



Jacobs School of Medicine and Biomedical Sciences

MD-PhD Program

University at Buffalo

# WELCOME *to* BUFFALO

## TRI-INSTITUTIONAL MD-PHD RESEARCH DAY

SATURDAY, OCTOBER 26

# 2024

---

HOSTED BY THE UNIVERSITY AT BUFFALO

955 MAIN ST, BUFFALO, NY

---

# EVENT SCHEDULE

- 9:00am** REGISTRATION, POSTER SET-UP, & BREAKFAST  
Active Learning, Room 1220
- 9:45am** WELCOME REMARKS & INTRODUCTION  
Marc Halterman, MD, PhD, MD-PhD Program Director  
Mandy Cohen, MD, MPH, Director, US Centers for Disease Control and Prevention  
Dozoretz, Room 2220A
- 10:00am** STUDENT TALKS  
Dozoretz, Room 2220A
- 11:00am** BREAK
- 11:10am** BREAKOUT SESSION I  
Various Rooms
- 12:10pm** MENTORSHIP LUNCH  
Active Learning, Room 1220
- 1:10pm** POSTER SESSION & COFFEE  
2nd Floor Atrium
- 2:15pm** KEYNOTE SPEAKER  
Dozoretz, Room 2220A
- 3:15pm** BREAK
- 3:30pm** BREAKOUT SESSION II  
Various Rooms
- 4:30pm** CLOSING REMARKS  
Dozoretz, Room 2220A

**A special thank you to our Planning Committee members:**

- Peter Fiorica
- Kanita Chaudhry
- Elizabeth Lathrop
- Amra Mujcic
- Janie Park
- Christian Prechtl
- Johanna Rajotte

# STUDENT TALKS

10:00 am  
Dozoretz  
Room 2220A



**Matthew Lesko**

SUNY Upstate, Biomedical and Chemical Engineering  
Magnetically Actuated Shape Memory Polymer  
Scaffolds with Sequential Shape Memory



**Catherine Beamish**

University of Rochester, Toxicology  
Transcriptomic analysis identifies muscle-specific  
mitochondrial and vesicular transport genes as  
methylmercury toxicity targets in Drosophila



**Hayley Chang**

University of Rochester, Neuroscience  
Exploring the neurophysiologic and neuropathologic  
basis of visual deficits in a cystinosis mouse model



**Olivia Laniak**

SUNY Upstate, Microbiology and Immunology  
SIRT2 Inhibitor FLS-359 Leads to Reduction in HCMV  
Replication and Dissemination in Athymic Nude Hu-Skin  
Xenograft Mice Model



**Nicholas Salgia**

University at Buffalo, Immunology (Roswell Park)  
Unraveling the Paradoxical Immune Sensitivity of  
Sarcomatoid Renal Cell Carcinoma



**Peter Fiorica**

University at Buffalo, Genetics, Genomics, Bioinformatics  
DROSHA-related tumor predisposition: a new entity with  
risk for pineoblastoma and Wilms tumor

# BREAKOUT SESSION 1

11:10 am  
Various Rooms

## RESIDENCY: PSTP OR NON-PSTP MEDICAL ALUMNI, ROOM 2213A



### **Rachel Simpson, MD, PhD '19**

Research Pathway Fellow, Infectious Diseases  
University of Rochester

### **Peter Kim, MD, PhD**

Vice Chair - Research & Innovation  
Professor of Surgery, Department of Surgery  
University at Buffalo



### **Sangita Patel, MD, PhD '04**

Assistant Professor, Department of Ophthalmology  
University at Buffalo

## ADVOCACY AND PUBLIC POLICY AS A PHYSICIAN-SCIENTIST MEDICAL ALUMNI, ROOM 2213B



### **Nancy H. Nielsen MD '76, PhD**

Senior Associate Dean for Health Policy  
Clinical Professor of Medicine  
University at Buffalo

## F30 PREPARATION DOZORETZ, ROOM 2220A



### **Laurie Read, PhD**

Professor, Department of Microbiology and Immunology  
University at Buffalo



### **Margaret DeAngelis, MS, PhD**

Professor, Department of Ophthalmology  
University at Buffalo



### **Clayton Brady, M4**

Department of Physiology and Biophysics  
University at Buffalo



### **Sarah Choi, G4**

Department of Tumor Immunology, Roswell Park  
Comprehensive Cancer Center, University at Buffalo

1

2

3



# POSTER SESSION

1:10 pm  
2nd Floor Atrium

## 1. Joseph Mauro

SUNY Upstate, Biochemistry & Molecular Biology  
The Impact of Protein Import Stress on Body Homeostasis

## 2. Nicholas Salgia

University at Buffalo, Immunology (Roswell Park)  
Unraveling the Paradoxical Immune Sensitivity of Sarcomatoid Renal Cell Carcinoma

## 3. Sanaea Bhagwagar

SUNY Upstate, Biochemistry and Molecular Biology  
Mitochondrial Protein Import Stress Causes Vacuolar/Lysosomal Damage through Proteostatic Signaling Mechanisms

## 4. Jessica Crooker

SUNY Upstate, Microbiology & Immunology  
Characterization of circulating viral isolates of Powassan Virus Lineage II

## 5. Peter Fiorica

University at Buffalo, Genetics, Genomics, Bioinformatics  
DROSHA-related tumor predisposition: a new entity with risk for pineoblastoma and Wilms tumor

## 6. Ali (Shervin) Razavi

SUNY Upstate, Neuroscience  
Appraisal of Gene Expression-Based Classifiers for Neuropsychiatric Disorders: A Meta-Regression

## 7. Hayley Chang

University of Rochester, Neuroscience  
Exploring the neurophysiologic and neuropathologic basis of visual deficits in a cystinosis mouse model

## 8. Kevin Lin

SUNY Upstate, Biochemistry and Molecular Biology; Urology  
Determining the Role of ABI1 DNA Binding in Regulating AR Transcriptional Activity

## 9. Olivia Laniak

SUNY Upstate, Microbiology and Immunology  
SIRT2 Inhibitor FLS-359 Leads to Reduction in HCMV Replication and Dissemination in Athymic Nude Hu-Skin Xenograft Mice Model

## 10. Adam Geber

University of Rochester, Microbiology & Immunology  
Characterizing Innate-like CD8+ T Cells in Early Life

## 11. Catherine Beamish

University of Rochester, Toxicology  
Transcriptomic analysis identifies muscle-specific mitochondrial and vesicular transport genes as methylmercury toxicity targets in Drosophila

## 12. Levy Sominsky

University of Rochester, Pathology (Cell Biology of Disease)  
Optimization of an In Vitro Model of Staphylococcal Abscess Communities to Study Bactericidal Mechanisms

## 13. Nicholas Brennan

SUNY Upstate, Biochemistry & Molecular Biology  
Ant1 overexpression induces progressive muscle wasting independent of mitochondrial bioenergetic defect.

## 14. Arnav Rana

SUNY Upstate, Biochemistry and Molecular Biology  
Chronic Stress Signaling via the Integrated Stress Response Does Not Harm the Heart

## 15. Matthew Lesko

SUNY Upstate, Biomedical and Chemical Engineering  
Magnetically Actuated Shape Memory Polymer Scaffolds with Sequential Shape Memory

## 16. Jonathan Chung

SUNY Upstate, Biochemistry  
Rearming the Guardian: p53 Reactivation Enhances Pol I Inhibition in p53 Mutant Breast Cancer

## 17. Lauren Beryl Guterman

University at Buffalo, Microbiology & Immunology  
Harnessing microbially derived metabolites in the urinary tract to prevent infection induced catheter encrustation

# KEYNOTE SPEAKER

2:15 pm  
Dozoretz  
Room 2220A



## Wendy Chung, MD, PhD

Chief, Department of Pediatrics  
Boston Children's Hospital  
Professor of Pediatrics  
Harvard Medical School

### **"From N of 1 to population health for rare genetic diseases."**

Wendy Chung, MD, PhD is a clinical and molecular geneticist and the Chief of the Department of Pediatrics at Boston Children's Hospital and Harvard Medical School. Dr. Chung directs NIH funded research programs in human genetics of pulmonary hypertension, breast cancer, obesity, diabetes, autism, birth defects including congenital diaphragmatic hernia and congenital heart disease.

Dr. Chung is a national leader in the ethical, legal, and social implications of genomics. She was the recipient of the Rare Impact Award from the National Organization of Rare Disorders, and is a member of the National Academy of Medicine and the American Academy of Physicians. Dr. Chung received her B.A. in biochemistry from Cornell University, her M.D. from Cornell University Medical College, and her Ph.D. from The Rockefeller University in genetics.

## In Memoriam: Robert N. Taylor, MD, PhD

The MD-PhD Program at the Jacobs School of Medicine and Biomedical Sciences is deeply saddened by the loss of Dr. Robert N. Taylor, our former director, who passed away on January 22 at the age of 71. Though his time as our program's leader was brief, his impact was profound. Dr. Taylor's advocacy for our trainees and his vision for the program left a lasting imprint that continues to inspire us.

A distinguished physician-scientist, educator, and clinician, Dr. Taylor's career spanned over four decades. He was among the world's leading researchers in endometriosis and reproductive health, focusing on the molecular and cell biology of the human uterus and placenta. His laboratory, continuously funded by the NIH since 1987, made significant contributions to understanding human endometrial function, uterine biology, and embryonic implantation. His recent work on the relationship between endometriosis lesions and pain holds promise for advancing therapeutic options for women suffering from this chronic condition. In addition to authoring hundreds of scientific papers and several books, he was a frequent national and international lecturer and received numerous awards, including the American Society for Reproductive Medicine Distinguished Researcher Award.

Before joining the Jacobs School in 2020, Dr. Taylor led the MD-PhD program at the University of Utah School of Medicine and held leadership roles in prestigious organizations, including the American Board of Obstetrics and Gynecology and the Society for Reproductive Investigation. He was also an honorary secretary of the World Endometriosis Society and served on the NIH Reproductive Scientist Development Program.

Beyond his professional achievements, Dr. Taylor was cherished by his students and colleagues. His warmth, kindness, and dedication to nurturing the next generation of physician-scientists were hallmarks of his tenure with us. We are grateful for his leadership and the legacy he has left on our program and trainees.



# BREAKOUT SESSION 2

3:30 pm  
Various Rooms

## FINDING MENTORS: PHD ADVISORS AND BEYOND

DOZORETZ, ROOM 2220A



### Marc Halterman, MD, PhD

Senior Associate Dean and Executive Director,  
Office of Research  
MD-PhD Program Director  
University at Buffalo



### Suzanne G. Laychock, PhD

Associate Dean for Faculty Affairs  
Former MD-PhD Program Director  
University at Buffalo

## APPROACHES TO LAB MANAGEMENT

MEDICAL ALUMNI, ROOM 2213B



### John C. Hu, MD, PhD '17

Clinical Assistant Professor, Department of Medicine  
University at Buffalo



### Jennifer Lang, MD '09

Associate Professor, Department of Medicine  
University at Buffalo

## WORK-LIFE BALANCE

MEDICAL ALUMNI, ROOM 2213A



### Lucy Mastrandrea, MD, PhD '99

Professor; Division Chief, Endocrinology/Diabetes  
Department of Pediatrics  
MD-PhD Associate Program Director  
University at Buffalo



### Meghan Higman, MD, PhD '95

Assistant Professor, Department of Pediatric Oncology  
Roswell Park Comprehensive Cancer Center  
Clinical Assistant Professor, Department of Pediatrics  
University at Buffalo



### John H. Lillvis, MD, PhD

Clinical Assistant Professor, Department of  
Ophthalmology  
University at Buffalo

1

2

3



# Staying in Buffalo?

**Good choice.**

In a city as diverse as Buffalo, you can always find something fun to do. If you're looking for historical architecture, great eats, local breweries, the arts or waterfront viewing, we have it.

Want some recommendations? **Just ask. We love sharing the Buffalove.**