

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
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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) <i>Exploration of the Role of Trafficking protein Particle TRAPPC6A in Cardiac Arrhythmia</i>
12:25pm–12:35pm	Gianni Giarrano (Graduate Student) <i>Antibody Fusion Proteins Containing Domains from the Tripartite Motif Family Protein 72 (TRIM72) Increase Plasma Membrane Repair to Treat Muscle Diseases</i>
12:35pm --12:45pm	Juan Ignacio Elio Mariángelo (Post Doctoral Scholar) <i>Disruption of Localized Protein Synthesis in the Sarcoplasmic Reticulum Impairs Excitation-Contraction Coupling Machinery in Heart Failure</i>
12:45pm–12:55pm	Eleanor Mohler (Undergraduate Student) <i>Sex-Dependent Timing of Intergenerational Cardiovascular Risk from Preconception PM2.5 Exposure</i>
12:55pm–1:05pm	Natalia Del Pilar Vanegas (Post Doctoral Scholar) <i>Transcriptomic Shifts in Human Lungs Donated After Brain and Circulatory Death and Severe Obliterative Bronchiolitis</i>

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-**Ashfaq** (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-**Ozabrahmyan** (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- κ B

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 17 α -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 Ashfaq

β IV-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

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The Role Of High Phosphate Diet On Muscle Metabolism

Department of Physiology and Cell Biology

PI: Kedryn Baskin, PhD

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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

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Glucocorticoids Regulate Mitochondrial Quality Control Through Metabolic Reprogramming

Department of Physiology and Cell Biology

Molecular, Cellular and Developmental Biology

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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

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Department of Surgery, Division of Cardiac Surgery

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PI: Mona El Refaey, PhD

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

Department of Physiology and Cell Biology

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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

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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

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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

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Department of Physiology and Cell Biology
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Department of Biomedical Engineering
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Department of Internal Medicine, Division of Pulmonary, Critical Care and Sleep Medicine

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PI: Joshua Englert, MD

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AMPK γ 2 Subunit Regulates Cardiac Hypertrophy through Direct Interactions with Myosin Heavy Chain

Department of Molecular Medicine and Therapeutics

Biomedical Sciences Graduate Program

PI: Wandu Zhu, PhD

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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

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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

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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

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

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

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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 Higueta-Castro, PhD

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Secreted Cardiomyokines Improve Exercise Capacity and Regulate Inter-organ Communication

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

Poster # 66: Hwayeon Lim

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

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

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

Davis Heart and Lung Research Institute
Biomedical Engineering
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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

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Davis Heart and Lung Research Institute
Molecular, Cellular and Developmental Biology
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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 Glutamic Acid in Alzheimer's Disease

Department of Surgery, Division of General and Gastrointestinal Surgery
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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
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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

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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

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

Department of Biomedical Engineering
Biomedical Engineering
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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 β IV-spectrin/STAT3 Complex In Ischemic Cardiac Remodeling With Spatial Transcriptomics

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

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

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

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

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

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

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Troponin Enhanceropathies: A Novel Role For The Troponin Genes

Department of Physiology and Cell Biology

Biophysics Graduate Program

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

Department of Physiology and Cell Biology

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PI: Jonathan P. Davis, PhD

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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

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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

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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

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Molecular, Cellular and Developmental Biology
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Local Protein Synthesis: A New Dimension in Cardiac Regulation and Remodeling

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

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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

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

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

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

Department of Surgery, Division of General and Gastrointestinal Surgery
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Subcutaneous Adipose Tissue HuR Expression and Extracellular Vesicle Signaling as Drivers of Cardiac Remodeling

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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

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

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Structural Basis of Human Nav1.5 Gating Mechanisms

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

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Molecular Mechanisms Of Dysferlin-Mediated Membrane Repair

Department of Physiology and Cell Biology

PI: Krishna Chinthalapudi, PhD

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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

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

Department of Physiology and Cell Biology

PI: Vadim Fedorov, PhD

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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

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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

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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

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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

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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 Diabetes

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Clic2 As A Novel Regulator Of Ryr2 And Sr Ca²⁺ Homeostasis In Cardiac Physiology

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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

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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

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

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PI: Mauricio Rojas, MD

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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

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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

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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

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TnC Engineered Rats Show Improved Cardiac Function in Pulmonary Arterial Hypertension

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

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PI: Xun Ai, MD

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

Department of Microbial Infection and Immunity

PI: Murugesan Rajaram, PhD

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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

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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

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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

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Department of Biomedical Engineering

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Localized Protein Synthesis in Atrial Cardiomyocytes

Department of Physiology and Cell Biology

PI: Sandor Györke, PhD

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FBXO5 Acts As Suppressor Of Pulmonary Inflammation

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

PI: Rama Mallampalli, MD

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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

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Department of Surgery, Division of Cardiac Surgery
PI: Loren Wold, PhD

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Department of Radiology
PI: Juliet Varghese, PhD

Poster # 115: Sourabh Soni, PhD

Unveiling the BIK- β 5 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: Wandu Zhu, PhD

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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

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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

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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

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Fellows

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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