE MODEL FOR RECTAL SYPHILIS
Dr. Alay Sundaram Vishwanathan4, Dr. Cassandra Tansey1, Ms. Chunxia Zhao1, Mr. Andre Hopkins1, Dr. Yetunde Fakile5, Ms. Tamanna Ahmed1, Dr. Allan Pillay1, Dr. Samantha Katz1, Dr. Ellen Kersh1, Mr. James Mitchell1, Dr. Janet McNicholl1
1CDC (Centers For Disease Control & Prevention)
10:00 – 10:15 505 ALTERNATIVE NK CELL SIGNALING MECHANISMS IN CMV AND SIV INFECTION
Spandan Shah1,2, Cordelia Manickam1,2, Daniel Ram1,2, R. Keith Reeves1,2
1Beth Israel Deaconess Medical Center, 2Harvard Medical School

10:15 – 10:45 Coffee Break
Promenade Terrace

10:45 – 12:00 Scientific Session 5B NHP models for other infectious diseases: Using SIV tools to investigate other pathogens

10:45 – 11:00 506 NONHUMAN PRIMATE MODELS FOR ZIKA VIRUS INFECTION
Dr. Dawn Dudley1, Christina M. Newman1, Emma L. Mohr2, Matthew T. Aliota3, Sydney M. Nguyen4, Kathleen M. Antony4, Sarah Kohn5, Heather A. Simmons6, Andrea M. Weiler6, Matthew R. Semler1, Mariel S. Mohns1, Meghan E. Breitbach1, Laurel M. Stewart1, Michelle Koenig1, Bryce Wolfe1, M. Shahriar Salamat1, Leandro B. C. Teixeira7, Xiankun Zeng8, Gregory J. Wiepz2, Troy H. Thoong8, Gabrielle L. Barry6, Kim L. Weisgrau2, Logan J. Vosler6, Mustafa N. Rasheed1, Michael E. Graham1, Lindsey Block1, Jennifer Post6, Jennifer M. Hayes8, Nancy Schultz-Darken6, Michele L. Schotzko6, Josh A. Eudailey10, Jens Kuhn6, Sallie R. Permar10, Eva G. Rakasz6, Saverio Capuano III6, Alice F. Tarantal11, Jorge E. Osorio9, Shelby L. O’Connor1, Thomas C. Friedrich6,3, Thaddeus G. Golos4,6,3, David H. O’Connor1,6
1Department of Pathology and Laboratory Medicine, University of Wisconsin-Madison, 2Department of Pediatrics, University of Wisconsin-Madison, 3Department of Pathobiological Sciences, University of Wisconsin-Madison, 4Department of Obstetrics and Gynecology, University of Wisconsin-Madison, 5Department of Radiology, University of Wisconsin-Madison, 6Wisconsin National Primate Research Center, University of Wisconsin-Madison, 7School of Veterinary Medicine, University of Wisconsin-Madison, 8Integrated Research Facility at Fort Detrick, Division of Clinical Research, National Institute of Allergy and Infectious Diseases, National Institutes of Health, 9Department of Comparative Biosciences, University of Wisconsin-Madison, 10Department of Pediatrics and Human Vaccine Institute, Duke University Medical Center, 11Departments of Pediatrics and Cell Biology and Human Anatomy, University of California-Davis, California National Primate Research Center

11:00 – 11:15 507 INFECTION DYNAMICS AND PERSISTENCE OF ZIKA VIRUS IN NEW AND OLD WORLD NONHUMAN PRIMATES
Dr Neil Berry1, Dr Deborah Ferguson1, Mrs Claire Ham1, Ms Jo Hall1, Mr Adrian Jenkins1, Mrs Elaine Giles1, Dr Nicola Rose1, Dr Roger Hewson2, Dr Stuart Dowell2, Dr Sarah Kempster1, Dr Neil Almond1
1NIBSC, 2PHE Porton

11:15 – 11:30 508 IMPACT OF RHEUS CYTOMEGALOVIRUS EXPOSURE ON HOST INTESTINAL GENE EXPRESSION
Nicole Narayan1,2, Gema Méndez-Lagares1,2, Kawthar Machmach1,2, David Merriam1,2, Connie Chen1,2, Amir Ardeshir2, W L William Chang1, Peter A Barry3, Dennis J Hartigan-O’Connor1,2
1Department of Medical Microbiology & Immunology, University of California, Davis, 2California National Primate Research Center, University of California, Davis, 3Center for Comparative Medicine, University of California, Davis

11:30 – 11:45 509 IMPACT OF ANTIRETROVIRAL DRUG THERAPY ON MUCOSAL INFLAMMATORY AND REGULATORY RESPONSES IN SIV INFECTED MACAQUES
Megan O’Connor1,2, Paul Munson1,2, Hillary Tunggal1,2, Nika Hajari1,2, Debra Bratt1,2, Drew May2, Solomon Wangari2, Brian Agricola3, Jeremey Smedley2, Deborah Fuller1,2
1Department of Microbiology, University of Washington, 2Washington National Primate Research Center
11:45 – 12:00  510  EVALUATION OF A COMBINATION ANTIRETROVIRAL THERAPY REGIMEN CONTAINING LONG-ACTING FORMULATIONS OF THE INTEGRASE INHIBITOR CAB-LA AND THE PROTEASE INHIBITOR GSK385-MLAP

Dr. Gregory Del Prete1, Dr. Adrienne Swanstrom1, Dr. Claire Deleage1, Dr. Jacob Estes1, Dr. Brandon Keele1, Dr. Jerry Jeffrey2, Dr. Jeffrey Lifson1

1AIDS and Cancer Virus Program, Frederick National Laboratory for Cancer Research, Leidos Biomedical Research, Inc., 2GlaxoSmithKline Research & Development, Infectious Diseases Therapy Area Unit

12:00 – 12:30  Closing Remarks; preview of 36th NHP AIDS Symposium  Promenade Hall