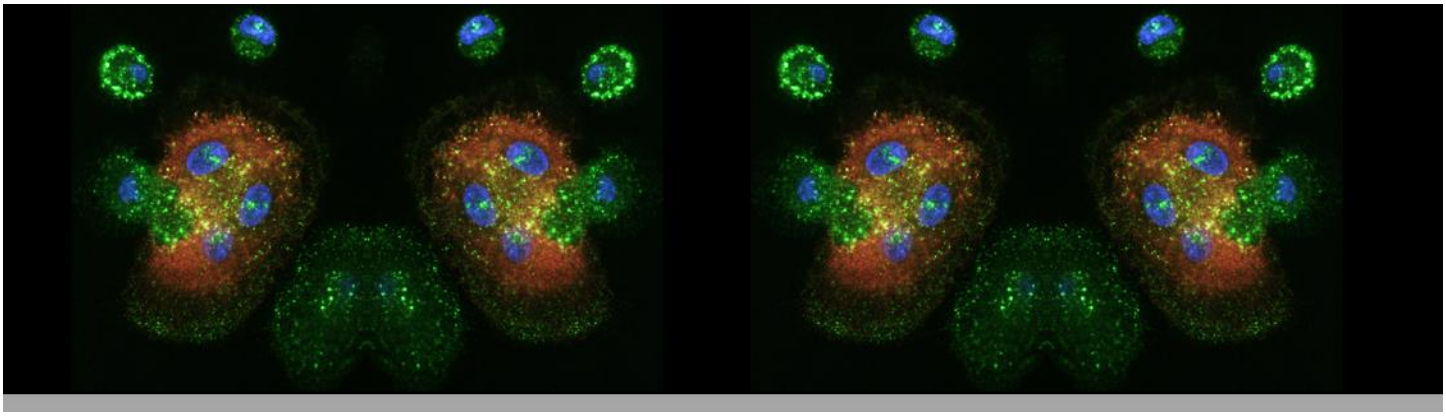

Macrophage Infection by HIV: Implications for Pathogenesis and Cure

Meeting Agenda

WEDNESDAY, OCTOBER 13TH

09:45-10:15 **Opening Session**

Workshop Goals and Meeting Structure: *Jeymohan Joseph (NIMH, Bethesda, MD)*
Opening Remarks: *Dianne Rausch (NIMH, Bethesda, MD)*
Opening Remarks: *Maureen Goodenow (OAR, NIH, Bethesda, MD)*
Opening Remarks: *Bruce Walker (Ragon Institute, Cambridge, MA)*

10:15-10:45 **Myeloid cells as inter-system communicators**

Filip Swirski *(Icahn School of Medicine, Mount Sinai, New York, NY)*

10:45-12:10 **Session #1: Macrophages and the immune system during HIV and SARS-CoV-2 infection**

10:45-10:50 Moderator Introduction: ***Kiera Clayton*** *(University of Massachusetts Medical School, Worcester, MA)*

10:50-11:05 **The role of virus-induced inflammation in the establishment of the HIV-1 myeloid reservoir**

Tim Hanley *(University of Utah Health Science Center, Salt Lake City, UT)*

11:05-11:20 **Phenotypic properties of HIV-1 at transmission and rebound**

Scott Sherrill-Mix *(University of Pennsylvania, Philadelphia, PA)*

11:20-11:35 **Innate immune sensing of SARS-CoV-2 infection in macrophages**

Rahm Gummuluru *(Boston University, Boston, MA)*

11:35-11:50 **Targeting macrophage-mediated inflammation to reduce CVD risk in HIV**

Vincent Marconi *(Emory Vaccine Center, Druid Hills, GA)*

11:50-12:10 Q&A: ***Kiera Clayton*** *(University of Massachusetts, Worcester, MA)*

12:10-12:40 **Lunch Break**

12:40-2:05 **Session #2: Challenges to studying HIV/SIV in myeloid reservoirs**

12:40-12:45 Moderator Introduction: ***Tom Hope*** *(Northwestern University, Evanston, IL)*

12:45-1:00 **Utilizing correlative PET/CT and multiscale imaging to define the dynamics of SIV rebound after treatment interruption**

Yanique Thomas *(Northwestern University, Evanston, IL)*

1:00-1:15 **HIV-1 neurotheranostics**

Bhavesh Kevadiya *(University of Nebraska Medical Center, Omaha, NE)*

1:15-1:30 **Monocyte-derived macrophages from ART-suppressed HIV-infected individuals contain reactivatable HIV**

Rebecca Veenhuis *(Johns Hopkins University, Baltimore, MD)*

1:30-1:45 **A novel transmitted-founder SHIV model of CNS persistence**

Katharine Bar *(University of Pennsylvania, Philadelphia, PA)*

1:45-2:05 Q&A: ***Tom Hope*** *(Northwestern University, Evanston, IL)*

2:05-2:15 **Break**

2:15-3:20 **Session #3: Highlights from recent awardees of NIMH/NINDS/NIDA Myeloid Reservoir RFA (RFA-MH-20-701/702)**

2:15-2:20 Moderator Introduction: ***Janice Clements & Rebecca Veenhuis*** *(Johns Hopkins University, Baltimore, MD)*

2:20-2:27 **Targeting the HIV-1 reservoir in myeloid cells**

Jin Wang *(Methodist Hospital Research Institute, Houston, TX)*

2:27-2:34 **Control of latent/persistent HIV-1 infection in macrophages/microglia: a key role for the phosphatase PPM1A**

Olaf Kutsch *(University of Alabama at Birmingham, Birmingham, AL)*

2:34-2:41 **Effects of CSF1R blockade on repopulation of SIV reservoirs from the CNS to the periphery after antiretroviral therapy interruption**

Kenneth Williams *(Boston College, Boston, MA)*

2:41-2:48 **Metabolic strategies to eliminate CNS myeloid reservoirs**

Eliseo Eugenin *(University of Texas Medical Branch, Galveston, TX)*

2:48-2:55 **Targeting HIV myeloid reservoirs in the CNS by IAP and TREM1 inhibition**

Grant Campbell *(University of California San Diego, San Diego, CA)*

2:55-3:02 **Macrophages and microglia, gene expression and chromatin: illuminating the myeloid reservoir in the brain through single cell analysis**

Howard Fox *(University of Nebraska Medical Center, Omaha, Nebraska)*

3:02-3:20 Q&A: ***Janice Clements*** & ***Rebecca Veenhuis*** *(Johns Hopkins University, Baltimore, MD)*

THURSDAY, OCTOBER 14TH

10:00-12:05 **Session #4: Macrophage reservoirs and approaches to their elimination**

10:00-10:05 Moderator Introduction: ***Kamel Khalili*** *(Temple University, Philadelphia, PA)*

10:05-10:20 **Replication-competent HIV-1 reservoirs form in mucosal tissue macrophages of patients under suppressive antiretroviral therapy**

Morgane Bomsel *(Institut Cochin, Paris, France)*

10:20-10:35 **Modifying the Effector Functions of AAV-delivered anti-HIV Monoclonal Antibodies**

James Termini *(University of Miami, Miami, FL)*

10:35-10:50 **Pharmacologic suppression of HIV-1 proviral reactivation in myeloid cells**

Rebecca Peters *(University of Miami, Miami, FL)*

10:50-11:05 **Modulation of BRD4 to induce HIV epigenetic suppression in myeloid and microglial cells**

Haitao Hu *(University of Texas Medical Branch, Galveston, TX)*

11:05-11:20 **CRISPR-Cas9 exonic disruption and HIV-1 elimination**

Howard Gendelman *(University of Nebraska Medical Center, Omaha, NE)*

11:20-11:35 **CRISPR-mediated inactivation of ALCAM in myeloid cells**

Rafal Kaminski *(Temple University, Philadelphia, PA)*

11:35-12:05 Q&A: ***Kamel Khalili*** *(Temple University, Philadelphia, PA)*

12:05-12:15 **Break**

12:15-1:20 **Session #5: CNS co-morbidities in the era of ART (involvement of myeloid reservoirs)**

12:15-12:20 Moderator Introduction: ***Serena Spudich*** *(Yale, New Haven, CT)*

12:20-12:35 **Innate immune responses in HIV-infected microglia**

Hisashi Akiyama *(Boston University, Boston, MA)*

12:35-12:50 **Myeloid HIV reservoirs: from establishment to aberrant cognitive trajectories**

Lishomwa Ndhlovu *(Weill Cornell Medicine, New York, NY)*

12:50-1:05 **Viral seeding by mature monocytes and potential therapies to reduce CNS viral reservoirs in the ART era**

Joan Berman *(Albert Einstein College of Medicine, Bronx, NY)*

1:05-1:20 Q&A: ***Serena Spudich*** *(Yale, New Haven, CT)*

1:20-1:50 **Lunch Break**

1:50-2:52 **Session #6: Highlights from recent awardees of NIMH/NINDS/NIDA Myeloid Reservoir RFA (RFA-MH-20-701/702)**

1:50-1:55 Moderator Introduction: ***Jeymohan Joseph*** *(NIMH, Bethesda, MD)* ***and Amanda Brown*** *(Johns Hopkins University, Baltimore, MD)*

1:55-2:02 **Toward understanding the role of adult human microglia in the ongoing persistence of HIV and its associated neuropsychiatric co-morbidities**

Amanda Brown *(Johns Hopkins University, Baltimore, MD)*

2:02-2:09 **Brain myeloid cells are a source of HIV-associated damage and viral dispersal**

Antoine Chaillon *(University of California San Diego, San Diego, CA)*

2:09-2:16 **Revealing the role of platelets in promoting HIV reservoir seeding and persistence in the CNS-resident myeloid cells**

Sanjay Maggirwar *(George Washington University, Washington, D.C.)*

2:16-2:23 **Defining brain pericytes as a novel and myeloid-derived HIV reservoir**

Michal Toborek *(University of Miami, Miami, FL)*

2:23-2:30 **Characterization of the intact and defective HIV reservoirs in myeloid cells in the brain**

Melissa Churchill *(Royal Melbourne Institute of Technology, Melborne, Australia)*

2:30-2:37 **Characterize replication competent myeloid reservoirs in the central nervous system**

Guochun Jiang *(University of North Carolina Chapel Hill, Chapel Hill, NC)*

2:37-2:52 Q&A: ***Jeymohan Joseph*** *(NIMH, Bethesda, MD)* ***and Amanda Brown*** *(Johns Hopkins University, Baltimore, MD)*

2:52-3:02 **Break**

3:02-3:35 **Closing Session – Setting Research Priorities**

Moderators: ***Janice Clements*** *(Johns Hopkins University, Baltimore, MD)* & ***Mario Stevenson*** *(University of Miami, Miami, FL)*

Overview of Meeting from Session Chairs:

Kiera Clayton *(University of Massachusetts Medical School, Worcester, MA)*
Tom Hope *(Northwestern University, Evanston, IL)*
Rebecca Veenhuis *(Johns Hopkins University, Baltimore, MD)*
Kamel Khalili *(Temple University, Philadelphia, PA)*
Serena Spudich *(Yale, New Haven, CT)*
Amanda Brown *(Johns Hopkins University, Baltimore, MD)*

Closing Comments

Dianne Rausch *(NIMH, Bethesda, MD)*