

# 2019 IMMID Workshop Series on Molecular and Translational Medicine

## Workshop 1

### HIV disease, vaccines, and therapies toward a cure



DREXEL UNIVERSITY

Institute for

**Molecular Medicine  
& Infectious Disease**

*College of Medicine*

October 15, 2019  
245 N. 15<sup>th</sup> Street  
Philadelphia, PA

#### ***HIV DISEASE, VACCINES, AND THERAPIES TOWARD A CURE***

Presentations today will focus on clinical and translational aspects of HIV disease.

9:30 AM *Introductory Remarks*

**Brian Wigdahl, PhD**

Professor and Chair, Department of Microbiology and Immunology  
Director, Institute for Molecular Medicine and Infectious Disease  
Drexel University College of Medicine, Philadelphia, PA

**Kenny Simansky, PhD**

Vice Dean for Research  
Professor, Department of Pharmacology & Physiology  
Drexel University College of Medicine, Philadelphia, PA

#### ***SESSION 1: Current topics of care and research in the HIV clinical environment***

9:40 AM *Opening Remarks*

**Organizers:**

**Michael Nonnemacher, PhD**

Associate Professor, Department of Microbiology & Immunology  
Drexel University College of Medicine

**Zsofia Szep, MD, MSCE**

Associate Professor of Medicine, Division of Infectious Disease and HIV  
Director, Partnership Comprehensive Care Practice  
Drexel University College of Medicine

Co-chairs: **Julio Martin-Garcia, PhD**, and **Sara Schultz, MD**

- 9:45 AM **Pablo Tebas, MD**  
 Professor of Medicine, Hospital of the University of Pennsylvania,  
 Philadelphia, PA  
*Gene therapy approaches to HIV cure*
- 10:20 AM **Elias Haddad, PhD**  
 Professor of Medicine, Division of Infectious Disease and HIV  
 Drexel University College of Medicine, Philadelphia, PA  
*Targeting CD4 helper T cells in HIV vaccine development*
- 10:55 AM **Dong Lee, MD**  
 Associate Professor of Medicine and Interim Division Chief, Division of Infectious  
 Disease and HIV, Drexel University College of Medicine, Philadelphia, PA  
*Overview of Drexel HIV Partnership*
- 11:20 AM **Amy Althoff, MD**  
 Assistant Professor of Medicine, Division of Infectious Disease and HIV  
 Drexel University College of Medicine, Philadelphia, PA  
*U=U at the Partnership*
- 11:40 AM **Michael Nonnemacher, PhD**  
 Associate Professor, Department of Microbiology and Immunology  
 Drexel University College of Medicine, Philadelphia, PA  
*HIV Tat genetics associated with HAND in the Drexel Medicine CARES cohort*

12:00 PM **Lunch**  
 Lunch will be provided for all meeting attendees

***SESSION 2: PhD Candidate research presentations***

- 12:45 PM *Opening Remarks*  
 Co-chairs: **Olimpia Meucci, MD, PhD**, and **Tricia Burdo, PhD**
- 12:50 PM **Alexander Allen**, PhD Candidate, T32 trainee  
 Department of Microbiology and Immunology, Drexel University College of  
 Medicine, Philadelphia, PA  
*Broad-spectrum gRNAs abolish HIV-1 LTR-mediated transcription in cells that  
 receive CRISPR/Cas9 therapy*
- 1:05 PM **Shadan Yarandi**, PhD Candidate, T32 trainee  
 Department of Neuroscience, Lewis Katz School of Medicine, Temple University,  
 Philadelphia, PA  
*Role of extracellular vesicles carrying HIV-1 nef in development of CNS  
 dysfunction*

- 1:20 PM **Megan Meuser**, PhD Candidate, T32 Trainee  
Department of Biochemistry, Drexel University College of Medicine,  
Philadelphia, PA  
*Field-based affinity optimization of a novel azabicyclohexane scaffold HIV-1 entry inhibitor*
- 1:35 PM **Michael Duggan**, PhD Candidate, T32 trainee  
Department of Neuroscience, Lewis Katz School of Medicine, Temple University,  
Philadelphia, PA  
*Converging modulation of PQC by H<sub>2</sub>O<sub>2</sub> and Tat: Insights from primary rat neuronal culture*
- 1:50 PM **Emily Nickoloff**, PhD Candidate, T32 trainee  
Department of Pharmacology and Physiology, Drexel University College of  
Medicine, Philadelphia, PA  
*Dopamine increases HIV entry into macrophages via an alternative, calcium dependent pathway*
- 2:05 PM **Bahareh Torkzaban**, PhD Candidate  
Department of Neuroscience, Lewis Katz School of Medicine, Temple University,  
Philadelphia, PA  
*The lncRNA LOC102549805 (U1) modulates neurotoxicity of HIV-1 Tat protein*

2:20 PM **Break**  
Snack provided

### **SESSION 3: City-wide NeuroHIV Discussion Group**

2:40 PM *Opening Remarks*

**Kamel Khalili, PhD**

Laura H. Carnell Professor and Chair, Department of Neuroscience,  
Director, Center for Neurovirology  
Director, Comprehensive NeuroAIDS Center  
Lewis Katz School of Medicine, Temple University

**Organizers:**

Tricia Burdo  
Jennifer Gordon  
Kamel Khalili

Michael Nonnemacher  
Brian Wigdahl

Co-chairs: **Michael Nonnemacher, PhD**, and **Hassen Wollebo, PhD**

2:45 PM **George Pavlakis, MD, PhD**

Chief, Human Retrovirus Section, Vaccine Branch, Center for Cancer Research,  
National Cancer Institute

*Protection against SHIV challenge upon same site administration of DNA+protein vaccine in macaques*

- 3:20 PM **Ilker Sariyer, DVM, PhD**  
Associate Professor, Department of Neuroscience and Center for Neurovirology,  
Lewis Katz School of Medicine, Temple University, Philadelphia, PA  
*Suppression of Zika virus infection in brain by the antiretroviral drug Rilpivirine*
- 3:45 PM **Yoelvis Garcia-Mesa, PhD**  
Research Associate, Department of Neurology, Perelman School of Medicine,  
University of Pennsylvania, Philadelphia, PA  
*Evolving regional brain injury and recovery in SIV-infected rhesus macaques  
associate with regional heme oxygenase enzyme isoform expression*
- 4:10 PM **Jacqueline Barker, PhD**  
Assistant Professor, Department of Pharmacology and Physiology,  
Drexel University College of Medicine, Philadelphia, PA  
*Accumbens glutamate signaling in behavioral flexibility: Implications for NeuroHIV*
- 4:35 PM **Natarajaseenivasan Kalimthusamy, PhD**  
Postdoctoral Fellow Research Associate, Department of Neuroscience and  
Center for Neurovirology, Lewis Katz School of Medicine, Temple University,  
Philadelphia, PA  
*Transcellular mitochondrial transfer in neurodegeneration*