



THE OHIO STATE UNIVERSITY

WEXNER MEDICAL CENTER

Dorothy M. Davis Heart and Lung Research Institute

Quarterly Newsletter



Winter 2024



Dr. Thomas Hund was featured by OSU Health and Discovery for his role as the DHLRI Director, and his research on cardiac arrhythmias

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[www. https://medicine.osu.edu/departments/davis-heart-lung-research-institute](https://medicine.osu.edu/departments/davis-heart-lung-research-institute)

A Message from the Director -



Calendar year 2023 ended with a flurry of activity in the DHLRI. October through December is always busy in the Institute but 2023 set a new high, starting with our Annual Research Day in October. The event featured ~130 poster presentations and talks by researchers from various areas of cardiovascular and lung disease. The keynote speaker was **Anthony Rosenzweig, MD**, a renowned expert in identifying novel mechanisms and therapeutic targets in heart failure using the exercised heart to understand heart health. Turnout was incredible as was the science - Congratulations to all our presenters and award winners!

In November, the DHLRI leadership team shared FY23 updates and reviewed strategy with our internal advisory board and our DHLRI membership. These meetings sparked great discussion around a range of important topics, including how to bolster a sustainable research infrastructure, challenges and opportunities for use of clinical data in translational research, and innovative ways to enhance collaborative science.

Also in November, we were happy to partner with the Heart and Vascular Center to host the 2023 Schottenstein Laureate, **Richard Kitsis, MD**, Director of the Wilf Family Cardiovascular Institute at the Albert Einstein College of Medicine. The Schott Prize is the largest award for cardiovascular research and given out on a biannual basis to a leading cardiovascular scientist.

Finally, we closed out 2023 with the Connor Senn Symposium on Sudden Cardiac Arrest in the Athlete, organized in partnership with OSU Heart and Vascular Center, the Division of Cardiovascular Medicine, and OSU Sports Medicine. The keynote speakers for this event were **Kimberly Harmon, MD** (University of Washington & CMO, National Hockey League) and **Eugene Chung, MD** (Harvard University). Again, turnout was phenomenal, with participation from faculty, trainees, first responders, trainers, coaches and athletes from around Central Ohio. Shout out to the exceptional DHLRI staff for helping to coordinate this very busy schedule! Now, to acknowledge the hard work and remarkable achievements of our members over the past few months!

Sincerely,

A handwritten signature in black ink that reads "Thomas J. Hund".

Thomas J. Hund, PhD
Professor, Departments of Internal Medicine and Bio-medical Engineering
Director and William D. and Jacquelyn L. Wells Chair,
Dorothy M. Davis Heart and Lung Research Institute



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Kudos -

Three cheers for our members who received new grants over the last quarter!

Kristy Townsend, PhD (Neurosurgery) and collaborators received a \$3.6 million NIH grant to test a novel diagnosis and treatment combination for painful diabetic neuropathy. **Thomas Hund, PhD** [Cardiovascular Medicine (CVM)/Biomedical Engineering (BME)] was awarded an NIH R01 for his project entitled, “Novel role for the spectrin cytoskeleton in regulation of cardiac fibroblast activity, long-range communication and injury-induced fibrosis.” MSTP student **Kyle Gordon** (Gumina Lab) received an American Heart Association Predoctoral Fellowship Award for his project, “Impact of Endothelial Nucleotidase on Vascular Function.”

Kudos also to our members receiving national awards, honors and invited talks.

Natalia Higueta-Castro, PhD (BME) was recognized by the Biomedical Engineering Society as the 2023 Cellular and Molecular Bioengineering Young Innovator.

Matthew Gorr, PhD (Cardiac Surgery) was awarded the New Investigator Award at the Ohio Valley Society of Toxicology meeting.

Matthew Exline, MD [Pulmonary, Critical Care, and Sleep Medicine (PCCSM)] received Lifeline of Ohio’s Physician Champion Award for his efforts to streamline the organ donation process.



Natalia Higueta-Castro, PhD



Sakima Smith, MD

Curt Daniels, MD (CVM) was inducted into the Ohio State Teaching Honor Society, Courage to Teach and was also published in Heart BMJ on the use of implantable hemodynamic monitoring for the long-term monitoring of pulmonary hypertension in patients with ACHD.

Sakima Smith, MD (CVM) was appointed as a permanent member of the NIH Cardiovascular and Respiratory Diseases Study Section.

Narasimham Parinandi, PhD (PCCSM) was selected as Editor-in-Chief of the Springer Nature Journal Cell Biochemistry and Biophysics.

Daniel Gallego-Perez, PhD (BME) was the keynote speaker at the OSU Latin X in BME Symposium. **Rengasayee Veeraghavan, PhD** (BME) gave an invited talk at the Midwest Microscopy Conference and was elected to a 3-year term as Director of Biological Sciences for the Microscopy Society.

Michael Tranter, PhD (Molecular Medicine & Therapeutics) gave a talk at the International Society for Heart Research North American Section Mid-Career Investigators webinar.



Michael Tranter, PhD

Several DHLRI members gave keynote talks at the Global Talents in Science conference, including:

Vidu Garg, MD (Nationwide Children's Hospital)

Thomas Hund, PhD (CVM)

Murugesan Rajaram, PhD (Microbial Infection and Immunity)

Harpreet Singh, PhD (Physiology and Cell Biology).

Many **DHLRI Faculty, Staff, and Trainees** presented at and attended the 2023 American Heart Association Scientific Sessions held in Philadelphia, PA. Read more about OSU at the 2023 AHA Scientific Sessions here:

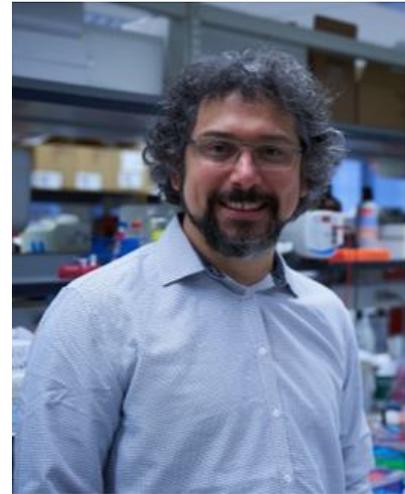
<https://wexnermedical.osu.edu/features/aha-scientific-meeting-2023>



John Hummel, MD, Vadim Fedorov, PhD, and Ning Li, MD, PhD at the 2023 AHA Scientific Sessions

Transitions -

We are very excited to welcome our newest member, **Onur Kanisicak, PhD**, Associate Professor in the Department of Emergency Medicine. Dr. Kanisicak's research addresses cardiovascular regenerative medicine and fibrogenesis. His lab joins a fantastic group of DHLRI members in the Chlapaty Labs, including **Sara Heissler, PhD** (PCB) and **Krishna Chinthalapudi, PhD** (PCB) who relocated their groups to the new building over the past quarter.



Onur Kanisicak, PhD



Peter Mohler, PhD



Walter "Ted" Carter



DHLRI gives a warm welcome to **Walter "Ted" Carter** as the 17th President of The Ohio State University and salute DHLRI member **Peter Mohler, PhD** for his service as Interim President. Dr. Mohler continues in his position as Executive Vice President for Research, Innovation, and Knowledge and Chief Scientific Officer for the OSU Wexner Medical Center.

The DHLRI Administrative Team Welcomes Latisha Roland and Rachel Rosenzweig!

Latisha joined the team this winter as the new Office Service Coordinator and Rachel joined as the manager of the new DHLRI Flow Cytometry Core.



Latisha Roland



Rachel Rosenzweig

Happenings -

In addition to Research Day, Schottenstein Prize, and Connor Senn Symposium discussed above, DHLRI hosted several great speakers through Research in Progress, including **Nipavan Chiamvimonvat, MD** (UC Davis) and **Vladimir Kalinichenko, MD, PhD** (Phoenix Children's Hospital). The final Research in Progress of the year featured DHLRI Director, **Thomas Hund, PhD** presenting on the State of the DHLRI. Research in Progress takes place every Friday from 1-2pm in DHLRI 170. For more information about weekly speakers, check out the DHLRI website and X/Twitter @OhioStateDHLRI.

Davis Heart and Lung Research Institute
Research In Progress

"Functional Roles Of Cardiac Small Conductance Calcium-activated Potassium Channels In Health and Disease"

Friday, November 3, 2023
1pm – 2pm
170 DHLRI



Nipavan Chiamvimonvat, MD
Professor, Roger Tatarian Endowed Professor of Cardiovascular Medicine
Associate Chief for Research, Division of Cardiovascular Medicine
Co-Director, UC Davis Cardiovascular Research Institute (CVRI)
Staff Cardiologist at VA Medical Center



Nipavan Chiamvimonvat, MD

Davis Heart and Lung Research Institute

Research in Progress



"Bioengineering and Stem Cell Approaches to Improve Pulmonary Vasculature in Perinatal Lung Diseases"

Vlad Kalinichenko, MD, PhD
Director, Phoenix Children's Health Research Institute
Professor of Child Health
University of Arizona College of Medicine – Phoenix
Division of Neonatology, Phoenix Children's Hospital

Friday, November 17, 2023
1:00 pm – 2:00 pm
170 DHLRI

Vladimir Kalinichenko, MD, PhD

DHLRI members also participated in a broad range of outreach events. **Thomas Hund, PhD**, **Loren Wold, PhD** (Cardiac Surgery), **Kymerly Gowdy, PhD** (PCCSM), and **Penny Jones** (DHLRI Administrator), along with **Nehal Patel, PhD** (DHLRI Alum) met virtually with >50 STEM students of Thomas Worthington High School to share the importance of the STEM field and how they can help shape the future.

Joshua Joseph, MD, Vidu Garg, MD, and **Thomas Hund, PhD** were featured participants in the Central Ohio American Heart Association's Evening of Excellence, which showcased some of the incredible AHA funded work happening at the Ohio State Wexner Medical Center.

Joshua Joseph, MD and Vidu Garg, MD on the AHA Evening of Excellence Expert Panel



Tom Hund, PhD giving closing remarks at the AHA Evening of Excellence

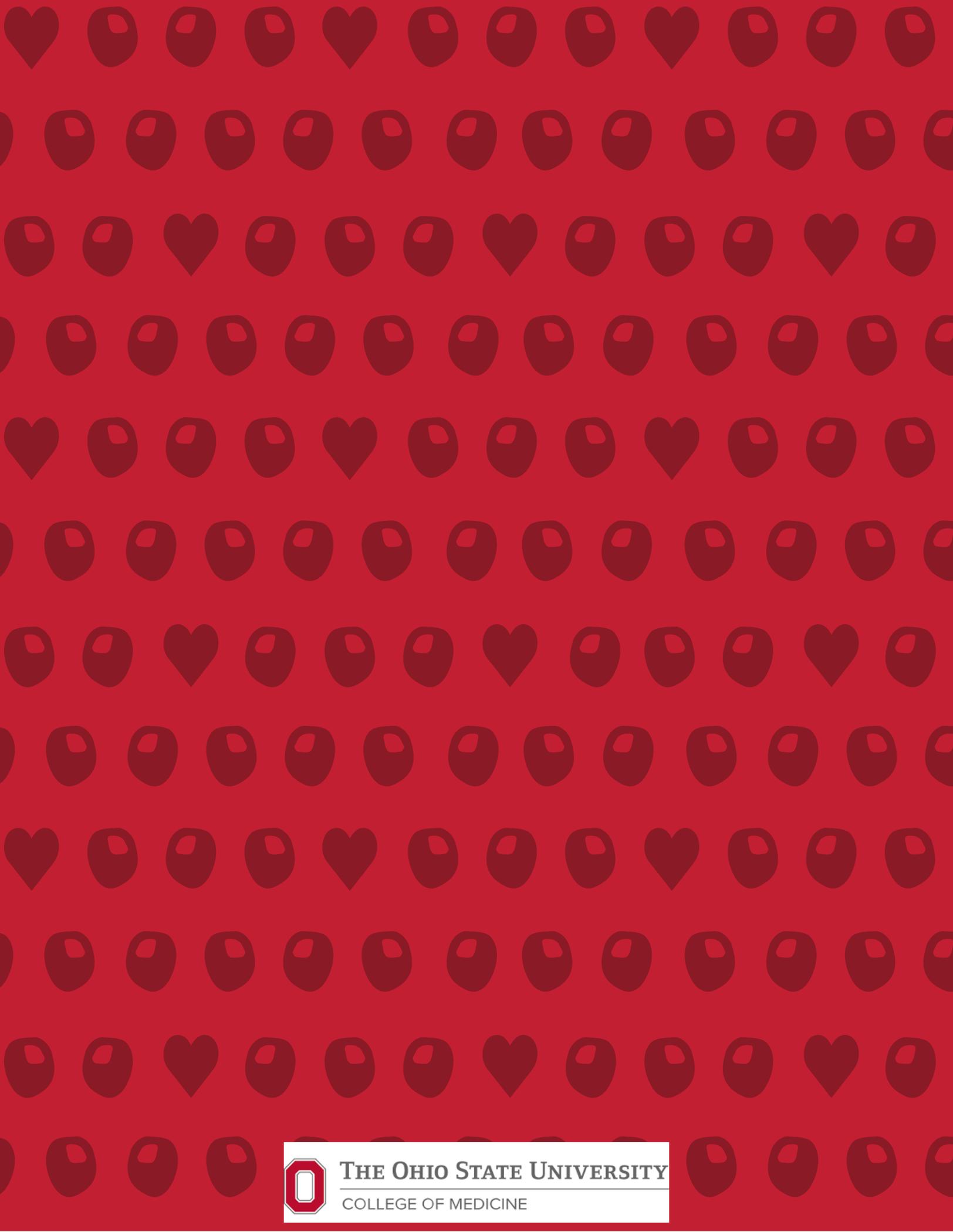
Penny Jones was again presented the College of Medicine Block O award as selected by her peers. DHLRI members also participated in diaper and pajama drive for **Moms2B**. Finally, DHLRI hosted an **Annual Flu Shot Blitz**, where >230 faculty, staff, and students received their annual flu shot.



A new DHLRI Annual Report was released in November! You can view current and previous Annual Reports and Quarterly Newsletters at: <https://medicine.osu.edu/departments/davis-heart-lung-research-institute/our-people/message-from-the-director>

The DHLRI website has also been updated for the quarter, including a new featured story, featured publicatoin, a new events & outreach schedule, and administrative staff updates.

Please reach out to Izabelle Colvin, Editor, (Izabelle.Colvin@osumc.edu) with any submissions for next quarter's newsletter. Photos to accompany your announcement are appreciated.



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