



# 2024 RESEARCH SYMPOSIUM NIH MEDICAL RESEARCH SCHOLARS PROGRAM

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May 6-8, 2024



9:00AM - 3:00PM



Masur Auditorium



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NIH Medical Research Scholars  
Program



<https://clinicalcenter.nih.gov/training/mrsp>

TIME	SPEAKER	TOPIC	INSTITUTE
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### Session I: Dermatology, Immunology and Infectious Disease

Moderator: Hannah Huth

9:00	Emad Chishti	Association Between Hospital Type and Resilience During Caseload Stress: A Natural Quality-of-Care Experiment from the COVID-19 Pandemic	CC-CCMD
9:15	Bhushan Gitanjali	Antigenic Cartography Using Hamster Sera Identifies SARS-CoV-2 JN.1 Evasion Seen in Human XBB.1.5 Booster Sera	NIAID
9:30	Elizabeth Karanja	Anti-Cytokine Autoantibodies in Chronic Granulomatous Disease	NIAID
9:45	Alexandra Firek	Exploring the Microbiome in Central Centrifugal Cicatricial Alopecia: A Pilot Study	NIAMS
10:00	Jacob Tribble	The Burden of Merkel Cell Carcinoma Attributable to Immunosuppression, Ambient Ultraviolet Radiation, and Merkel Cell Polyomavirus in the U.S.	NCI-DCEG
10:15	Jennifer Strong	Demodicosis and Ivermectin-associated Mazzotti-Like Reactions in Hematopoietic Cell Transplant Recipients	NIAMS

### Session II: Psychiatry and Pain Medicine

Moderator: David Zarrin

10:45	Brady Greene	Out of Sight but Not Out of Mind: Correlates of Interoceptive Sensibility in Treatment-Resistant Depression	NIMH
11:00	Sahit Menon	Discovering Domain-Specific Targets for Neuromodulation in Autism Spectrum Disorder	NIMH
11:15	Megan Jiao	Piloting a Virtual Reality-Based, Gamified Intervention with Cognitive Training for Children and Adolescents with ADHD	NHGRI
11:30	Sade Orejobi	Gait Analysis for the Quantification of Neuropathic Foot Pain: A Step in the Right Direction	CC-DPM
11:45	Gustavo Serrano-Berrios	Thermosensory Loss is Correlated with Primary Afferent Nociceptive Fiber Deletion in Postmortem Dorsal Root Ganglion and Spinal Cord in a Cancer Patient Treated with Resiniferatoxin	NCCIH

### Session III: Cardiovascular and Pulmonary Disease

Moderator: Marie Luff

1:00	Alexander Karius	Exploring the Role of the Mitochondrial Disulfide Relay System in Heart Failure	NHLBI
1:15	Ashley Golbus	Modifiers of Arterial Stenosis in Williams Syndrome: Using Genomics to Discover Drivers of Vessel-Specific Outcomes	NHLBI
1:30	Sonal Sharda	Social Determinants of Health as a Potential Driver of Clonal Hematopoiesis via Epigenetic Modulation of the TET2 gene	NHLBI
1:45	Alexa Golbus	Coronary Artery Calcium Score: 3D Landmark Scout Imaging Accurately Assesses Presence and Extent of Coronary Calcification with Lower Radiation Exposure	NHLBI
2:00	Scott Wilson	Targeting Inflammation in Pulmonary Arterial Hypertension: A High-Throughput Small Molecule Screen for Compounds Degrading Xeroderma Pigmentosum Group B Protein (XPB)	NHLBI
2:15	Manasa Gadiraju	PI3K-delta Inhibition in a Rodent Model of Pulmonary Arterial Hypertension: Going with the Flow	CC-CCMD

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**Session IV: Pediatric Oncology; Immuno-Oncology**  
**Moderator: Scott Wilson**

9:00	Paul Borgman	Incidence of Pre-Existing B-Cell Aplasia in CAR T-Cell Clinical Trials at the NCI	NCI-CCR
9:15	Monica Nair	Predicting Hematotoxicity After CAR T-Cell Therapy in B-Cell Acute Lymphoblastic Leukemia	NCI-CCR
9:30	Natalia Yakobian	3-D Culture Method to Evaluate the Immunological Effects of Membrane-tethered IL-15 and IL-21 GD2 CAR T-Cells Within the Tumor Microenvironment	NCI-CCR
9:45	Kathy Li	Combinatorial Cellular Therapy in Pediatric Solid Tumors with Natural Killer (NK) and Genetically Engineered Myeloid Cells (GEMys)	NCI-CCR
10:00	Avery Funkhouser	Mechanisms of MYOD1 Rhabdomyosarcoma Aggressiveness	NCI-CCR
10:15	Francisco Rodriguez-Matos	Variations in Hepatic Immune Cell Populations in Commonly-Used Mouse Strains	NCI-CCR

**Session V: Head and Neck Cancer; Otolaryngology; GI Malignancies**  
**Moderator: Brady Greene**

10:45	Marie Luff	Epigenetic Landscape of CD8+ T cell Exhaustion and Tissue Residency in HPV-negative Head and Neck Squamous Cell Carcinoma	NCI-CCR
11:00	Shivani Ramolia	Characterizing the Tumor Environment of Olfactory Neuroblastoma	NCI-CCR
11:15	Amir Kaskas	Tissue Egress Pathways of Tumor-Specific T Cells After Immune Checkpoint Blockade	NCI-CCR
11:30	Julia Telischi	Longitudinal Quantification of Inner Ear Fluid Spaces using MRI: Correlations to Audiovestibular Measurements	NIDCD
11:45	Jack Victory	Optimizing Hepatic Locoregional Chemotherapy: Preclinical Evaluation of Carfilzomib for Hepatic Artery Infusion Pump Therapy	NCI-CCR
12:00	Shelby Johnson	Characterization of Multi-Metastatic SDH-Deficient Gastrointestinal Stromal Tumors	NCI-CCR

**Session VI: Artificial Intelligence; Endocrinology; Gynecologic Oncology**  
**Moderator: Elizabeth Karanja**

1:15	Abhinav Suri	Deep Diabetes: Using Artificial Intelligence for Opportunistic Screening of Type II Diabetes on CT Imaging	CC-DRIS
1:30	Hannah Huth	Voice EHR: Equitable Healthcare Technology with Multimodal Audio Data	CC_IR
1:45	Maame-Animwah Amoako	Black-White Disparities in Thyroid Function in Healthy Young Women	NIEHS
2:00	Elizabeth Varghese	Possible Compensatory Mechanisms of Follicle Protection in the Retained Ovary After Unilateral Oophorectomy in Mouse Models	NICHD
2:15	Sarah Phillips	Association of Genome-Wide Significant Ovarian Cancer Susceptibility Loci with Abnormal Ovarian Ultrasound Findings in the Prostate, Lung, Colorectal, and Ovarian Cancer Screening Trial	NCI-DCEG
2:30	Kristen Ibanez	Dual Inhibition of ATR and PI3K Pathways Promotes Cell Death in Platinum Resistant Endometrial Cancer Cells by Increasing DNA Damage	NCI-CCR

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**Session VII: Neurogenetics, Neuroinflammation, Neurodegeneration; Skeletal Disorders**  
**Moderator: Gitanjali Bhushan**

9:00	Gregory Boyek	Correction of an Intronic Pseudoexon-Inducing Variant in Collagen-VI Related Muscular Dystrophy Using an Adenine Base Editor	NINDS
9:15	Si Jie (Jessica) Tang	Central Nervous System Uptake of Anti-CD8+ T Cell Minibodies in Multiple Sclerosis and Progressive Multifocal Leukoencephalopathy	NINDS
9:30	Samantha Nishimura	Non-Motor Symptom and Neurocognitive Evaluation of a GBA1 Variant-Carrying Cohort: Implications for Gaucher and Parkinson Disease	NHGRI
9:45	Saswat Sahoo	Using Neuronal Extracellular Vesicles to Examine Biomarkers of Alzheimer's Disease and Brain Insulin Signaling in Prediabetes and Type II Diabetes	NIA
10:00	Devin Barzallo	Sclerotic Bone Lesions May Distinguish Patients with Mosaic or Germline Tuberous Sclerosis Complex from Those with Sporadic Lymphangioliomyomatosis	NHLBI
10:15	Jonathan Freeman	Lesion Expansion in Craniofacial Fibrous Dysplasia: Natural History and Indicators of Progression	NIDCR

**Session VIII: Urologic Oncology**  
**Moderator: Amir Kaskas**

10:45	David Gelikman	Evaluating Artificial Intelligence (AI)-Assisted Prostate Biparametric MRI Interpretation: An International, Multi-Reader Study	NCI-CCR
11:00	William Azar	Leveraging Large Language Models to Extract Data from the Electronic Health Record	NCI-CCR
11:15	Kyle Schuppe	Inhibition of Oxidative Phosphorylation in Castrate Resistant Prostate Cancer Through Direct and Indirect Therapies Results in a Hormone-Sensitive Phenotype	NCI-CCR
11:30	Nityam Rathi	Next Generation Analyses to Inform Precision Management of Renal Tumors in von Hippel-Lindau Syndrome	NCI-CCR
11:45	Jessica Hsueh	Characterization of Metabolic and Imaging Profiles in the Diagnosis of Hereditary Pheochromocytoma and Paraganglioma Syndrome	NCI-CCR

**Session IX: Neurophysiology, Neuro-oncology, Ophthalmology**  
**Moderator: Kristen Ibanez**

1:00	David Zarrin	Analysis of Cortical Neuronal Spiking Dynamics Throughout Human Sleep Wake Cycles	NINDS
1:15	Ujwal Boddeti	Preictal Action Potential Burst Activity Predicts Seizure Events	NINDS
1:30	Ihika Rampalli	Multiomic Analysis of Recurrent Ependymomas Reveals Mechanisms of Tumor Progression and Treatment Resistance	NINDS
1:45	Erin Walker	LMP744 Topoisomerase Inhibition as an Effector for Myc Suppression in Glioblastoma	NINDS
2:00	Annette Kaminaka	Cone Photoreceptor Enlargement and Disorganization in RHO-associated Retinitis Pigmentosa Revealed with Adaptive Optics	NEI
2:15	Minali Prasad	Longitudinal Study of Ocular Manifestations of von Hippel-Lindau Disease: A 30-Year Follow Up	NEI

# 2023-2024 MRSP SCHOLARS AND INSTITUTIONS

Ms.	Maame-Animwah Amoako	Duke University School of Medicine
Mr.	William Azar	Georgetown University School of Medicine
Mr.	Devin Barzallo	Case Western Reserve University School of Medicine
Ms.	Gitanjali Bhushan	Penn State College of Medicine
Mr.	Ujwal Boddeti	University of Maryland School of Medicine
Mr.	Paul Borgman	Florida State University College of Medicine
Mr.	Gregory Boyek	Drexel University College of Medicine
Mr.	Emad Chishti	University of Kentucky College of Medicine
Ms.	Alexandra Firek	FIU Herbert Wertheim College of Medicine
Mr.	Jonathan Freeman	University of Nevada, Reno School of Medicine
Mr.	Avery Funkhouser	University of South Carolina School of Medicine, Greenville
Ms.	Manasa Gadiraju	University of Missouri, Kansas City School of Medicine
Mr.	David Gelikman	University of Central Florida College of Medicine
Ms.	Ashley Golbus	Medical University of South Carolina College of Medicine
Ms.	Alexa Golbus	Medical University of South Carolina College of Medicine
Mr.	Brady Greene	Cleveland Clinic Lerner College of Medicine
Ms.	Jessica Hsueh	Georgetown University School of Medicine
Ms.	Hannah Huth	University of Tennessee Health Sciences Center College of Medicine
Ms.	Kristen Ibanez	University of Central Florida College of Medicine
Ms.	Megan Jiao	University of Texas Health Houston, McGovern Medical School
Ms.	Shelby Johnson	University of Texas Health Austin, Dell Medical School
Ms.	Annette Kaminaka	Albany Medical College
Ms.	Elizabeth Karanja	University of Missouri, Columbia School of Medicine
Mr.	Alexander Karius	Johns Hopkins University School of Medicine
Mr.	Amir Kaskas	Louisiana State University School of Medicine, Shreveport
Ms.	Kathy Li	Medical College of Georgia at Augusta University
Ms.	Marie Luff	David Geffen School of Medicine at UCLA
Mr.	Sahit Menon	University of California, San Diego School of Medicine
Ms.	Monica Nair	Cleveland Clinic Lerner College of Medicine
Ms.	Samantha Nishimura	Drexel University College of Medicine
Ms.	Sade Orejobi	Duke University School of Medicine
Ms.	Sarah Phillips	Eastern Virginia Medical School
Ms.	Minali Prasad	Boston University School of Medicine
Ms.	Shivani Ramolia	Rutgers, Robert Wood Johnson Medical School
Ms.	Ihika Rampalli	Baylor College of Medicine
Mr.	Nityam Rathi	Cleveland Clinic Lerner College of Medicine
Mr.	Francisco Rodriguez-Matos	San Juan Bautista School of Medicine
Mr.	Saswat Sahoo	Cleveland Clinic Lerner College of Medicine
Mr.	Kyle Schuppe	Washington State University Elson S. Floyd College of Medicine

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Mr.	Gustavo Serrano-Berrios	Ponce Health Sciences University School of Medicine
Ms.	Sonal Sharda	University of Massachusetts Medical School
Ms.	Jennifer Strong	University of Maryland School of Medicine
Mr.	Abhinav Suri	David Geffen School of Medicine at UCLA
Ms.	Si Jie (Jessica) Tang	University of California, Davis School of Medicine
Ms.	Julia Telischi	University of Miami Miller School of Medicine
Mr.	Jacob Tribble	University of Missouri, Kansas City School of Medicine
Ms.	Elizabeth Varghese	Stony Brook University Renaissance School of Medicine
Mr.	Jack Victory	West Virginia University School of Medicine
Ms.	Erin Walker	University of South Carolina School of Medicine, Greenville
Mr.	Scott Wilson	Albert Einstein College of Medicine of Yeshiva University
Ms.	Natalia Yakobian	Saint Louis University School of Medicine
Mr.	David Zarrin	David Geffen School of Medicine at UCLA