2025 Research Day

20th Research Day

October 16th, 2025

Davis Heart and Lung Research Institute
473 West 12th Avenue
Biomedical Research Tower
460 West 12th Avenue

Made possible through the generous support of the Webb Family Fund

Dorothy M. Davis Heart and Lung Research Institute
Office of the Director
473 West 12th Avenue, 110G
Columbus, Ohio 43210-1252
Phone: 614.247.7766
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Dear Colleagues and Guests,

We are delighted to welcome you to our 20th Annual Research Day also commemorating the 25th Anniversary of the Dorothy M. Davis Heart and Lung Research Institute (DHLRI). We are honored to welcome Juleen Zierath, Professor of Clinical Integrative Physiology at Karolinska Institutet and Executive Director at the Novo Nordisk Foundation Center for Basic Metabolic Research, as our keynote speaker. A globally recognized leader in diabetes and metabolism research, Dr. Zierath's pioneering work has illuminated how exercise and circadian rhythms influence insulin sensitivity and gene expression in skeletal muscle, offering transformative insights into the prevention and treatment of type 2 diabetes.

The DHLRI has indeed come a long way since its inception 25 years ago. Over this time, we have more than tripled in size by every metric, including members, facilities, and total research dollars with commensurate impact across a wide range of fields related to heart and lung health, including genetic basis of cardiopulmonary disease, molecular mechanisms of complex disease, advanced imaging, regenerative medicine, and advanced therapies. This past year has been among our best ever with a research portfolio that for the first time has surpassed $80M in total extramural funding. At the same time, we have made significant strides in advancing our research capabilities with significant investment in shared equipment and core labs, recruitment of new members, and launch of new support programs, including the new R01-201 grant program to help investigators continue to get funding beyond their first R01. These initiatives reflect our ongoing commitment to fostering innovative research and collaboration.

We want to conclude by expressing our heartfelt appreciation to all our incredible faculty, staff, and trainees, who have been instrumental in cultivating the vibrant research and training environment at DHLRI. As we welcome in the next quarter century of success for the DHLRI, there's no group we'd rather celebrate with than you. Your dedication and hard work lay the foundation for the continued success to come over the next 25 years!

Have a great day,

Thomas J. Hund, PhD
Professor, Department of Internal Medicine
and Biomedical Engineering
DHLRI, Director
William D. and Jacqueline L. Wells Chair

Seth H. Weinberg, PhD, FHRS
Professor, Department of Biomedical Engineering
Associate Dean for Research, College of Engineering
Chair, DHLRI Education Committee

Agenda– October 16, 2025

8:30am **Poster Set-Up (BRT Lobby)**

9:00am **Opening Remarks (DHLRI 170), Thomas J. Hund, PhD – Director, DHLRI**

9:10am—10:15am **Panel Presentation (DHLRI 170)**
"The Power of Collaborative, Interdisciplinary Research"

Lorri Fowler
Associate Vice President for Finance and Business Administration at the OSU Enterprise, Research, Information and Knowledge

Thomas J. Hund, PhD
Director, Dorothy M. Davis Heart and Lung Research Institute

Sara Koenig, PhD
Senior Director, Research Strategy and Operations for The College of Medicine

John J. Warner, MD
Chief Executive Officer of The Ohio State University Wexner Medical Center
Executive Vice President at The Ohio State University

Juleen R. Zierath, PhD
Executive Director of the Novo Nordisk Foundation Center for Basic Metabolic Research
University of Copenhagen, Denmark

10:15am—12:15pm **Poster Session (BRT Lobby & BRT 115)**

12:15pm — 1:05pm **Short Talks (BRT 115)**

12:15pm—12:25pm **John Bobik (Graduate Student)**
Exploration of the Role of Trafficking protein Particle TRAPPC6A in Cardiac Arrythmia

12:25pm—12:35pm **Gianni Giarrano (Graduate Student)**
Antibody Fusion Proteins Containing Domains from the Tripartite Motif Family Protein 72 (TRIM72) Increase Plasma Membrane Repair to Treat Muscle Diseases

12:35pm –-12:45pm **Juan Ignacio Elio Mariángelo (Post Doctoral Scholar)**
Disruption of Localized Protein Synthesis in the Sarcoplasmic Reticulum Impairs Excitation-Contraction Coupling Machinery in Heart Failure

12:45pm—12:55pm **Eleanor Mohler (Undergraduate Student)**
Sex-Dependent Timing of Intergenerational Cardiovascular Risk from Preconception PM2.5 Exposure

12:55pm—1:05pm **Natalia Del Pilar Vanegas (Post Doctoral Scholar)**
Transcriptomic Shifts in Human Lungs Donated After Brain and Circulatory Death and Severe Obliterative Bronchiolitis

Agenda– October 16, 2025

1:15pm—2:15pm	**Lunch (BRT Lobby)**
2:15pm—2:25pm	**Juleen R. Zierath, PhD Intro (DHLRI 170)**
2:25pm—3:10pm	**Keynote Talk (DHLRI 170)** **Juleen R. Zierath, PhD** **"Deconvoluting Signals and Metabolic Rhythmicity in Type 2 Diabetes"**
3:10pm —3:25pm	**Juleen R. Zierath, PhD Q&A (DHLRI 170)**
3:25pm —4:00pm	**Awards (DHLRI 170)**

Juleen R. Zierath, PhD

Keynote Speaker

Juleen R. Zierath, Professor Karolinska Institutet, Stockholm, Sweden and University of Copenhagen, Denmark

Juleen R. Zierath is Professor of Clinical Integrative Physiology at Karolinska Institutet, Stockholm, and Professor and Executive Director at the Novo Nordisk Foundation Center for Basic Metabolic Research at University of Copenhagen. She is a member of the Nobel Assembly and Nobel Committee for Physiology or Medicine, the Royal Swedish Academy of Sciences, EMBO, Academia Europaea and the Keystone Symposia Board of Directors. She has received several awards, including the Diabetes Prize for Excellence awarded by EASD and Novo Nordisk Foundation for outstanding achievements in research, the Harold Rifkin Award for Distinguished international Service in the Cause of Diabetes from the American Diabetes Association, and a Distinguished Alumnus Award and Honorary Doctorate of Science from University of Wisconsin-River Falls. Zierath performs translational research to delineate mechanisms for Type 2 Diabetes pathogenesis. Her current work is focused on the interaction between circadian rhythms and exercise training and the control of metabolism in diabetes and obesity.

The Ohio State University Wexner Medical Center

DHLRI Core Labs

2025 DHLRI Research Day

Cardiovascular Imaging Research Center (CIRC)

Co-Directors: Orlando Simonetti, PhD and Yuchi Han, MD

The Cardiovascular Imaging Research Center (CIRC) is a state-of-the-art imaging core facility capable of in vivo imaging of human subjects and large animals for research purposes. It includes whole-body magnetic resonance imaging (MRI) scanners, whole-body X-ray computed tomography (CT) scanners, image post-processing hardware and software, and scientific and engineering personnel with expertise in human and large animal cardiovascular imaging.

Specific Instrumentation available with CIRC includes 3, 1.5 and 0.55 Tesla Resonance Imaging (MRI), Computed Tomography (CT) and MRI-compatible exercise stress ergometers. CIRC is administrated through the Dorothy M. Davis Heart and Lung Research Institute (DHLRI) and is a collaborative effort with the OSU Heart and Vascular Center (HVC). CIRC is under the direction of Drs. Orlando Simonetti and Yuchi Han and is available as a resource to all investigators at The Ohio State University (OSU), as well as at other academic institutions and commercial organizations.

In addition, CIRC offers consultation, guidance, analysis and interpretation.

Cardiovascular Imaging Research Center Core Lab
2050 Kenny Road
Columbus, OH 43221
Email: Orlando.Simonetti@osumc.edu

Comprehensive Small Animal Surgery Core (CSASC)

Manager: Nuo Sun, PhD

The DHLRI Comprehensive Small Animal Surgery Core (CSASC) provides high quality services to support OSU investigators pursuing pre-clinical in-vivo rodent studies. The CSASC is a state-of-the-art small animal surgical core facility capable of cardiovascular small animal surgery for research purposes. There are fully equipped surgical stations including an isoflurane anesthesia system, MPS Millar Pressure catheter system with data analysis software, bioamp hardware for ECG recording, biopods for rectal probe, temperature recording, animal surgery heating pads for mouse homeostasis, bead sterilizer, surgical grade instruments, and scientific personnel with expertise in small animal cardiovascular surgery.

The CSASC offers a two-tiered service through a choice of: 1) fee-for-service project (Tier 1) with user fees charged per procedure or hour for the surgical research services provided by CSASC personnel using CSASC equipment and platform; and 2) long-term projects (Tier 2) involving an MOU for %FTE of salary + benefits and support for supplies. Tier 2 projects require a commitment for at least an entire fiscal year (FY) and may only be initiated or modified at the start of the FY.

The CSASC maintains standard operating procedures (406-00 SOP approved by IACUC) that should be referenced in a PI's specific IACUC protocol. Any deviation from CSASC SOP must be approved in the PI's own protocol and shared with CSASC personnel prior to study.

The advantages to using the CSASC SOP include:

a. The elimination of variations in surgery descriptions between protocols using the same surgeon
b. The reduction of study team member changes and amendments for protocols referencing to an IACUC approved SOP
c. The responsibility of the Core for facility and supplies inspected during IACUC semi-annuals

Comprehensive Small Animal Surgery Core
Email: Nuo.Sun@osumc.edu

Flow Cytometry Core Lab

Manager: Trent Sandstrom, BS

The Flow Core is DHLRI's all-in-one hub for everything flow cytometry. We provide the tools and expertise needed to perform advanced cell sorting, high-dimensional cell phenotyping, and nanoparticle analysis to support a wide range of research projects. From detailed immune profiling to stem cell characterization, and anything else you can tag with a fluorophore, the Flow Core has you covered.

Our suite of three carefully selected instruments provides maximum flexibility, covering a wide range of applications:

Cytek Northern Lights – A full-spectrum flow cytometer equipped with 3 lasers (405, 488, 640 nm) and 38 fluorescence channels. It utilizes Full Spectrum Profiling and Spectral Unmixing technology to enable high-dimensional analysis with panels of 25+ markers.

Cytek Aurora – Spectral cell sorter for collecting choice populations in test tubes. Uses the same 3-laser, 38-channel setup as the Northern Lights, allowing for convenient panel-optimization prior to sorting. Sorts up to 6 populations at a time and supports multiple nozzle sizes.

NanoFCM – High-resolution cytometer for nanoparticles (7–1000 nm). It is equipped with a blue (488 nm) laser and utilizes single-photon counting modules (SPCM) for side scatter and fluorescence detection, with detection ranges centered around 525 nm (FITC/GFP) and 660 nm (PerCP). Useful for extracellular vesicles, viral particles, and other nanoscale analyses.

Flow Cytometry Core
358 DHLRI
473 West 12th Avenue
Columbus, OH 43210
Email: DHLRI-FlowCore@osumc.edu

Interventional Cardiology Cath Core Lab

Manager: Matthew Joseph, BS

The Cath Core specializes in providing fluoroscopic (real-time x-ray) based services to institutional investigators as well as external private companies. We can support a wide array of preclinical research projects including:

- Basic Research
- Medical Device Development
- R&D / Proof of Concept
- Cellular Therapy / Biologics
- Training Labs

The Cath Core is a fully equipped interventional Cath/EP suite with an OEC 9800 Plus fluoroscopic C-arm and GE CardioLab recording system. This fluoroscopy unit has cine, digital spot, and digital subtraction angiography (DSA) capabilities. In addition to the equipment, the Cath Core also provides the experienced interventional and surgical support personnel needed to complete your large animal preclinical experiments.

Our main focus is on surgical and interventional cardiovascular research models in various large animal species. However, the use of fluoroscopy is not limited to cardiovascular research. Other disciplines including pulmonary, neurology, orthopedics, oncology, and urology have benefited by utilizing this imaging technology. If your translational studies encompass a different field, we can either reproduce published in vivo models or develop a unique model to fit your research objectives.

Interventional Cardiology Cath Core Lab
1016 Wiseman Hall
400 West 12th Avenue
Columbus, Ohio 43210
Phone: 724-730-9337
Email: Matthew.Joseph@osumc.edu

Small Animal Imaging Core Lab (SAIC)

Manager: Anna Bratasz, PhD

Lab Personnel: Kamaria Davis, BA, RLAT

The Small Animal Imaging Core (SAIC) at the Davis Heart and Lung Research Institute is a comprehensive small animal imaging facility available to investigators at The Ohio State University and other academic and commercial institutions. This facility includes high resolution imaging equipment (MRI, ultrasound, microCT, and optical), X-ray irradiators (SARRP, RS-2000), body composition analyzer, and personnel trained in the operation of each imaging modality and small animal handling procedures, as well as analytical software support for quantitative image analysis. In addition to providing interim animal housing for serial imaging studies, the SAIC also offers on-site suites for surgical procedures, and animal care provided by the University Laboratory Animal Resources.

Services and Equipment:

- Consultation
- Consultation
- Analysis and Interpretation
- Training and Education
- Remote Workstation

- Services at **Pelotonia Research Center**:
    - Ultrasound imaging (Vevo F2)
    - Optical Imaging (IVIS Lumina II)
    - Live Animal Body Composition Measurements (echoMRI; available probes: rat, mouse, and tissue)
- Services at **Biomedical Research Tower**:
    - Ultrasound (Vevo F2)
    - Magnetic Resonance Imaging (Bruker 9.4T)
    - MicroCT Imaging (SkyScan 1276)
    - Optical Imaging (IVIS Spectrum 2)
    - Live Animal Body Composition Measurements (echoMRI. Available probes: mouse, tissue, biopsy)
    - X-ray irradiator (RS-2000)
    - Small Animal Radiation Research Platform (SARRP)

Small Animal Imaging Core Lab
Phone: 614-688-8068
Email: DHLRI.SAIC@osumc.edu

DHLRI Metabolism Core

Director: Lisa Baer, MS

Columbus Instrument's Comprehensive Lab Animal Monitoring System (CLAMS) incorporates sub-systems for open circuit calorimetry and activity in an environmental chamber: Oxymax/CLAMS is the one-test solution for simultaneous multi parameter assessment of one to nine mice. Operation of Oxymax/CLAMS and data collection is performed by an integrated program. The resulting secure data sets can be exported to Comma Separated Value (CSV) files and provide the link between Oxymax/CLAMS and your existing data analysis tools.

The **Agilent Seahorse XFe analyzers** measure and report the oxygen consumption rate (OCR), proton efflux rate (PER) or extracellular acidification rate (ECAR), as well as ATP production rates of live cells in a 96-well format. This analyzer features excellent OCR precision at low rates, verified performance, optimized temperature control, and is automation enabled.

OCR, PER, and ATP production rates are critical measurements of energy metabolism and vital indicators of mitochondrial health, toxicity, glycolysis, and overall cellular (dys)function. Together, these measurements provide a systems-level view of cellular metabolic function in cultured cells and ex vivo samples.

DHLRI Metabolism Core
340 Biomedical Research Tower (BRT)
460 West 12th Avenue
Columbus, Ohio 43210
Phone: 614-247-8287
Email: Lisa.Baer@osumc.edu

Presenter Abstracts by Alphabet

1-**Abu-saleh** (Research Staff)
2-**Acharya, PhD** (Post-Doctoral Researcher)
3-**Adongo** (Undergraduate Student)
4-**Agarwal** (Undergraduate Student)
5-**Almahameed** (Undergraduate Student)
6-**Alonzo, PhD** (Post-Doctoral Researcher)
7-**Amro** (Undergraduate Student)
8-**Anang, PhD** (Post-Doctoral Researcher)
9-**Anshu** (Undergraduate Student)
10-**Argall, PhD** (Post-Doctoral Researcher)
11-**Ashfaque** (Undergraduate Student)
12-**Ballas** (Graduate Student)
13-**Banks** (Undergraduate Student)
14-**Barta** (Graduate Student)
15-**Baseeruddin Alvi, PhD** (Post-Doctoral Researcher)
16-**Batabyal** (Graduate Student)
17-**Baylon-Valdez, MD** (Post-Doctoral Researcher)
18-**Bentley, MD** (Faculty)
19-**Bisht, PhD** (Research Staff)
20-**Biswas, PhD** (Post-Doctoral Researcher)
21-**Bobik** (Graduate Student)
22-**Bogdanov** (Graduate Student)
23-**Burghaze** (Graduate Student)
24-**Burke** (Graduate Student)
25-**Burns** (Undergraduate Student)
26-**Campbell, PhD** (Post-Doctoral Researcher)
27-**Cao** (Graduate Student)
28-**Chaurasia, PhD** (Post-Doctoral Researcher)
29-**Chen** (Graduate Student)
30-**Chen** (Graduate Student)
31-**Chen, PhD** (Post-Doctoral Researcher)
32-**Cochran, PhD** (Post-Doctoral Researcher)
33-**De, PhD** (Research Staff)
34-**Doss** (Undergraduate Student)
35-**Elks** (Graduate Student)
36-**Esteves, PhD** (Post-Doctoral Researcher)
37-**Flannery** (Graduate Student)
38-**Fritz** (Graduate Student)
39-**Fukuda** (Undergraduate Student)
40-**Ge** (Graduate Student)
41-**Ghadi** (Undergraduate Student)
42-**Ghobashi, PhD** (Post-Doctoral Researcher)
43-**Giarrano** (Graduate Student)
44-**Gibson, PhD** (Post-Doctoral Researcher)
45-**Green** (Graduate Student)
46-**Hanley** (Graduate Student)
47-**Huang** (Graduate Student)
48-**James** (Graduate Student)
49-**Jurs** (Graduate Student)
50-**Kalinin, PhD** (Post-Doctoral Researcher)
51-**Kanaan** (Graduate Student)
52-**Kanj** (Undergraduate Student)
53-**Kapoor** (Undergraduate Student)
54-**Kavedia** (Undergraduate Student)
55-**Kern** (Graduate Student)
56-**King** (Research Staff)
57-**Kohli** (Research Staff)
58-**Kolodny** (Graduate Student)
59-**Kolonay** (Graduate Student)
60-**Kopuri** (Undergraduate Student)
61-**Kordowski** (Graduate Student)
62-**Kumar, PhD** (Research Staff)
63-**Kumar, PhD** (Post-Doctoral Researcher)
64-**Kumar, PhD** (Post-Doctoral Researcher)
65-**Lefers** (Graduate Student)
146-**Liang** (Graduate Student)
66-**Lim** (Graduate Student)
67-**Lindsey** (Undergraduate Student)
68-**Liu** (Graduate Student)
69-**Loyo Celis, PhD** (Post-Doctoral Researcher)
70-**Madabattula** (Research Staff)
71-**Mahalingam** (Graduate Student)
72-**Mariángelo, PhD** (Post-Doctoral Researcher)
73-**Maurya** (Research Staff)
74-**Meyerink** (Graduate Student)
75-**Miller** (Graduate Student)
76-**Mitash, PhD** (Post-Doctoral Researcher)
77-**Mohler** (Undergraduate Student)
78-**Nassal, PhD** (Faculty)
79-**Nirengi, PhD** (Research Staff)
80-**Novotny** (Graduate Student)
81-**Odayil Muralidharan** (Graduate Student)
82-**Ogundare** (Undergraduate Student)
83-**Olverson** (Graduate Student)
84-**Omar** (Undergraduate Student)
85-**Oueis** (Undergraduate Student)
86-**Ozabrahamyan** (Graduate Student)
87-**Pardeshi** (Graduate Student)
88-**Parinandi, PhD** (Faculty)
89-**Patel** (Undergraduate Student)
90-**Patel** (Graduate Student)
91-**Pervaiz, MD** (Research Staff)
92-**Pokrass, PhD** (Research Staff)
93-**Ponna** (Undergraduate Student)
94-**Pradhan, PhD** (Research Staff)
95-**Qureshi** (Undergraduate Student)
96-**Raghavan** (Undergraduate Student)
97-**Rai, MD** (Fellow)
98-**Raut, PhD** (Post-Doctoral Researcher)
99-**Roberts** (Research Staff)
100-**Rosas, PhD** (Research Staff)
101-**Ross** (Undergraduate Student)
102-**Sahoo** (Undergraduate Student)
103-**Saldana** (Research Staff)
104-**Sanders** (Graduate Student)
105-**Sanghvi, PhD** (Post-Doctoral Researcher)
106-**Sarkar** (Graduate Student)
107-**Sattler** (Graduate Student)
108-**Schehl** (Undergraduate Student)
109-**Seighali** (Research Staff)
110-**Shaheen** (Graduate Student)
111-**Shamseldin, PhD** (Post-Doctoral Researcher)
112-**Shantaram, PhD** (Post-Doctoral Researcher)
113-**Shrestha, PhD** (Post-Doctoral Researcher)
114-**Smeltzer** (Undergraduate Student)
115-**Soni, PhD** (Research Staff)
116-**Sridhar, MD** (Fellow)
117-**Steckner** (Undergraduate Student)
118-**Stoner** (Graduate Student)
119-**Stucky** (Graduate Student)
120-**Sultan** (Graduate Student)
121-**Suresh** (Undergraduate Student)
122-**Suresh** (Undergraduate Student)
123-**Tamimi** (Undergraduate Student)
124-**Tang** (Graduate Student)
125-**Taylor** (Research Staff)
126-**Taylor** (Undergraduate Student)
127-**Thuma** (Graduate Student)
128-**Ulker** (Graduate Student)
129-**Van Aelst** (Research Staff)
130-**Vanegas, PhD** (Post-Doctoral Researcher)
131-**Vasileva, PhD** (Research Staff)
132-**Wang** (Undergraduate Student)
142- **Watson** (Graduate Student)
133-**Wei, PhD** (Research Staff)
134-**Wen** (Graduate Student)
135-**Winkle** (Graduate Student)
136-**Xie** (Graduate Student)
137-**Xu** (Graduate Student)
138-**Yeh** (Graduate Student)
139-**Yu, PhD** (Post-Doctoral Researcher)
140-**Yunker** (Graduate Student)
141-**Yurtsever, PhD** (Post-Doctoral Researcher)
51-**Zafar** (Graduate Student)
143-**Zelidon** (Undergraduate Student)
144-**Zoller** (Graduate Student)
145-**Zuiker** (Graduate Student)

The Ohio State University Wexner Medical Center

Undergraduate Students

2025 DHLRI Research Day

Undergraduate Students

Poster # 3: **Jessica Adongo**

The Association Between Adverse Childhood Experiences and Adult Neighborhood Deprivation

Department of Internal Medicine, Division of Endocrinology, Diabetes, & Metabolism

PI: Joshua J. Joseph, MD

Poster # 4: **Shreya Agarwal**

Effect of Increased Afterload on Right Ventricular Waveform Shape and Novel Phenotyping of Patients with Pulmonary Hypertension

Department of Internal Medicine, Division of Cardiovascular Medicine

PI: Rebecca R. Vanderpool, PhD

Poster # 5: **Lea Almahameed**

Mechanisms of PD-1 Inhibitor–Associated Cardiotoxicity: Role of TNF-α and NF-κB

Department of Internal Medicine, Division of Cardiovascular Medicine

PI: Sakima Smith, MD

Poster # 7: **Kareem Amro**

Chronic Electronic Cigarette Exposure and Cardiovascular Dysfunction in Mice

Department of Internal Medicine, Division of Cardiovascular Medicine

PI: Jay Zweier, MD

Poster # 9: **Kaasvi Anshu**

Effects of 17α-Estradiol Longevity Treatment On Age-Related Adipose Fibrosis In Male And Female HET3 Mice

Department of Neurosurgery

PI: Kristy Townsend, PhD

Poster # 11: **Taukeed Muhammad Ashfaque**

βIV-spectrin Deficient Cardiac Fibroblasts Influence Macrophage Phenotype

Department of Biomedical Engineering

PI: Thomas J. Hund, PhD

Poster # 13: **Savannah Banks**

Hyperglycemic Glycolaldehydes Are Pro-Inflammatory In Myoblasts Through Oxidative Stress, Activation Of Phospholipase A2, And Formation Of Eicosanoids

Department of Internal Medicine, Division of Pulmonary, Critical Care and Sleep Medicine

PI: Narasimham Parinandi, PhD

Undergraduate Students

Poster # 25: **Katelyn Burns**

Defining Zanzalintinib's Role in Renal Cell Carcinoma and Assessing Potential Cardiotoxicity

Department of Internal Medicine, Division of Cardiovascular Medicine

PI: Sakima Smith, MD

Poster # 34: **Colin Doss**

Short-Term PM2.5 Exposure and Chronic Psychosocial Stress Cause Maladaptive Remodeling in the Heart

Department of Surgery, Division of Cardiac Surgery

PI: Loren Wold, PhD

Poster # 39: **Megumi Fukuda**

Tissue Nano-Transfection Promotes Vascularization to Enhance Acellular Nerve Allograft–Mediated Nerve Repair

Department of Biomedical Engineering

PI: Daniel Gallego-Perez, PhD

Poster # 41: **Esha Ghadi**

Acute Environmental PM2.5 Exposure as a Driver of Cardiovascular Dysfunction

Department of Surgery, Division of Cardiac Surgery

PI: Loren Wold, PhD

Poster # 52: **Andrew Kanj**

Advancing Transfusion Medicine Through Cold Storage: Comparative Analysis Of Cold Stored Versus Room Temperature Stored Platelets

Davis Heart and Lung Research Institute

PI: Julia Coleman, MD

Poster # 53: **Anusha Kapoor**

Pulmonary Metastasis Increases Susceptibility to Ventilator-Induced Lung Injury in Murine Breast Cancer Models

Department of Internal Medicine, Division of Pulmonary, Critical Care and Sleep Medicine

PI: Joshua Englert, MD

Poster # 54: **Janhavi Kavedia**

Alterations in Mitochondrial Dynamics in Cardiac Fibroblasts During Pulmonary Hypertension

Department of Surgery, Division of Cardiac Surgery

PI: Matthew Gorr, PhD

Undergraduate Students

Poster # 60: **Lasya Kopuri**

Molecular Mechanism Of Activation Of Human Cardiac Fibroblasts During Pseudomonas Aeruginosa Infection

Department of Microbial Infection and Immunity

PI: Murugesan Rajaram, PhD

Poster # 67: **Ella Lindsey**

The Association of Diabetes Distress with Hemoglobin A1c in the LINK (Linking Education, Produce Provision, And Community Referrals To Improve Diabetes Care) Trial

Department of Internal Medicine, Division of Endocrinology, Diabetes, and Metabolism

PI: Joshua J. Joseph, MD

Poster # 77: **Eleanor Mohler**

Sex-Dependent Timing of Intergenerational Cardiovascular Risk from Preconception PM2.5 Exposure

Department of Surgery, Division of Cardiac Surgery

PI: Loren Wold, PhD

Poster # 82: **Patience Ogundare**

Changes in Skeletal Muscle Myoglobin Expression and Distribution in Hypertensive vs. Normotensive Rats

Department of Family and Community Medicine

PI: T.M. Ayodele Adesanya, MD, PhD

Poster # 84: **Mohamed Omar**

Feasibility and Acceptability of Smartwatch Technology in an Exercise Regimen (FASTER) Study in Older Individuals

Department of Internal Medicine, Division of Endocrinology, Diabetes, and Metabolism

PI: Joshua J. Joseph, MD

Poster # 85: **Mariam Oueis**

MicroRNA-1's Biophysical Function is Essential for Postnatal Cardiac Maturation

Department of Physiology and Cell Biology

PI: Jidong Fu, MD, PhD

Poster # 89: **Mudra Patel**

Dapagliflozin-Mediated Attenuation of Myocardial Infarction is Facilitated by CLIC4

Department of Physiology and Cell Biology

PI: Harpreet Singh, PhD

Undergraduate Students

Poster # 93: **Siri Ponna**

TRMT1, a tRNA Methyltransferase Enzyme, Is Regulated In Myeloid Cells During Lung Injury

Department of Internal Medicine, Division of Pulmonary, Critical Care and Sleep Medicine

PI: Joseph S. Bednash, MD

Poster # 95: **Shaihrum Qureshi**

TREK-1 Regulates STAT3 Activity To Influence Cardiac Remodeling

Davis Heart and Lung Research Institute

PI: Thomas J. Hund, PhD

Poster # 96: **Jagun Raghavan**

Dysfunction In Ankyrin-B Disrupts Heart Rate Regulation By Altering The Membrane Targetting Of GIRK Channels

Department of Surgery, Division of Cardiac Surgery

PI: Mona El Refaey, PhD

Poster # 101: **Jamiona Ross**

Assessing Cabozantinib-Induced Cardiotoxicity through an In Vitro and Vivo Model

Davis Heart and Lung Research Institute

PI: Sakima Smith, MD

Poster # 102: **Rhea Sahoo**

The Transcriptional Repressive Role of KChIP2 on Cardiac Hypertrophic Genes

Department of Physiology and Cell Biology

PI: Isabelle Deschênes, PhD

Poster # 108: **Neva Schehl**

WISP1: A Key potentiator of TGFB1-Induced Myofibroblast Differentiation

Department of Molecular Medicine and Therapeutics

PI: Michael Tranter, PhD

Poster # 114: **Isabel Smeltzer**

Assessing the Cardiotoxic Effects of Pembrolizumab and Lenvatinib Combination Therapy

Department of Internal Medicine, Division of Cardiovascular Medicine

PI: Sakima Smith, MD

Poster # 117: **Eric Steckner**

Ketogenetic versus Mixed Diet: Effect on Exercise Tolerance in Subjects with the Metabolic Phenotype of Heart Failure with Preserved Ejection Fraction

Department of Radiology

PI: Yuchi Han, MD

Undergraduate Students

Poster # 121: **Nishi Suresh**

CHEMR23 Signaling Protects Against Ozone-Induced Airspace Inflammation through RvE1 Signaling.

Department of Internal Medicine, Division of Pulmonary, Critical Care and Sleep Medicine

PI: Kymberly Gowdy, PhD

Poster # 122: **Sanjana Suresh**

Annexin A2 Mediates Plasma Membrane Repair In Primary Alveolar Epithelial Cells

Department of Internal Medicine, Division of Pulmonary, Critical Care and Sleep Medicine

PI: Joshua Englert, MD

Poster # 123: **Nawal Tamimi**

Membrane-Repairing LncRNA Masir Protects the Heart from Ischemic Injury

Department of Physiology and Cell Biology

PI: Jidong Fu, MD, PhD

Poster # 126: **Logan Taylor**

Hemin [Ferric (Fe3+) Heme] causes skeletal muscle cell damage through oxidative stress and membrane lipidome alterations: Protection by Natural Polyphenol Nutraceuticals

Department of Internal Medicine, Division of Pulmonary, Critical Care and Sleep Medicine

PI: Narasimham Parinandi, PhD

Poster # 132: **Jerry Wang**

Functional Analysis of Pathogenic NOTCH1 Signaling in Hypoplastic Left Heart Syndrome Using Patient-Specific iPSCs and Genome Editing

Nationwide Children's Hospital, Center for Cardiovascular Research

PI: Mingtao Zhao, DVM, PhD

Poster # 143: **Jaden Zelidon**

The Role Of High Phosphate Diet On Muscle Metabolism

Department of Physiology and Cell Biology

PI: Kedryn Baskin, PhD

The Ohio State University Wexner Medical Center

Graduate Students

2025 DHLRI Research Day

Graduate Students

Poster # 12: **Joseph Ballas**

Exploring Aging as a Potential Modifier of the Association between the Gut Microbiome and Psychosocial Health in Community-Dwelling Black Men

Department of Internal Medicine, Division of Endocrinology, Diabetes, and Metabolism
MD Program
PI: Joshua J. Joseph, MD

Poster # 14: **Hayley Barta**

Glucocorticoids Regulate Mitochondrial Quality Control Through Metabolic Reprogramming

Department of Physiology and Cell Biology
Molecular, Cellular and Developmental Biology
PI: Nuo Sun, PhD

Poster # 16: **Anandi Batabyal**

Maternal 12,13-Dihome Mediates Offspring Metabolism Via Gut Microbiome Adaptations In A Model Of Maternal High Fat Diet

Department of Surgery, Division of General and Gastrointestinal Surgery
Molecular, Cellular and Developmental Biology
PI: Kristin I. Stanford, PhD and Tamar Gur, MD, PhD

Poster # 21: **John Bobik**

Exploration of the Role of Trafficking protein Particle TRAPPC6A in Cardiac Arrythmia

Department of Surgery, Division of Cardiac Surgery
Biomedical Sciences Graduate Program
PI: Mona El Refaey, PhD

Poster # 22: **Vlad Bogdanov**

Differential Localization of CaM mRNAs Reveals Spatiotemporal Regulation of Ca2+-CaM Signaling in Cardiomyocytes

Department of Physiology and Cell Biology
Biophysics Graduate Program
PI: Sandor Györke, PhD

Poster # 23: **Madeline Burghaze**

Right Ventricle Fibroblasts Display a Hyperfibrotic Phenotype In Vitro

Department of Surgery, Division of Cardiac Surgery
Molecular, Cellular and Developmental Biology
PI: Matthew Gorr, PhD

Graduate Students

Poster # 24: **Savanna Burke**

Cardiac METTL3/METTL14 Complex Mediated M6a Modification Is Required For Early Heart Development

Nationwide Children's Hospital, Center for Cardiovascular Research
Biomedical Sciences Graduate Program
PI: Jihyun Jang, PhD

Poster # 27: **Yuanyuan Cao**

Paternal Exercise Prevents Adverse HFD Effects on Offspring Cardiac Function

Department of Surgery, Division of General and Gastrointestinal Surgery
Biomedical Sciences Graduate Program
PI: Kristin I. Stanford, PhD

Poster # 29: **Hu Chen**

A Spatial Graph Reaction-Diffusion Model to Infer Secreted Signaling Dynamics in Lung Fibrosis

Department of Biomedical Informatics
Biomedical Sciences Graduate Program
PI: Qin Ma, PhD

Poster # 30: **Kangxuan Chen**

Exploring the Role of Neddylation in Parkinson's Disease

Department of Physiology and Cell Biology
Biomedical Sciences Graduate Program
PI: Nuo Sun, PhD

Poster # 35: **Gabriella Elks**

Computational Modeling of Pediatric Atrial Electrophysiology: Age-Dependent Biomarkers and the Role of Patient-Specific Heart Rates

Department of Biomedical Engineering
Biomedical Engineering
PI: Seth Weinberg, PhD

Poster # 37: **Katherine Flannery**

Predicting Long Qt Type 3 Arrhythmia Risk For Variable Extracellular Ionic Conditions

Department of Biomedical Engineering
Biomedical Engineering
PI: Seth Weinberg, PhD

Graduate Students

Poster # 38: **Jon Fritz**

Computational Modeling Elucidates Mechanistic Targets For Treating Surfactant Dysfunction During Lung Injury

Department of Internal Medicine, Division of Pulmonary, Critical Care and Sleep Medicine
Biophysics Graduate Program
PI: Joshua Englert, MD

Poster # 40: **Qianyun Ge**

AMPK γ2 Subunit Regulates Cardiac Hypertrophy through Direct Interactions with Myosin Heavy Chain

Department of Molecular Medicine and Therapeutics
Biomedical Sciences Graduate Program
PI: Wandi Zhu, PhD

Poster # 43: **Gianni Giarrano**

Antibody Fusion Proteins Containing Domains From The Tripartite Motif Family Protein 72 (TRIM72) Increase Plasma Membrane Repair To Treat Muscle Diseases

Department of Physiology and Cell Biology
Ohio State Biochemistry Program
PI: Christoph Lepper, PhD

Poster # 45: **Lynzey Green**

Sex Differences in the Association of Age With Life's Essential 8 Scores Over the Life Course

Department of Internal Medicine, Division of Endocrinology, Diabetes, and Metabolism
Public Health - Epidemiology
PI: Joshua J. Joseph, MD

Poster # 46: **Meghan Hanley**

Chamber-Specific Human Ipsc-Derived Cardiac Models Reveal Cardiac Conduction And Differentiation Defects Due To NOTCH1 Deficiency

Nationwide Children's Hospital, Center for Cardiovascular Research
Biomedical Sciences Graduate Program
PI: Mingtao Zhao, DVM, PhD

Poster # 47: **Hsiang-Ling Huang**

Structural Polymorphism of Cardiac Actin Hypertrophic Cardiomyopathy Mutant Y166C

Department of Physiology and Cell Biology
Molecular, Cellular and Developmental Biology
PI: Krishna Chinthalapudi, PhD

Graduate Students

Poster # 48: **Natasha Maria James**

Uncovering Heart–Adipose Tissue Crosstalk: Natriuretic Peptides And Their Role In BAT- Mediated Metabolic Health

Department of Surgery, Division of General and Gastrointestinal Surgery
Molecular, Cellular and Developmental Biology
PI: Kristin I. Stanford, PhD

Poster # 49: **Sallie Jurs**

Medical-Financial Partnerships: Assessing Impacts on Cardiometabolic, Mental, and Financial Health

Department of Family and Community Medicine
Biomedical Sciences Graduate Program
PI: T.M. Ayodele Adesanya, MD, PhD

Poster # 51: **Adel Kanaan and Salvia Zafar**

A 3D-Cardiac Organoid Model To Mimic Myocardial Infarction In A Dish

Department of Emergency Medicine
MD Program
PI: Mahmood Khan, PhD

Poster # 55: **Hank Kern**

Med12 is Essential for Skeletal Muscle Development

Department of Physiology and Cell Biology
Ohio State Biochemistry Program
PI: Kedryn Baskin, PhD

Poster # 58: **Isabella Kolodny**

Effect of Essential Light Chains MYL6 and MYL6B on the Enzymatic Activity of Nonmuscle Myosin-2A

Department of Physiology and Cell Biology
Molecular, Cellular and Developmental Biology
PI: Sarah Heissler, PhD

Poster # 59: **Dominic Kolonay**

MED12 Interacts with Transcription Machinery to Control Cardiac Gene Expression

Department of Physiology and Cell Biology
Molecular, Cellular and Developmental Biology
PI: Kedryn Baskin, PhD

Poster # 61: **Mia Kordowski**

Functionalized Engineered Extracellular Vesicles For Targeted Delivery To Intervertebral Disc Cells

Department of Biomedical Engineering
Biophysics Graduate Program
PI: Natalia Higuita-Castro, PhD

Graduate Students

Poster # 65: **Lucas Lefers**

Secreted Cardiomyokines Improve Exercise Capacity and Regulate Inter-organ Communication

Department of Physiology and Cell Biology
Ohio State Biochemistry Program
PI: Kedryn Baskin, PhD

Poster # 66: **Hwayeon Lim**

Characterization of AAV/DJ Vector For Cardiac-Specific Gene Delivery

Department of Biomedical Engineering
Biomedical Engineering
PI: Lufang Zhou, PhD

Poster # 68: **Yixuan Liu**

Low-Latency Cine Reconstruction with GRAPPA Variational Network

Department of Biomedical Engineering
Biomedical Engineering
PI: Orlando P. Simonetti, PhD

Poster # 71: **Neeraja Mahalingam**

Automatic Segmentation of Epicardial Adipose Tissue Volume using 3D nnU-Net

Davis Heart and Lung Research Institute
Biomedical Engineering
PI: Orlando P. Simonetti, PhD

Poster # 74: **Michael Meyerink**

Identifying, Detecting, And Measuring Trastuzumab-Induced Cardiotoxicities Utilizing The Cardioprotective Biomarker Adrenomedullin

Davis Heart and Lung Research Institute
Biomedical Sciences Graduate Program
PI: Sakima Smith, MD

Poster # 75: **Zachary Miller**

Defining interactions between PD-1/PD-L1 with Natural Killer cells in Idiopathic Pulmonary Fibrosis

Department of Internal Medicine, Division of Pulmonary, Critical Care and Sleep Medicine
Immunology and Immunotherapeutics Graduate Program
PI: Mauricio Rojas, MD

Poster # 80: **Meghan Novotny**

Characterization of the Myosin Co-Chaperone UNC45A

Department of Physiology and Cell Biology
Molecular, Cellular and Developmental Biology
PI: Sarah Heissler, PhD

Graduate Students

Poster # 81: **Aparna Odayil Muralidharan**

The Secret Society Of Cardiac Cells: Biv-Spectrin Influences Macrophage Recruitment

Davis Heart and Lung Research Institute
Molecular, Cellular and Developmental Biology
PI: Thomas J. Hund, PhD

Poster # 83: **Zianne Olverson**

In Utero Exposure to Electronic Cigarette Aerosol Causes Maternal-Fetal Blood Flow Dysfunction

Department of Surgery, Division of Cardiac Surgery
Molecular, Cellular and Developmental Biology
PI: Matthew Gorr, PhD

Poster # 86: **Serena Ozabrahamyan**

Systemic Glucose Modulation by Brown Adipose Tissue Elevates Peripheral GABA and Lowers Central Glutaric Acid in Alzheimer's Disease

Department of Surgery, Division of General and Gastrointestinal Surgery
Biomedical Sciences Graduate Program
PI: Kristin I. Stanford, PhD

Poster # 87: **Parth Pardeshi**

In Vitro Effect Of Bat-Evs On The Mitochondrial Respiration Of Human-Derived Induced Pluripotent Stem Cell-Cardiomyocytes

Department of Surgery, Division of General and Gastrointestinal Surgery
Biophysics Graduate Program
PI: Kristin I. Stanford, PhD

Poster # 90: **Romaben Patel**

Myeloid-Derived Suppressor Cell Mediated Delivery Of Angiogenic Transcription Factor Genes To Treat Ischemic Stroke

Department of Biomedical Engineering
Biomedical Engineering
PI: Daniel Gallego-Perez, PhD

Poster # 104: **Hannah Sanders**

Acute High-Phosphate Diet Dysregulates Skeletal Muscle Metabolism And Bone Remodeling

Department of Physiology and Cell Biology
Ohio State Biochemistry Program
PI: Kedryn Baskin, PhD

Graduate Students

Poster # 106: **Anusua Sarkar**

Pannexin-2 Deficiency Exacerbates Thapsigargin-induced Cell Injury in Cardiomyocytes

Department of Biomedical Engineering
Biomedical Engineering
PI: Lufang Zhou, PhD

Poster # 107: **Kristina Sattler**

Lectins As Biomarkers For GNE Myopathy Gene Therapy

Department of Physiology and Cell Biology
Molecular, Cellular and Developmental Biology
PI: Christoph Lepper, PhD

Poster # 110: **Rebecca Shaheen**

Understanding the Spatial And Temporal Regulation of the βIV-spectrin/STAT3 Complex In Ischemic Cardiac Remodeling With Spatial Transcriptomics

Department of Biomedical Engineering
Biomedical Engineering
PI: Thomas J. Hund, PhD

Poster # 118: **Justen Stoner**

The Feasibility of CPET-EXCMR During Maximal Exercise in Healthy Adults

Department of Human Sciences and Department of Radiology
Kinesiology
PI: Juliet Varghese, PhD

Poster # 119: **Lauren Stucky**

Assessing Cardiovascular Health of Transgender Adults Receiving Gender-Affirming Hormone Therapy

The Ohio State University College of Medicine
MD Program
PI: Taru Saigal, MD

Poster # 120: **Muhammad Ahmad Sultan**

Motion-robust Dual-echo MRI-based 3D Late Gadolinium Enhancement (LGE) Reconstruction Framework

Department of Biomedical Engineering
Biomedical Engineering
PI: Rizwan Ahmad, PhD

Poster # 124: **Feng Tang**

Direct Biophysical Modulation of Multiple Cardiac Ion Channels by microRNA-1

Department of Physiology and Cell Biology
Biomedical Sciences Graduate Program
PI: Jidong Fu, MD, PhD

Graduate Students

Poster # 127: **Jenna Thuma**

Troponin Enhanceropathies: A Novel Role For The Troponin Genes

Department of Physiology and Cell Biology
Biophysics Graduate Program
PI: Jonathan P. Davis, PhD

Poster # 128: **Ali Ulker**

Regulation of Mitochondrial Redox in Dilated Cardiomyopathy: Role of Calmodulin–NADK2 Signaling

Department of Physiology and Cell Biology
Biomedical Sciences Graduate Program
PI: Jonathan P. Davis, PhD

Poster # 134: **Bo-Yao Wen**

The Role of Periostin in Regulating Adipose Tissue Development and Metabolic Function

Department of Molecular Medicine and Therapeutics
Molecular, Cellular and Developmental Biology
PI: Michael Tranter, PhD

Poster # 135: **Alexander Winkle**

The Role of TREK-1 in Heart Failure and Arrhythmia

Davis Heart and Lung Research Institute
Biomedical Engineering
PI: Thomas J. Hund, PhD

Poster # 136: **Yujia Xie**

Distinct Roles For CD36 Dependent Versus Independent Transendothelial Delivery And Uptake By Cardiomyocytes are Revealed By Coordination With Vectorial Acylation By Esterification To acyl-Coa

Department of Internal Medicine, Division of Endocrinology, Diabetes, and Metabolism
Ohio State Biochemistry Program
PI: E. Douglas Lewandowski, PhD

Poster # 137: **Siying Xu**

Liposomal Nanoparticle Delivery of mTOR Inhibitors to Alveolar Epithelial Cells to Attenuate Ventilator-Induced Lung Injury

Department of Internal Medicine, Division of Pulmonary, Critical Care and Sleep Medicine
Pharmaceutics and Pharmacology
PI: Joshua Englert, MD

Graduate Students

Poster # 138: **Chung-Ju Yeh**

FGFR1 And FGFR4 are Essential Regulators Of Muscle Stem Cell Quiescence

Department of Physiology and Cell Biology
Molecular, Cellular and Developmental Biology
PI: Christoph Lepper, PhD

Poster # 140: **Bennett Yunker**

Local Protein Synthesis: A New Dimension in Cardiac Regulation and Remodeling

Department of Physiology and Cell Biology
Biophysics Graduate Program
PI: Sandor Györke, PhD

Poster # 142: **Samuel Watson**

Unresolved Inflammation in ST-Elevation Myocardial Infarction: The Silent Killer

Davis Heart and Lung Research Institute
Biomedical Sciences Graduate Program
PI: Richard Gumina, MD, PhD

Poster # 144: **Kate Zoller**

The E3 Ligase Subunit FBXL16 Regulates Metabolic Function And The Innate Immunity

Department of Internal Medicine, Division of Pulmonary, Critical Care and Sleep Medicine
Biomedical Sciences Graduate Program
PI: Rama Mallampalli, MD

Poster # 145: **Eryn Zuiker**

Antibacterial Effects of the MEK1/2 Inhibitor ATR-002 on Staphylococcus aureus

Department of Microbial Infection and Immunity
Biomedical Sciences Graduate Program
PI: Matthew Long, PhD

Poster # 146: **Jingru Liang**

Lipokine 12,13-diHOME Protects Against Obesity-Associated Atrial Fibrillation by Attenuation of CaMKII

Department of Surgery, Division of General and Gastrointestinal Surgery
Molecular, Cellular and Developmental Biology
PI: Kristin Stanford, PhD

The Ohio State University Wexner Medical Center

Post-Doctoral Researchers

2025 DHLRI Research Day

Post-Doctoral Researchers

Poster # 2: **Pooja Acharya, PhD**

Subcutaneous Adipose Tissue HuR Expression and Extracellular Vesicle Signaling as Drivers of Cardiac Remodeling

Department of Molecular Medicine and Therapeutics

PI: Michael Tranter, PhD

Poster # 6: **Matthew Alonzo, PhD**

Engineering a Clinical Blood Test to Screen for Fetal Congenital Heart Disease during Pregnancy

Nationwide Children's Hospital, Center for Cardiovascular Research

PI: Mingtao Zhao, DVM, PhD

Poster # 8: **Vandana Anang, PhD**

Bcl-2-interacting killer (BIK) as a Critical Regulator of Host Response to SARS-CoV-2

Department of Internal Medicine, Division of Pulmonary, Critical Care and Sleep Medicine

PI: Yohannes A. Mebratu, DVM, MS. PhD

Poster # 10: **Aaron Argall, PhD**

Cardiac Cell Lineage Differentiation in Trisomy 21 iPSCs alters Ventricular Cardiomyocyte Function

Nationwide Children's Hospital, Center for Cardiovascular Research

PI: Mingtao Zhao, DVM, PhD

Poster # 15: **Syed Baseeruddin Alvi, PhD**

Cardiac Patch-Mediated Lymphatic Remodeling Improves Heart Repair after Infarction

Department of Emergency Medicine

PI: Mahmood Khan, PhD

Poster # 17: **Victor Baylon-Valdez, MD**

Black Impact: Evaluating Outcomes of a Community-Based Cardiovascular Health Intervention

Department of Internal Medicine, Division of Endocrinology, Diabetes, and Metabolism

PI: Joshua J. Joseph, MD

Poster # 20: **Rupam Biswas, PhD**

Structural Basis of Human Nav1.5 Gating Mechanisms

Department of Physiology and Cell Biology

PI: Krishna Chinthalapudi, PhD

Post-Doctoral Researchers

Poster # 26: **Ian Campbell, PhD**

Molecular Mechanisms Of Dysferlin-Mediated Membrane Repair

Department of Physiology and Cell Biology

PI: Krishna Chinthalapudi, PhD

Poster # 28: **Smriti Chaurasia, PhD**

Organoid As A Model To Study ATII Cell Differentiation

Department of Internal Medicine, Division of Pulmonary, Critical Care and Sleep Medicine

PI: Ana L. Mora, MD

Poster # 31: **Weixuan Chen, PhD**

Sex-Specific Cellular Features of the Human Sinoatrial Node Associated with Arrhythmia Risk

Department of Physiology and Cell Biology

PI: Vadim Fedorov, PhD

Poster # 32: **Samuel Cochran, PhD**

CD163 Mediated Resolution Of Pulmonary Injury And Inflammation Induced By Acute Ozone Inhalation

Department of Internal Medicine, Division of Pulmonary, Critical Care and Sleep Medicine

PI: Kymberly Gowdy, PhD

Poster # 36: **Joao Victor Esteves, PhD**

Maternal Exercise Negates the Effects of Maternal PM2.5 Exposure on Offspring Metabolic and Cardiovascular Health

Department of Surgery, Division of General and Gastrointestinal Surgery

PI: Kristin I. Stanford, PhD

Poster # 42: **Ahmed Ghobashi, PhD**

Functional Heterogeneity of Alveolar Type II Cells Across Fibrotic Lung Diseases Revealed by Single-Cell Transcriptomics

Department of Biomedical Informatics

PI: Qin Ma, PhD

Poster # 44: **Brandon Gibson, PhD**

Divergent Cardiometabolic Responses to Parental PM2.5 Pre-conception Exposure in Male and Female Offspring

Department of Surgery, Division of Cardiac Surgery

PI: Loren Wold, PhD

Post-Doctoral Researchers

Poster # 50: **Roman Kalinin, PhD**

Active mRNA Transport and Localized Protein Synthesis in Cardiomyocytes

Department of Physiology and Cell Biology

PI: Sandor Györke, PhD

Poster # 63: **Pankaj Kumar, PhD**

The E3 Ubiquitin ligase, ARIH2, Mitigates LPS-induced Acute Lung Injury

Department of Internal Medicine, Division of Pulmonary, Critical Care and Sleep Medicine

PI: Yohannes A. Mebratu, DVM, MS. PhD

Poster # 64: **Vijay Kumar, PhD**

Immune Cell-Derived Gasdermin D Regulates Endothelial Cell Death and Vascular Leakage In LPS-Induced ALI

Department of Internal Medicine, Division of Pulmonary, Critical Care and Sleep Medicine

PI: Anasuya Sarkar, PhD

Poster # 69: **Veronica Loyo Celis, PhD**

Molecular Determinants of pH Sensing in the Chloride Intracellular Channel 3 (CLIC3)

Department of Physiology and Cell Biology

PI: Harpreet Singh, PhD

Poster # 72: **Juan Ignacio Mariángelo, PhD**

Disruption of Localized Protein Synthesis in the Sarcoplasmic Reticulum Impairs Excitation-Contraction Coupling Machinery in Heart Failure

Department of Physiology and Cell Biology

PI: Sandor Györke, PhD

Poster # 76: **Nilay Mitash, PhD**

Senescence Associated Gangliosides Expression In Fibrotic Lung

Department of Internal Medicine, Division of Pulmonary, Critical Care and Sleep Medicine

PI: Ana L. Mora, MD

Poster # 98: **Satish Raut, PhD**

Chloride Intracellular Channel 1 Regulates GLUT4 Trafficking to Promote Intermittent Fasting Benefits in Diabesity

Department of Physiology and Cell Biology

PI: Harpreet Singh, PhD

Post-Doctoral Researchers

Poster # 105: **Shridhar Sanghvi, PhD**

Clic2 As A Novel Regulator Of Ryr2 And Sr Ca^{2+} Homeostasis In Cardiac Physiology

Department of Physiology and Cell Biology

PI: Harpreet Singh, PhD

Poster # 111: **Mohamed Shamseldin, PhD**

Caspase-4/11 Induces Lung Inflammation And Dampens The Humoral Immune Response In SARS-Cov2 Infected Mice

Department of Microbial Infection and Immunity

PI: Amal Amer, MD, PhD

Poster # 112: **Dharti Shantaram, PhD**

Reprogramming Regulatory T Cells As A Strategy To Rescue Obesity-Driven Insulin Resistance And Fatty Liver Disease

Department of Internal Medicine, Division of Endocrinology, Diabetes, and Metabolism

PI: Willa Hsueh, MD

Poster # 113: **Rabina Shrestha, PhD**

Investigating The Role Of NOTCH1 In Valve Development And Disease

Nationwide Children's Hospital, Center for Cardiovascular Research

PI: Mingtao Zhao, DVM, PhD

Poster # 130: **Natalia Vanegas, PhD**

Transcriptomic Shifts In Human Lungs Donated After Brain And Circulatory Death And Severe Obliterative Bronchiolitis

Department of Internal Medicine, Division of Pulmonary, Critical Care and Sleep Medicine

PI: Mauricio Rojas, MD

Poster # 139: **Yang Yu, PhD**

Impaired Myocardial Proliferation In Cardioids Derived From Patients With Hypoplastic Left Heart Syndrome

Nationwide Children's Hospital, Center for Cardiovascular Research

PI: Mingtao Zhao, DVM, PhD

Poster # 141: **Ilknur Yurtsever, PhD**

USP4 Stabilizes The Immune Regulatory Protein FBXO24 During H. Influenza Infection

Department of Internal Medicine, Division of Pulmonary, Critical Care and Sleep Medicine

PI: Rama Mallampalli, MD

The Ohio State University Wexner Medical Center

Research Staff

2025 DHLRI Research Day

Researcher Staff

Poster # 1: **Dania Abu-aleh**

Knockout Of Melanoma Differentiation-Associated Protein 5 Protects From Pulmonary Hypertension

Department of Internal Medicine, Division of Pulmonary, Critical Care and Sleep Medicine

PI: Laszlo Farkas, MD

Poster # 19: **Madhoolika Bisht, PhD**

Rewriting The Regulatory Script: Enhancer Dynamics During Organ Development

Department of Physiology and Cell Biology

PI: Jonathan P. Davis, PhD

Poster # 33: **Mithu De, PhD**

Proteinase 3 Surface Epitope Detection On Monocytes Versus Neutrophils

Department of Internal Medicine, Division of Pulmonary, Critical Care and Sleep Medicine

PI: Lynn A. Fussner, MD

Poster # 56: **Jordan King**

TnC Engineered Rats Show Improved Cardiac Function in Pulmonary Arterial Hypertension

Department of Physiology and Cell Biology

PI: Jonathan P. Davis, PhD

Poster # 57: **Aaryan Kohli**

Novel Mechanisms Underlying Inflammatory Cytokine IL-17A-triggered Arrhythmic Activities in Cardiomyocytes

Department of Physiology and Cell Biology

PI: Xun Ai, MD

Poster # 62: **Naresh Kumar, PhD**

Pseudomonas Aeruginosa-Mediated Cardiac Dysfunction Is Driven By Extracellular Vesicles Released During Infection

Department of Microbial Infection and Immunity

PI: Murugesan Rajaram, PhD

Poster # 70: **Bindu Madhavi Madabattula**

TRMT1 Methyltransferase Activity is Cytoprotective in Macrophages During Lung Injury

Department of Internal Medicine, Division of Pulmonary, Critical Care and Sleep Medicine

PI: Joseph S. Bednash, MD

Researcher Staff

Poster # 73: **Chandan Maurya**

Persistent Metabolic Remodeling Following Alleviation Of Afterload Stress In A Preclinical Model, Despite Recovery Of Ejection Fraction And Left Ventricle Hypertrophy

Department of Internal Medicine, Division of Endocrinology, Diabetes, & Metabolism

PI: E. Douglas Lewandowski, PhD

Poster # 79: **Shinsuke Nirengi, PhD**

12,13-diHOME Protects Against The Age-Related Decline In Cardiovascular Function Via Attenuation Of Camkii

Department of Surgery, Division of General and Gastrointestinal Surgery

PI: Kristin I. Stanford, PhD

Poster # 91: **Salman Pervaiz, MD**

Towards Pediatric Imaging at 0.55T: Non-Contrast, Gadolinium, and Ferumoxytol Enhanced 3D Magnetic Resonance Angiography in a Porcine Model

Department of Biomedical Engineering

PI: Juliet Varghese, PhD

Poster # 92: **Anastasiia Pokrass, PhD**

Localized Protein Synthesis in Atrial Cardiomyocytes

Department of Physiology and Cell Biology

PI: Sandor Györke, PhD

Poster # 94: **Arun Pradhan, PhD**

FBXO5 Acts As Suppressor Of Pulmonary Inflammation

Department of Internal Medicine, Division of Pulmonary, Critical Care and Sleep Medicine

PI: Rama Mallampalli, MD

Poster # 99: **Jessica Roberts**

Lactate Promotes Myofibroblast Differentiation Through GPR-81-Mediated Suppression of cAMP Under Hypoxia

Department of Internal Medicine, Division of Pulmonary, Critical Care and Sleep Medicine

PI: Richard Nho, PhD

Poster # 100: **Lorena Rosas, PhD**

SMAC Mimetic Promotes Fibrotic Fibroblast Apoptosis And Reduces The Progression Of Pulmonary Fibrosis

Department of Internal Medicine, Division of Pulmonary, Critical Care and Sleep Medicine

PI: Ana L. Mora, MD

Researcher Staff

Poster # 103: **Sierra Saldana**

From Rescue to Risk: The Cardiopulmonary Aftermath of the World Trade Center Collapse

Department of Surgery, Division of Cardiac Surgery

PI: Loren Wold, PhD

Poster # 109: **Arian Seighali**

DeepOx: A Model-Free Reconstruction of O2-Saturation Maps from Cardiac MRI

Department of Radiology

PI: Juliet Varghese, PhD

Poster # 115: **Sourabh Soni, PhD**

Unveiling the BIK-β5 Axis: A Novel Host Determinant of Severe Influenza

Department of Internal Medicine, Division of Pulmonary, Critical Care and Sleep Medicine

PI: Yohannes A. Mebratu, DVM, MS. PhD

Poster # 125: **Lauren Taylor**

Piezo1 Drives Mechanically Induced Immunothrombosis

Department of Molecular Medicine and Therapeutics

PI: Wandi Zhu, PhD

Poster # 129: **Amelia Van Aelst**

Characterizing Normal Physiology in a Mouse Model with Severe Dilated Cardiomyopathy

Department of Physiology and Cell Biology

PI: Jonathan P. Davis, PhD

Poster # 131: **Nataliia Vasileva, PhD**

USP54 Deletion Enhances Autophagy and Motor Function in Aging Mice

Department of Physiology and Cell Biology

PI: Nuo Sun, PhD

Poster # 133: **Jianli Wei, PhD**

Low-Field Interventional Cardiac Magnetic Resonance Imaging Through 3D Radial "Beating and Breathing" Roadmap Imaging Using Multi-Dynamic Low-Rank Deep Image Priors (ML-DIP)

Department of Radiology

PI: Samuel Ting, PhD

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Faculty

2025 DHLRI Research Day

Faculty

Poster # 18: **Ian Bentley, MD**

Airspace miR-146a Levels In Mechanically Ventilated Patients Correlate With Clinical Outcomes And Decrease With Age

Department of Internal Medicine, Division of Pulmonary, Critical Care and Sleep Medicine

Poster # 78: **Drew Nassal, PhD**

STAT3 Recruits KIF20A To Promote Eccentric Myocyte Growth

Department of Physiology and Cell Biology

Poster # 88: **Narasimham Parinandi, PhD**

Angiotensin II Causes Hyperproliferation of Vascular Smooth Muscle Cells through Phospholipase D-generated Bioactive Lipid Signal Mediator, Phosphatidic Acid

Department of Internal Medicine, Division of Pulmonary, Critical Care and Sleep Medicine

The Ohio State University Wexner Medical Center

Fellows

2025 DHLRI Research Day

Fellows

Poster # 97: **Karan Rai, MD**

A Novel Medicare Claims-Based Approach To Identifying Tele-ICU Capability And Utilization Across U.S. Hospitals

Department of Internal Medicine, Division of Pulmonary, Critical Care and Sleep Medicine

PI: Nathan Brummel, MD

Poster # 116: **Shilpa Sridhar, MD**

Frequency, Etiologies, and Prediction of Diffuse Alveolar Hemorrhage

Department of Internal Medicine, Division of Pulmonary, Critical Care and Sleep Medicine

PI: Lynn A. Fussner, MD