



Rustbelt **CFAR Retreat**
Tuesday, June 25, 2024

Wolstein Research Building
2103 Cornell Road
Cleveland, OH 44106

<https://www.rustbeltcfar.org/>

<https://twitter.com/RustbeltCFAR>



Dear Rustbelt CFAR Members,

We are delighted to host our second in-person Rustbelt CFAR retreat. To those of you from Pittsburgh and Uganda, we welcome you to Cleveland and thank you for making the drive. To all our colleagues, we warmly greet and thank you for taking time away from your many other duties to join us today.

We are 25 months into our five-year journey as a joint CWRU-Pitt CFAR. The CFAR has brought rich opportunities for new collaborations across our two campuses through the provision of core services and ongoing discussions hosted by our vibrant Scientific Working Groups focused on Ending the HIV Epidemic (EHE) and research on Sex and gender. During the poster session, the Rustbelt CFAR Cores will describe their many high-tech services, so please take advantage of this innovative science.

Another key feature of the Rustbelt CFAR is our extensive mentoring opportunities for our junior colleagues. During the first two years, we have awarded 10 developmental awards. Most of these awardees have benefited from using the CFAR Cores to support their research projects.

Finally, as part of a special supplement to the CFAR, we hosted 10 undergraduate students from the University of Puerto Rico in 2023 and again this year. Please introduce yourself to these remarkable trainees.

And thanks for coming!

Sincerely,

A handwritten signature in black ink that reads 'Jonathan Karn'. The signature is written in a cursive style with a large, sweeping initial 'J'.

Jonathan Karn

A handwritten signature in black ink that reads 'Sharon Hillier'. The signature is written in a cursive style with a large, sweeping initial 'S'.

Sharon Hillier

Administrative Core A



Jonathan Karn, PhD
CFAR Director
Case Western Reserve University
jxk153@case.edu



Sharon Hillier, PhD
CFAR Director
University of Pittsburgh/MWRI
hillsl@mwri.magee.edu



Kyle Bicket, MBA
Financial Administrator
Case Western Reserve University
kxb384@case.edu



Michelle Leszczewski, BA
Project Manager
University of Pittsburgh/MWRI
leszczewskimn@upmc.edu



Rose Davis, BS
CFAR Administrator
Case Western Reserve University
rxd517@case.edu



Daria Smolinski, BS
Web Designer/IT Specialist
University of Pittsburgh/MWRI
smolinskidm@upmc.edu

Administrative Core A and Developmental Core B



Alan Levine, PhD
CFAR Co-Director
Case Western Reserve University
alan.levine@case.edu

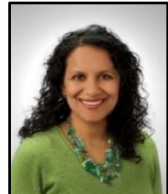


Nicolas Sluis-Cremer, PhD
CFAR Co-Director
University of Pittsburgh
nps2@pitt.edu

Uganda Core C



Immaculate Nankya, PhD
Core C Director
Case Western Reserve University
inankya@jrcrc.org.ug



Urvi Parikh, PhD
Core C Director
University of Pittsburgh
ump3@pitt.edu



Kerri Penrose, MS
Core C & E Manager
University of Pittsburgh
kjp43@pitt.edu

Clinical Sciences Core D



Jeffrey Jacobson, MD
Core D Director
Case Western Reserve University
jxj573@case.edu

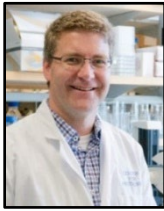


Sharon Riddler, MD
Core D Director
University of Pittsburgh
riddler@pitt.edu



Leslie Meyn, PhD
Epidemiologist/Statistician
University of Pittsburgh
meynla@mwri.magee.edu

Viral Pathogenesis & Persistence Core E



John "Chip" Tilton, MD

Core E Director
Case Western Reserve University
jct63@case.edu



John Mellors, MD

Core E Director
University of Pittsburgh
jwm1@pitt.edu



Ben Lutttge, PhD

Imaging Director
Case Western Reserve University
bxl244@case.edu



Josh Cyktor, PhD

Co-Director
University of Pittsburgh
jcc114@pitt.edu

Systems Biology & Biostatistics Core F



Mark Cameron, PhD

Core F Director
Case Western Reserve University
mjc230@case.edu



Charles Rinaldo, PhD

Core F Director
University of Pittsburgh
rinaldo@pitt.edu



Brian Richardson, BSc, PhD student

Bioinformatics
Case Western Reserve University
bxr183@case.edu



Robbie Mailliard, PhD

Core F Co-Director
University of Pittsburgh
rbm19@pitt.edu



Liangliang Zhang, PhD

Bioinformatics
Case Western Reserve University
liangliang.zhang2@case.edu



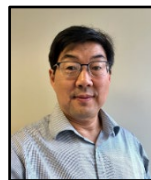
Jishnu Das, PhD

Bioinformatics
University of Pittsburgh
jishnu@pitt.edu



Adam Burgener, PhD

Proteomics & Microbiome
Case Western Reserve University
axb1160@case.edu



Curtis Tatsuoka, PhD

Biostatistics
University of Pittsburgh
cut4@pitt.edu



Samantha Knodel, BSc

Proteomics & Microbiome
Case Western Reserve University
samantha.horne@case.edu



Alok Joglekar, PhD

Systems & Functional Immunology
University of Pittsburgh
joglekar@pitt.edu

Sex and Gender Scientific Working Group (SWG)



Cheryl Cameron, PhD
SWG Director
Case Western Reserve University
cxc724@case.edu



Catherine Chappell, MD
SWG Director
University of Pittsburgh
chappellca@upmc.edu

Ending the HIV Epidemic Strategic Working Group (EHE SWG)



Ann Avery, MD
EHE SWG Director
Case Western Reserve University
aavery@metrohealth.org



Mackey Friedman, PhD
EHE SWG Director
Rutgers University
mf1061@sph.rutgers.edu



James Egan, PhD, MPH
EHE SWG Co-Director
University of Pittsburgh
jee48@pitt.edu



Rustbelt CFAR Retreat Agenda

Tuesday, June 25, 2024

Wolstein Research Building, 2103 Cornell Road, Cleveland, OH

9:30-10:00	Coffee and Pastries	
10:00-10:10	Welcome from CWRU Dean of the School of Medicine	Stanton Gerson
10:10-10:15	Rustbelt CFAR Annual Retreat Welcome	Jonathan Karn
Theme: Research in Uganda; Moderator: Robert Salata		
10:15-10:30	Pediatric HIV-1 infection in the Era of Elimination of Mother to Child Transmission of HIV: The Uganda Perspective	Immaculate Nankya
10:30-10:45	Impact of Efavirenz on Contraceptive Hormones and Finding a Solution for Women Living with HIV	Catherine Chappell
10:45-11:00	Mysteries of the Nuclear Architecture: Localization of Latent HIV Proviruses to a Perinucleolar Compartment Supports Proviral Reactivation.	Frederick Kizito
11:00-11:15	BREAK	
Theme: ART Pharmacology & Microbiome; Moderator: Sharon Riddler		
11:15-11:30	Long Way to Go with Antiretroviral Pharmacology	Aaron Devanathan
11:30-11:45	The Vaginal Microbiome and HIV	Christina Farr
11:45-12:00	Gut Microbiome and Proinflammatory Cytokines Mediate HIV-1 Seroconversion	Chuck Rinaldo
Theme: Ending the HIV Epidemic; Moderator: Jamie Egan		
12:00-12:10	The Power of Transition	Cederick Taylor
12:10-12:30	Where the Rubber Meets the Road: A Conversation with Health Department Partners	Erin Lark Turcoliveri; Vino Panakkal; Andre L. Brown; Lita Wills
12:30-13:00	LUNCH	
13:00-14:00	Poster Session and Dessert	



Rustbelt CFAR Retreat Agenda

Tuesday, June 25, 2024

Wolstein Research Building, 2103 Cornell Road, Cleveland, OH

Theme: NeuroAIDS and Substance Use: Moderator: Alan Levine		
14:00-14:15	Iron, Mitochondria, and Neurological Complications of HIV Infection	Asha Kallianpur
14:15-14:30	Miniature Brain in a Dish: Building iPSC-derived Primary Cell Models for NeuroHIV Studies	Sheetal Sreeram
14:30-14:45	Development of a Substance Use and HIV Resource Center	Ann Avery
14:45-15:00	Longitudinal Effects of Illicit Opioid Use and Medication Assisted Treatment on Immune Activation and Vascular Disease	Corrilynn Hileman
15:00-15:15	BREAK	
Theme: Chemical and Systems Biology Approaches to HIV: Moderator: Nic Sluis-Cremer		
15:15-15:30	Targeted Degradation of HIV-1 Nef Efficiently Restores Cell-surface CD4 and MHC-I Expression and Blocks HIV-1 Replication	John Jeff Alvarado
15:30-15:45	Spatial Transcriptomic Studies of HIV-Induced Inflammation	Mark Cameron
15:45-16:00	The Unknown Unknowns: Interrogating Innate Immune Cell Subsets via scRNA-seq	Robbie Mailliard
16:00-16:15	Using Interpretable Machine Learning to Elucidate Cellular and Molecular Underpinnings of Infectious Disease	Jishnu Das
16:15-16:30	Closing Thoughts	Sharon Hillier

Rustbelt CFAR Pilot Grant Awardees 2022



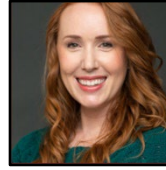
Soumya Panigrahi, PhD
Case Western Reserve University
“Endothelial GM-CSF and Vascular
Immune Microenvironment in
People Living with HIV”



Andrew Obuku, PhD
Uganda Virus Research Institute
“Effect of Stress Hormones on HIV
Reservoir Reactivation”



Anna Jasinska, PhD
University of Pittsburgh
“Aging in a Nonhuman Primate
Model of AIDS”



Erica Larson, PhD
University of Pittsburgh
“Immunometabolism of CD4 T Cells
in SIV”



Wei Lei, PhD Jana Jacobs, PhD

University of Pittsburgh
“Development of Next Generation CD4-Based Entry
Inhibitors for Preventing HIV-1 Infection”

Rustbelt CFAR Developmental Grant Awardees 2023



Uri Mbonye, PhD
Case Western Reserve University
“HIV-1 latency-reversing agents
that target P-TEFb with minimal T-
cell activation”



Yijia Li, MD
University of Pittsburgh
“Intact HIV-1 Provirus Decay
Dynamics on Long-Term ART”



Christina Farr, PhD
Case Western Reserve University
“Defining the neovaginal
microbiome in transgender women
post-vaginoplasty”



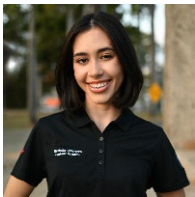






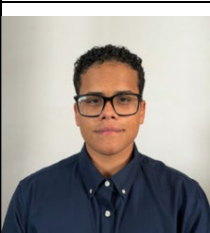
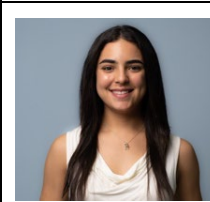

Anthony Cillo, PhD
University of Pittsburgh
“Dissecting the determinants of HIV-1
reservoir dynamics and their
relationships to biological sex”



Aaron Devanathan, PharmD, PhD
University of Pittsburgh
“Developing analytical methods to
quantify cabotegravir concentrations
for PrEP”

Rustbelt Investigators for the Next Generation (RING)
NIH-funded CFAR DEI Pipeline Initiative (CDEIPI) in collaboration with the
University of Puerto Rico

Students	Mentors	Institution
 <p>Andrea Acevedo Bado UPR Mayagüez</p>	<p>Nicolas Sluis-Cremer, PhD Professor, Division of Infectious Diseases</p>	<p style="text-align: center;">PITT</p>
 <p>Alondra Martínez Martínez UPR Humacao</p>	<p>Sharon Hillier, PhD Professor, Departments of Obstetrics, Gynecology & Reproductive Sciences</p>	<p style="text-align: center;">PITT</p>
 <p>Nathalia Chaparro Cáceres UPR Mayagüez</p>	<p>Aaron Devanathan, PharmD, PhD Assistant Professor, School of Pharmacy</p>	<p style="text-align: center;">PITT</p>
 <p>Zoamy N. Soto Ramírez UPR Mayagüez</p>	<p>Beej Macatangay, MD Associate Professor, Division of Infectious Diseases</p>	<p style="text-align: center;">PITT</p>
 <p>Angelica Cajina Rodriguez UPR Mayagüez</p>	<p>Robbie Mailliard, PhD Associate Professor, Division of infectious Diseases</p>	<p style="text-align: center;">PITT</p>

Students	Mentors	Institution
 <p>Paola Rodriguez-Nieves UPR Cayey</p>	<p>Michael Freeman, PhD Assistant Professor, Medicine</p>	<p>CASE</p>
 <p>Vianney Ojeda-Perez UPR Cayey</p>	<p>Alan Levine, PhD Professor, Department of Molecular Biology and Microbiology</p>	<p>CASE</p>
 <p>Adrian Rodriguez-Torres UPR Cayey</p>	<p>Uri Mbyone, PhD Instructor, Department of Molecular Biology and Microbiology</p>	<p>CASE</p>
 <p>Adriana Barreiro-Rosario UPR Río Piedras</p>	<p>Corrilynn Hileman, MD Director of the Infectious Diseases Clinic at MetroHealth Medical Center, Associate Professor at Case Western Reserve</p>	<p>CASE</p>
 <p>Roberto Vaquero-Orellano UPR Humacao</p>	<p>Cristina Farr, PhD Assistant Professor, Center for Global Health and Infectious Disease</p>	<p>CASE</p>



Rustbelt Center for AIDS Research

Case Western Reserve University/University Hospitals Cleveland Medical Center
10900 Euclid Avenue, Cleveland, Ohio 44106-4960
Phone (216) 368-3915

University of Pittsburgh
204 Craft Avenue, Pittsburgh, PA 15213-3005
Phone (412) 641-6435

Principal Investigators

Jonathan Karn, PhD
Sharon Hillier, PhD

Co-Directors

Alan Levine, PhD
Nicolas Sluis-Cremer, PhD

Solicitation for HIV/AIDS-Related Core Usage Grants

The RUSTBELT CFAR is inviting applications for Core Usage Awards the following areas, with a particular focus on the theme of the Rustbelt CFAR: Sex & Gender and Ending the HIV Epidemic:

1. Novel approaches to prevent HIV infection
2. HIV persistence and viral latency
3. NeuroAIDS including substance use
4. Antiretroviral therapy and drug resistance
5. Basic science focused on viral pathogenesis, host-protein interactions, and drug discovery

Application Criteria:

- All investigators are welcome and eligible
- Early career investigators (Senior Research Associates, Instructors, Assistant Professors) will receive preferential consideration
- Core usage between institutions is highly encouraged and expected
- All applications must propose use of at least one RUSTBELT CFAR Core:
 - **Core C: Uganda**
 - **Core D: Clinical Sciences**
 - **Core E: Viral Pathogenesis and Persistence**
 - **Core F: Systems Biology and Biostatistics**

Please establish feasibility with the CFAR Core Directors before submitting.

Budget and Project Period: 5 awards up to \$10,000 will be funded to support requested Core Services

Key Dates:

RFA Closing Date: **July 21, 2024**

Applications Due and Peer Review: **On a rolling basis**

Required Application Components and Application Format:

- Budget and Budget Justification
- NIH biosketches for key personnel
- Proposal Narrative (sections A – C, 1-page total)
 - A. Specific Aim
 - B. Significance & Innovation
 - C. Research Design and Methods
 - D. References Cited (not included in page limit)

Submission: All proposals must be submitted electronically via email, **as a single PDF file**, to Rose Davis at rx517@case.edu or Michelle Leszczewski at leszczewskimn@upmc.edu.

Questions: Please contact Dr. Alan Levine (alan.levine@case.edu) or Dr. Nicolas Sluis-Cremer (nps2@pitt.edu) with any questions.

