

Dorothy M. Davis Heart and Lung Research Institute
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Dear Colleagues and Guests,

It is a distinct pleasure to welcome you to the 19th Annual Research Day for the Dorothy M. Davis Heart and Lung Research Institute (DHLRI), including over 130 posters, featured talks from some of our very talented trainees, and a keynote talk from Dr. Leslie Leinwand, Distinguished Professor and Chief Scientific Officer of the BioFrontiers Institute at the University of Colorado Boulder. Dr. Leinwand is not only an exceptional translational scientist but also a successful entrepreneur and incredible mentor, who has trained many leaders in the field. Thank you to everyone who made the day possible, especially Jenifer Bennett, Business Operations Senior Analyst, the DHLRI Education Committee, and the Webb Family for their generous philanthropic support. We are also excited to announce the inaugural Charles Webb Innovator of the Year Award in memory of our friend Charles (Chuck) Webb, whose legacy includes a lifetime of hard work, commitment to family, and social responsibility.

Today is all about celebrating our many research and professional achievements over the past year, which have resulted in another record year in terms of funding and impact. To keep pace with your productivity, we have worked hard to increase programming, infrastructure, and membership. A highlight of the past year was celebration of the 1-year anniversary of the Chlapaty Labs in the Pelotonia Research Center. We thank the faculty, staff, and trainees that make up the 11 DHLRI labs now residing in the new space. In parallel, we have made major efforts to grow the infrastructure for collaborative research, including expansion of core labs and purchase of new equipment. We have also made major strides to incorporate Diversity, Equity, and Inclusion into the DHLRI mission. Our new DEI Committee is focused on identifying and removing barriers to progress for all our members. Keep an eye out for opportunities to listen and learn in our new DHLRI Pathways to Progress Distinguished Seminar Series, along with our other educational and mentoring programming.

We'd like to close with a final salute to all of our amazing faculty, staff, and trainees, who are responsible for creating the rich research and training environment in the DHLRI. We celebrate the many new grants, papers, and awards, but we also acknowledge the smaller wins – mastering a new protocol, starting a new collaboration, attending your first conference, clearing the inbox. We see the hard work that you do every day that sets the stage for the big wins!

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, FAHA
Professor, Department of Biomedical Engineering
Associate Dean for Research, College of Engineering
Chair, DHLRI Education Committee

Agenda

- 8:30am **Poster Set-Up (BRT Lobby)**
- 9:00am – 11:00am **Poster Session (BRT Lobby)**
- 11:00am **Opening Remarks (BRT 115), Thomas J. Hund, PhD – Director, DHLRI**
- 11:00am **Short Talks (BRT 115)**
- 11:00am-11:10am **Shreya Agarwal (Undergraduate Student)**
Effect of Increased Afterload on Right Ventricular Waveform Shape and Novel Phenotyping of Patients with Pulmonary Hypertension
- 11:10am-11:20am **Joshua Alvarez (Research Staff)**
Pro-Fibrotic Fibroblast MOXD1 Expression Is Associated with Impaired Copper Transport in Idiopathic Pulmonary Fibrosis
- 11:20am-11:30am **Elisa Felix Soriano, PhD (Post Doctoral Researcher)**
Paternal Exercise Negates the Detrimental Effect of a Paternal HFD On Offspring Cardiac Function and Improves Offspring Cardiac Metabolism
- 11:30am – 11:40am **Kyle Gordon (Graduate Student)**
Impact of Endothelial CD39 on Immune Cell Populations in Hypertension
- 11:40am–11:50am **Saugat Khanal, PhD (Post Doctoral Researcher)**
An Anti-Arrhythmic Action and Novel Molecular Mechanisms of Alda-1 In Holiday Heart Syndrome
- 11:50am-12:00pm **Evangeline Schott (Graduate Student)**
Lipocalin 2 Production Mitigates Ozone Induced Lung Injury and Inflammation
- 12:00pm – 12:45pm **Lunch (BRT Lobby)**
- 12:50pm **Intro to Keynote Speaker (DHLRI 170)**
- 1:00pm **Keynote Talk (DHLRI 170)**
Leslie Leinwand, PhD- BioFrontiers Institute, University of Colorado Boulder
“The Role of Basic Science in Treating A Deadly Heart Disease”
- 1:45pm **Keynote Q&A (DHLRI 170)**
- 2:00pm **Awards (DHLRI 170)**

Joshua Joseph, MD

Keynote Speaker



Joshua Joseph, MD

Associate Professor of Internal Medicine with Tenure
Endowed Professor for Research in Internal Medicine
Division of Endocrinology, Diabetes, and Metabolism
Investigator, Diabetes & Metabolism Research Center
Affiliated Faculty, Translation Data Analytics Institute
The Ohio State University Wexner Medical Center

Joshua Joseph, MD, MPH, FAHA is an associate professor of Internal Medicine and the Endowed Professor for Research in Internal Medicine in the Division of Endocrinology, Diabetes and Metabolism at The Ohio State University Wexner Medical Center. He is founder and medical director for the Ohio State Wexner Medical Center's Healthy Community Center, which focuses on nutrition and wellness on the near east side of Columbus. Dr. Joseph's research is funded by the National Institutes of Health, American Heart Association, Agency of Healthcare Research and Quality, Robert Wood Johnson

Foundation and the U.S. Department of Defense. This research focuses on advancing prevention and treatment of obesity, diabetes and cardiovascular disease through a health equity lens with four pillars:

- Examining the role of stress hormones in cardiometabolic disease
- Health system to community partnerships
- Community-based participatory research
- Quality improvement science

Dr. Joseph is recognized nationally for his work on academic, community, government and industry (ACGI) partnerships to advance health through community-based interventions. His ACCELERATE research group's work has been featured nationally and internationally, including in USA Today and Time, and on Sirius XM Doctor Radio, CBS News, NBC News, ABC News and PBS Newshour.

Clinically, Dr. Joseph treats patients with diabetes and cardiovascular disease at his community-based clinic. Nationally, he is chair of the Endocrine Society Clinical Affairs Core Committee, chair-elect of the American Heart Association Council on Lifestyle and Cardiometabolic Health Diabetes committee and president-elect of the Central Ohio American Heart Association Board. He has been recognized for his science, community engagement and clinical impact with several awards including election to Alpha Omega Alpha, National Minority Quality Forum 40 under 40, and the American Society for Clinical Investigation, along with being awarded the 2019 Columbus Education Association Dr. Martin Luther King Jr. Humanitarian Award, and the "Philanthropist of the Year" Pillar Award by the Medical Mutual Pillar Award for Community Service in 2021.

DHLRI Core Labs

Comprehensive Lab Animal Monitoring System (CLAMS)

Directors: Kristin Stanford, PhD and 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.

Please contact Lisa Baer (Lisa.Baer@osumc.edu) with questions.

Comprehensive Lab Animal Monitoring System (CLAMS)

346 Biomedical Research Tower (BRT)

460 West 12th Avenue

Columbus, Ohio 43210-1252

Phone: 614-688-8711 or 614-247-8287

Email: Lisa.Baer@osumc.edu or Kristin.Stanford@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. This imaging system has cine, digital spot, and digital subtraction angiography (DSA) capabilities as well as a dedicated cardiac review station for post imaging processing. 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)

Director: Kimerly A. Powell, PhD

Manager: Anna Bratasz, PhD

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, GammaCell), 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. Image reconstruction, multi-modality fusion, quantitative image analysis.

Services and Equipment:

- Consultation
- Imaging:
 - MicroCT Imaging (SkyScan 1276)
 - Optical Imaging (IVIS Lumina II)
 - Magnetic Resonance Imaging (Bruker 9.4T)
 - Ultrasound (Vevo 2100)
- Analysis and Interpretation
- Training and Education
- Live Animal Body Composition Measurements (echoMRI)
- Irradiation:
 - Cesium irradiator (GammaCell)
 - X-ray irradiator (RS-2000)
 - Small Animal Radiation Research Platform (SARRP)

Small Animal Imaging Core

Email: DHLRI.SAIC@osumc.edu

Phone: 614-688-8068 or 614-293-8954

Presenter Abstracts by Alphabet

1. Abu-saleh(Research Staff)
2. Acharya, PhD(Post-Doctoral Researcher)
3. Agarwal(Undergraduate Student)
4. Alabre-Bonsu, MD(Clinical Fellow)
5. Alonzo, PhD(Post-Doctoral Researcher)
6. Alvarez(Research Staff)
7. Anang, PhD(Post-Doctoral Researcher)
8. Angeles Lopez, PhD(Post-Doctoral Researcher)
9. Antonescu(Research Staff)
10. Arshad(Graduate Student)
11. Ashraf(Undergraduate Student)
12. Baoyinna, MD(Research Staff)
13. Batabyal(Graduate Student)
14. Batchu(Undergraduate Student)
15. Bentley, MD(Faculty (Non-Competing))
16. Bering(Undergraduate Student)
17. Bhachu(Undergraduate Student)
18. Bobik(Research Staff)
19. Brady, DO(Clinical Fellow)
20. Buck, MD(Clinical Fellow)
21. Burghaze(Graduate Student)
22. Chen(Research Staff)
23. Chen, MD, PhD(Post-Doctoral Researcher)
24. Clarkson(Undergraduate Student)
25. Cochran, PhD(Post-Doctoral Researcher)
26. Contreras(Graduate Student)
27. De, PhD(Research Staff)
28. Debell(Undergraduate Student)
29. Densel(Undergraduate Student)
30. Dholaniya, PhD(Post-Doctoral Researcher)
31. Diep(Undergraduate Student)
32. Esteves, PhD(Post-Doctoral Researcher)
33. Faber(Graduate Student)
34. Felix Soriano, PhD(Post-Doctoral Researcher)
35. Fritz(Graduate Student)
36. Frommeyer, MD(Clinical Fellow)
37. Gilbert(Graduate Student)
38. Gomatam(Graduate Student)
39. Gordon(Graduate Student)
40. Gunsch(Graduate Student)
41. Hackenberg(Research Staff)
42. Horbal, DO(Clinical Fellow)
43. Hu, MD, PhD(Post-Doctoral Researcher)
44. Ikkurthi(Undergraduate Student)
45. James(Graduate Student)
46. Johnson, PhD(Post-Doctoral Researcher)
47. Joshi, PhD(Post-Doctoral Researcher)
48. Khanal, PhD(Post-Doctoral Researcher)
49. King, PhD(Post-Doctoral Researcher)
50. Knowles(Undergraduate Student)
51. Koch(Undergraduate Student)
52. Kogan(Undergraduate Student)
53. Konakalla(Undergraduate Student)
54. Krishna, PhD(Post-Doctoral Researcher)
55. Kumar, PhD(Post-Doctoral Researcher)
56. Kumar, PhD(Research Staff)
57. Lee, MD(Clinical Fellow)
58. Lefers(Graduate Student)
59. Leuenerberger, MD(Faculty (Non-Competing))
60. Li, PhD(Faculty (Non-Competing))
61. Liu(Graduate Student)
62. Lococo(Undergraduate Student)
63. Lopez Serrano, PhD(Post-Doctoral Researcher)
64. Lovins(Graduate Student)
65. MacDowell, MD(Clinical Fellow)
66. Madabattula(Research Staff)
67. Mahalingam(Graduate Student)
68. Mattoo, PhD(Post-Doctoral Researcher)
69. McCallinhart, PhD(Research Staff)
70. McNicol(Undergraduate Student)
71. Miller(Graduate Student)
72. Mishra(Graduate Student)
73. Mocarski, MD(Clinical Fellow)
74. Mueller(Undergraduate Student)
75. Nadkarni, MD(Clinical Fellow)
76. Nassal, PhD(Faculty (Non-Competing))
77. Nirengi, PhD(Post-Doctoral Researcher)
78. Nypaver(Undergraduate Student)
79. Olverson(Graduate Student)
80. O'Malley, MD(Clinical Fellow)
81. Oueis(Undergraduate Student)
82. Ozabrahamyan(Graduate Student)
83. Pardeshi(Graduate Student)
84. Patel(Undergraduate Student)
85. Patel(Undergraduate Student)
86. Pham(Undergraduate Student)
87. Piepho(Graduate Student)
88. Piper(Research Staff)
89. Ricchiuti(Research Staff)
90. Riley(Undergraduate Student)
91. Rivera(Research Staff)
92. Rodriguez Lopez(Research Staff)
93. Roman(Undergraduate Student)
94. Rosas, PhD(Post-Doctoral Researcher)
95. Sanders(Graduate Student)
96. Sanghvi, PhD(Post-Doctoral Researcher)
97. Saroj(Graduate Student)
98. Sattler(Graduate Student)
99. Schott(Graduate Student)
100. Segreto(Undergraduate Student)
101. Selimi, MD, PhD(Post-Doctoral Researcher)
102. Shaheen(Graduate Student)
103. Shaheen, PhD(Post-Doctoral Researcher)
104. Shaver, MD(Clinical Fellow)
105. Soni, PhD(Research Staff)
106. Stoner(Graduate Student)
107. Tamimi(Undergraduate Student)
108. Tang(Graduate Student)
109. Tao(Graduate Student)
110. Tarasov, PhD(Research Staff)
111. Thuma(Graduate Student)
112. Tian(Undergraduate Student)
113. Vanegas, PhD(Post-Doctoral Researcher)
114. Veress, PhD(Research Staff)
115. Watson(Graduate Student)
116. Webb(Undergraduate Student)
117. Willows(Graduate Student)
118. Wilson(Undergraduate Student)
119. Winkle(Graduate Student)
120. Wodarczyk, MD(Clinical Fellow)
121. Woodbury(Research Staff)
122. Xia(Graduate Student)
123. Xu, PhD(Post-Doctoral Researcher)
124. Yaeger(Graduate Student)
125. Yang(Graduate Student)
126. Yeh(Graduate Student)
127. Yu, PhD(Post-Doctoral Researcher)
128. Yuhara, PhD(Post-Doctoral Researcher)
129. Zhang(Graduate Student)
130. Zhang, PhD(Faculty (Non-Competing))
131. Zuiker(Graduate Student)
132. Kasprovic (Research Staff)
133. Kolonay (Graduate Student)

UNDERGRADUATE STUDENT

Undergraduate Student

Poster # 3 : **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 Vanderpool, PhD

Poster # 11 : **Syed Ashraf**

hiPSC-CMs Cultured with hiPSC-CPCs on a Nanofiber Cardiac Patch Show Improved Function and Cardioprotection

Department of Emergency Medicine

PI: Mahmood Khan, M.Pharm, PhD

Poster # 14 : **Anant Batchu**

Optimization of Electrospun Crosslinked Nanofiber Scaffolds for Cardiac Drug Delivery

Department of Physiology & Cell Biology

PI: Mahmood Khan, M.Pharm, PhD

Poster # 16 : **Jakob Bering**

Elucidating the Role of NOTCH1 In Hypoplastic Left Heart Syndrome using Patient-Specific Induced Pluripotent Stem Cells

Center for Cardiovascular Research

PI: Mingtao Zhao, DVM, PhD

Poster # 17 : **Harmeet Bhachu**

X-Linked Cardiac Hypertrophy Within the CLIC2 Subproteome

Department of Physiology & Cell Biology

PI: Harpreet Singh, PhD

Poster # 24 : **Campbell Clarkson**

Cardiac JNK2 Mediates a Heart-Brain Crosstalk in Driving Holiday Heart Syndrome and Behavioral Abnormalities

Department of Physiology & Cell Biology

PI: Xun Ai, MD

Poster # 28 : **Peyton Debell**

Decorin Does Not Localize to Fibrotic Areas in Skeletal Muscles from Muscular Dystrophy Mouse Models

Department of Physiology & Cell Biology

PI: Jill Rafael-Fortney, PhD

Poster # 29 : **Nash Densel**

MCAO Coil-Induced Canine Survival Stroke Model

Department of Neurosurgery

PI: Paco Herson, PhD

Poster # 31 : **Sally Diep**

Hypoxia Increases MCT4-Dependent Extracellular Lactate in IPF Fibroblasts

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

PI: Richard Nho, PhD

Poster # 44 : **Rohita Ikkurthi**

Role of Cardiomyocyte-Derived Extracellular Vesicle (CM-EVs) In Pathological Cardiac Remodeling

Department of Molecular Medicine & Therapeutics

PI: Michael Tranter, PhD

Poster # 50 : **Alex Knowles**

In Vitro Modulation of Cardiac Fibroblast Activation by Matrix Composition

Department of Emergency Medicine

PI: Onur Kanisicak, PhD

Poster # 51 : **Daniel Koch**

Ubiquitin E3 Ligase MARCH10 Targets Influenza Hemagglutinin for Ubiquitination

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

PI: Joanna Tsai, MD & Rama Mallampalli, MD

Poster # 52 : **Jacob Kogan**

Fibroblast-Specific Deletion of Activating Transcription Factor 3 (ATF3) Attenuates Bleomycin-Induced Pulmonary Fibrosis in Mice

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

PI: Mauricio Rojas, MD

Poster # 53 : **Sravani Konakalla**

Identification of Aging and Senescent Cells in Different Anatomical Regions of Aged Lungs

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

PI: Mauricio Rojas, MD

Poster # 62 : **Simon Lococo**

Mechanism for Cardiomyopathy and Cardiac Arrhythmia Associated with a Novel Human Titin Variant

Department of Biomedical Engineering

PI: Thomas J. Hund, PhD

Poster # 70 : **Emily McNicol**

Identification of Key Functional Domains in Dysferlin Membrane Repair Protein Using Targeted Mutations and Deletion Analysis

Department of Physiology & Cell Biology

PI: Noah Weisleder, PhD

Poster # 74 : **Finley Mueller**

Right Atrial Size and Function in Pulmonary Hypertension

Department of Internal Medicine, Division of Cardiovascular Medicine

PI: Rebecca Vanderpool, PhD

Poster # 78 : **Elizabeth Nypaver**

Defining the Role of Cardiac Fibroblasts in the Adipose-Cardiac Signaling Axis

Department of Molecular Medicine & Therapeutics

PI: Michael Tranter, PhD

Poster # 81 : **Mariam Oueis**

Advanced 4-Chamber Echocardiography Techniques Enable Clinically Matched, Precise Assessments of Left and Right Ventricles, Atria, and Valve's Functions in Mice

Department of Physiology & Cell Biology

PI: Jidong Fu, MD, PhD

Poster # 84 : **Aaryan Patel**

Amantadine and Amitriptyline, Two FDA-Approved Potassium Channel Blockers, Inhibit Potassium Ion Viroporin Activity of The Strain-Independent SARS-COV-2 Envelope Protein

Department of Physiology & Cell Biology

PI: Harpreet Singh, PhD

Poster # 85 : **Mudra Patel**

Dapagliflozin-Mediated Attenuation of Myocardial Infarction is Facilitated by CLIC4

Department of Physiology & Cell Biology

PI: Harpreet Singh, PhD

Poster # 86 : **Cindy Pham**

High-Phosphate Diet Induces Exercise Intolerance and Impairs Fatty Acid Metabolism in Mice

Department of Physiology & Cell Biology

PI: Kedryn Baskin, PhD

Poster # 90 : **Morgan Riley**

Cellular Senescence Signatures Across Different Triggers in Human Precision-Cut Lung Slices for Studying Age-Related Lung Diseases

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

PI: Mauricio Rojas, MD

Poster # 93 : **Ana Roman**

Loss of Function Polymorphism in the Ecto-5'-Nucleotidase (NT5E) Gene Increases Atherosclerotic Burden

Department of Internal Medicine, Division of Cardiovascular Medicine

PI: Richard Gumina, MD, PhD

Poster # 100 : **Michael Segreto**

The tRNA Methyltransferase, TRMT1, Regulates tRNA Fragmentation to Prevent Cell Death During Cellular Stress

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

PI: Joseph S. Bednash, MD

Poster # 107 : **Nawal Tamimi**

**Advanced 4-Chamber Echocardiography Techniques Sensitive
Reveals the Therapeutic Effect of lncRNA in Murine Myocardial
Infarction Hearts**

Department of Physiology & Cell Biology

PI: Jidong Fu, MD, PhD

Poster # 112 : **Shane Tian**

**CRISPR Prime Editing for Treating Long QT Syndrome Associated Gene
Mutation**

Department of Surgery, Division of Cardiac Surgery

PI: Hua Zhu, PhD

Poster # 116 : **Averie Webb**

**Cabozantinib Leads to Cardiotoxicity and Oxidative Stress in H9c2
Ventricular Myoblasts**

Department of Internal Medicine, Division of Cardiovascular Medicine

PI: Sakima Smith, MD

Poster # 118 : **Matthew Wilson**

**Investigating the Effects of Intrauterine Exposure to E-cigarettes on
Cardiac Function**

Department of Surgery, Division of Cardiac Surgery

PI: Loren Wold, PhD

Graduate Student

Poster # 10 : **Syed Murtaza Arshad**

EMORE: Motion-Robust XD-CMR Reconstruction Using Expectation- Maximization (EM) Algorithm

Department of Electrical & Computer Engineering: Electrical and Computer Engineering Graduate Program

PI: Rizwan Ahmad, PhD

Poster # 13 : **Anandi Batabyal**

Maternal Fine Particulate Matter (PM2.5) Exposure Programs Cardiometabolic Dysfunction in Offspring via Adaptations to the Gut Microbiome

Department of Surgery, Division of General & Gastrointestinal Surgery: Molecular, Cellular and Developmental Biology Program

PI: Kristin I. Stanford, PhD & Tamar Gur, MD, PhD

Poster # 21 : **Madeline Burghaze**

Fibroblasts From the Right Ventricle Show a Unique Phenotype in Processes Involved in Cardiac Fibrosis

Department of Surgery, Division of Cardiac Surgery: Molecular, Cellular and Developmental Biology Program

PI: Matthew Gorr, PhD

Poster # 26 : **Javier Contreras**

Modelling Maternal Hyperglycemia-induced Congenital Heart Defects using Human Induced Pluripotent Stem Cells

Center for Cardiovascular Research: Biomedical Sciences Graduate Program

PI: Mingtao Zhao, DVM, PhD

Poster # 33 : **Sarah Faber**

Inhibition of Microglia-Specific miR17 Leads to Improvement in Alzheimer's Disease Pathology in Mouse Model

Department of Microbial Infection & Immunity: Neuroscience
Graduate Program

PI: Amal Amer, MD, PhD

Poster # 35 : **Jon Fritz**

Biophysical Determinants of Lung Surfactant Dysfunction in Mouse Models of Bacterial Infection and Injurious Ventilation

Department of Internal Medicine, Division of Pulmonary, Critical
Care & Sleep Medicine: Interdisciplinary Biophysics Graduate
Program

PI: Joshua Englert, MD & Samir Ghadiali, PhD

Poster # 37 : **Benjamin Gilbert**

Investigating The Role of MECOM During Mammalian Outflow Tract Development

Center for Cardiovascular Research: Molecular Genetics

PI: Vidu Garg, MD

Poster # 38 : **Chetan Gomatam**

Direct Effects of Mineralocorticoid Receptor Signaling on Dystrophic Skeletal Muscle Fibroblasts

Department of Physiology & Cell Biology: Molecular, Cellular and
Developmental Biology Program

PI: Jill Rafael-Fortney, PhD

Poster # 39 : **Kyle Gordon**

Impact of Endothelial CD39 on Immune Cell Populations in Hypertension

Department of Internal Medicine, Division of Cardiovascular Medicine:
Biomedical Sciences Graduate Program

PI: Richard Gumina, MD, PhD

Poster # 40 : **Gilian Gunsch**

Loss of Leptin Receptor Signaling in Schwann Cells and Obesity-Associated Neuropathy

Department of Neurosurgery: Biomedical Sciences Graduate Program

PI: Kristy Townsend, PhD

Poster # 45 : **Natasha Maria James**

Natriuretic Peptide Signaling Loop as A Potential Modulator in BAT's Response to Early Pathological Stress on The Heart

Department of Surgery, Division of General & Gastrointestinal Surgery:
Molecular, Cellular and Developmental Biology Program

PI: Kristin I. Stanford, PhD

Poster # 133 : **Dominic Kolonay**

MED12 Is a Transcriptional Nodal Point Regulating Cardiac Transcription

Department of Physiology & Cell Biology: Molecular, Cellular and
Developmental Biology Program

PI: Kedryn Baskin, PhD

Poster # 58 : **Lucas Lefers**

Cardiomyokines Regulate Inter-organ Communication and Improve Exercise Capacity

Department of Physiology & Cell Biology: Ohio State Biochemistry
Program

PI: Kedryn Baskin, PhD

Poster # 61 : **Yixuan Liu**

Enhanced Real-Time iCMR Device Visualization Using GRAPPA and DnCNN Denoising at Low Field

Department of Biomedical Engineering:
Biomedical Engineering Graduate Program

PI: Orlando P. Simonetti, PhD

Poster # 64 : **Hannah Lovins**

Eicosapentaenoic Acid Improves Ozone-Induced Airspace Inflammation through an Oxylin-Mediated Mechanism

Department of Internal Medicine, Division of Pulmonary, Critical Care & Sleep Medicine: Molecular, Cellular and Developmental Biology Program

PI: Kymberly Gowdy, PhD

Poster # 67 : **Neeraja Mahalingam**

Automatic Segmentation of Abdominal Adipose Tissue using 3D Multi-Echo Dixon Fat-Water Magnetic Resonance Imaging

Davis Heart & Lung Research Institute: Biomedical Engineering Graduate Program

PI: Orlando P. Simonetti, PhD

Poster # 71 : **Zachary Miller**

Analysis of the Immune System Dynamics in The Lymph of IPF And COPD Lung Transplants and The Role of The Lung Microenvironment on These Dynamics

Department of Internal Medicine, Division of Pulmonary, Critical Care & Sleep Medicine: Immunology and Immunotherapeutic Graduate Program

PI: Mauricio Rojas, MD

Poster # 72 : **Gargi Mishra**

Uncovering Sensory Nerve Functions in White Adipose Tissue

Department of Neurosurgery: Molecular, Cellular and Developmental
Biology Program

PI: Kristy Townsend, PhD

Poster # 79 : **Zianne Olverson**

**In Utero Exposure to Electronic Cigarette Aerosol Causes a Reduction in
Uterine Artery Peak Velocity and Feto-Placental Crosstalk**

Department of Surgery, Division of Cardiac Surgery: Molecular,
Cellular and Developmental Biology Program

PI: Matthew Gorr, PhD

Poster # 82 : **Serena Ozabrahamyan**

**12,13-diHOME Improves Cognitive Function and Decrease A β Plaque
Burden in Alzheimer`s Disease**

Department of Surgery, Division of General & Gastrointestinal Surgery:
Biomedical Sciences Graduate Program

PI: Kristin I. Stanford, PhD

Poster # 83 : **Parth Pardeshi**

**In vitro Effect of Brown Adipose Tissue-derived Extracellular Vesicles
on the Mitochondrial Respiration of the Subcutaneous White Adipose
Tissue**

Department of Surgery, Division of General & Gastrointestinal Surgery:
Interdisciplinary Biophysics Graduate Program

PI: Kristin I. Stanford, PhD

Poster # 87 : **Arden Piepho**

**Cardiac Inflammation in a Severe Model of Duchenne Muscular
Dystrophy Is Characterized by T-Cells that Exacerbate Cardiomyopathy
Pathology**

Department of Physiology & Cell Biology: Biomedical Sciences
Graduate Program

PI: Jill Rafael-Fortney, PhD

Poster # 95 : **Hannah Sanders**

High-Phosphate Diet Induces Skeletal but Not Cardiac Muscle Mitochondrial Dysfunction and Metabolism in Mice

Department of Physiology & Cell Biology: Ohio State Biochemistry Program

PI: Kedryn Baskin, PhD

Poster # 97 : **Neha Saroj**

TOP2B Knockdown via siRNA Protects hiPSC-Cardiomyocytes from Doxorubicin-Induced Toxicity

Department of Emergency Medicine: PhD Visting Scholar

PI: Mahmood Khan, M.Pharm, PhD

Poster # 98 : **Kristina Sattler**

Med12 Inactivation in Myogenic Progenitors Impairs Skeletal Muscle Differentiation

Department of Physiology & Cell Biology: Molecular, Cellular and Developmental Biology Program

PI: Christoph Lepper, PhD

Poster # 99 : **Evangeline Schott**

Lipocalin 2 Production Mitigates Ozone Induced Lung Injury and Inflammation

Department of Internal Medicine, Division of Pulmonary, Critical Care & Sleep Medicine: Immunology and Immunotherapeutic Graduate Program

PI: Kymberly Gowdy, PhD

Poster # 102 : **Rebecca Shaheen**

The Role of USP13 in Lung Metastasis

Department of Biomedical Engineering: Biomedical Engineering Graduate Program

PI: Thomas J. Hund, PhD

Poster # 106 : **Justen Stoner**

Exercise CMR Comparison Between 3T and 0.55T: Image Quality and Exercise Performance

Department of Human Sciences: Kinesiology

PI: Orlando P. Simonetti, PhD

Poster # 108 : **Feng Tang**

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