



THE OHIO STATE
UNIVERSITY

DOROTHY M. DAVIS HEART AND
LUNG RESEARCH INSTITUTE

Quarterly Newsletter

Winter 2026



2025 Research Day Panel

A Message from the Director -



This quarter marked an especially meaningful milestone for the Dorothy M. Davis Heart and Lung Research Institute (DHLRI) as we celebrated both our **25th Anniversary** and our 20th Annual Research Day in October. These events brought together our entire community to reflect on the institute's remarkable growth and impact over the past quarter century. A highlight of the celebration was the keynote address delivered by **Juleen Zierath, PhD** from the Karolinska Institutet, an internationally recognized leader in diabetes and metabolism research, whose insights underscored the transformative scientific trajectory that defines the DHLRI. As we look back on our achievements and forward to the innovations ahead, this quarter stands as a powerful reminder of the strength, creativity, and dedication that continue to drive our mission.

Thomas J. Hund, PhD

Professor, Departments of Internal Medicine and Biomedical Engineering
Director and William D. and Jacquelyn L. Wells Chair, Dorothy M. Davis Heart and Lung Research Institute



(Photo Descriptions from Left to Right)

Members of the Davis Foundation with a portrait of Dorothy M. Davis, DHLRI members at the 25th Anniversary celebration, Penny Jones and Emily Christian with Brutus, Brutus at the 25th Anniversary celebration, "25" cupcakes at the 25th Anniversary celebration.

Kudos: Celebrating Research Excellence

Several investigators secured major national awards and competitive federal funding.



Laszlo Farkas, MD [Pulmonary, Critical Care, and Sleep Medicine (PCCS)] earned a Transformational Project Award from the American Heart Association for work exploring endothelial RAB7 deficiency and vascular cell crosstalk in pulmonary hypertension.



Xun Ai, MD [Physiology & Cell Biology (PCB)] received an NIH R01 to investigate JNK2a variants in alcohol induced heart failure, while **Harpreet Singh, PhD** (PCB) was awarded an R01 focused on BK channels in cardiac physiology.



In November, **Krishna Chinthalapudi, PhD (PCB)** earned his second NIH R01 of the year for work on cMyBP C variants in hypertrophic cardiomyopathy, while **Nicolae Moise, MD** [Biomedical Engineering (BME)] received AHA funding and was featured by the College of Medicine for his computational research on atrial fibrillation.



Matthew Stratton, PhD (PCB) earned a pilot grant from the OSU Center for Medical and Engineering Innovation to advance spatially resolved electrophysiological imaging.

Collaboration across disciplines continues to flourish.

Bryan Whitson, MD, PhD (Cardiac Surgery) and **Andre Palmer, PhD** (Chemical & Biological Engineering) received a \$3M NIH R01 to advance lung transplant technology.



Kartik Venkatesh, MD, PhD (Obstetrics) secured federal support for research addressing maternal cardiovascular health through the MomHeart project. Dr. Venkatesh also led a multi investigator NIH funded trial (NOURISH) centered on nutrition insecurity and glycemic control in pregnancy.



Several DHLRI faculty were honored for contributions to mentorship, scientific discovery, and national leadership.

Kymberly Gowdy, PhD (PCCS) was named Outstanding Mentor by OSU FAME and recognized as a Luminary Scientist.

E. Douglas Lewandowski, PhD (Endocrinology) received the Naranjan S. Dhalla Award for Innovative Investigators and was featured for groundbreaking gene therapy research.

Mahmood Khan, PhD (Emergency Medicine) received an AHA Transformational Project Award to advance nanoparticle based myocardial repair and was recognized with the Educational Leadership Award from the Asian American Commerce Group of Columbus. The Khan Lab also contributed an Image of Distinction in the Nikon Small World Competition.



(Left to Right):
Kymberly Gowdy, PhD,
E. Douglas Lewandowski, PhD,
& Mahmood Khan, PhD



Across clinical research, **Scott Lilly, MD, PhD** [Cardiovascular Medicine (CVM)] shared the launch of OSU's AI driven heart failure monitoring trial on 10TV, while OSU became the first U.S. site to launch the global ELEVATE HFpEF pacemaker trial—an important milestone for heart failure innovation.



Seth Weinberg, PhD (BME) and team saw 3 papers appear in print or online in November (PMIDs 41267402, 41275402, 41265703).



Thomas Hund, PhD (CVM/BME) and **Drew Nassal, PhD** (PCB) were featured in the November *Discover CircRes* podcast talking about their recent publication in *Circulation Research*.



Dmitry Terentyev, PhD (PCB) was published in *Circulation Research* for a second time in the last 6 months with his paper, "Increased Intermembrane Space [Ca²⁺] Drives Mitochondrial Structural Damage in CPVT."

Early career scientists also shone brightly



Ella Mohler (Wold lab) received the Best Student Presentation Award at the International Association of Cardiovascular Sciences meeting for her work on cardiometabolic responses to environmental exposure.

Alex Winkle (Hund lab and BME graduate student) was awarded an AHA pre-doctoral fellowship award.

Happenings: Events & Community Engagement

DHLRI's scientific community remained vibrant throughout the autumn semester, with **Research in Progress** sessions spotlighting pre doctoral and post doctoral finalists, along with invited speakers from Johns Hopkins, Loyola, the University of Washington, UF Scripps, the University of Rochester, and other leading institutions.



The **Connor Senn Memorial Soccer Match** was held between OSU and University of Akron at Jesse Owens Memorial Stadium on Friday, September 5th. The match honors the memory of Connor Senn with donations going toward the Connor Senn Memorial Fund to support lifesaving research at the DHLRI.

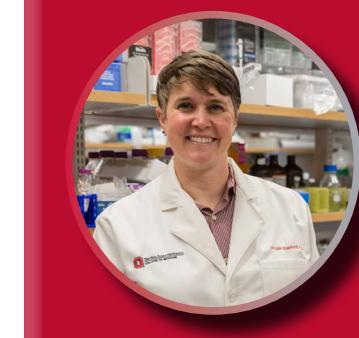


DHLRI members were also active in outreach and public engagement. **Tamar Gur, MD, PhD** (Psychiatry) hosted the inaugural Women's Health Research Symposium, cultivating new partnerships and dialogue around women's health. **Richard Gumina, MD, PhD** (CVM) appeared on Good Day Columbus alongside AHA leadership to discuss the importance of cardiovascular research in central Ohio.

Several DHLRI investigators were featured in notable media. **Ana Mora, MD** and **Mauricio Rojas, MD** (PCCS) contributed to an Ohio State Health & Discovery feature on aging and lung disease.



Kristin Stanford, PhD (Surgery) and **Daniel Gallego Perez, PhD** (BME/Surgery) were highlighted by both the College of Engineering and College of Medicine for their promising work on age related heart disease therapies.



The Schottenstein Prize in Cardiovascular Medicine was awarded this year to **Joseph Wu, MD, PhD**, continuing one of the field's most distinguished traditions.



Joseph Wu, MD, PhD

OSU had a great turnout at the **AHA Scientific Sessions 2025** held in New Orleans, LA from November 7-10 and featuring over 30 presentations from DHLRI members.



OSU Faculty, Staff, and Trainees at the 2025 AHA Scientific Sessions

DHLRI Research Day

A major highlight was the **20th Annual Research Day**, which concluded the institute's week long anniversary celebration. The standing room only event featured leadership from the ERIK office, Wexner Medical Center, College of Medicine, and DHLRI, reflecting on past accomplishments and envisioning the next 25 years. The day included short talks, a record number of poster presentations, and a keynote by **Juleen Zierath, PhD** of the Karolinska Institutet on metabolic rhythmicity in Type 2 diabetes.



Juleen Zierath, PhD



2025 Distinguished Awards

- **Ana Mora, MD** - Melissa G. Piper Distinguished Mentor Award
- **Daniel Gallego-Perez, PhD** - Charles Webb Innovator of the Year Award
- **Dana Mack** - Davis Heart and Lung Research Institute Director's Award
- **Xianyo Xu** - Distinguished Basic Research Staff Award
- **Kelly Dunsky** - Distinguished Clinical Research Staff Award
- **Anna Bratasz, PhD** - Distinguished Administrative Staff Award
- **Karan Rai, MD** - Distinguished Clinical Fellow Award
- **Xilal Y. Rima, PhD** - Post-Doctoral Scholar of the Year Award
- **Vladimir Bogdanov** - Graduate Student of the Year Award

Transitions: Promotions, Honors & New Leadership Roles

This quarter also marked several important professional transitions for members of the DHLRI community.



Masataka Nishiga, MD joined OSU in November as an Assistant Professor in the Department of Molecular Medicine and Therapeutics and a DHLRI Investigator. His lab is in the Joe and Linda Chalapty labs at the Pelotonia Research Center.



Kartik Venkatesh, MD, PhD was inducted into the American Gynecological and Obstetrical Society—recognition of his national prominence in women's health, cardiovascular pregnancy research, and academic leadership.



Xia Ning, PhD (Bioinformatics) was named a 2025 Fellow of the American College of Medical Informatics, reflecting her influential contributions to biomedical informatics and the use of AI to transform patient care.



Julia Coleman, MD (Trauma and Critical Care) and **Kristine Orion, MD** (Vascular Surgery) were inducted as Fellows of the American College of Surgeons.



Daniel Gallego-Perez, PhD (BME/Surgery) was named a Fellow of the Biomedical Engineering Society.



Brad Rovin, MD (Nephrology) was appointed Chair of the Lupus Foundation of America's Medical Scientific Advisory Council, where he will help guide scientific priorities and membership strategy.

Previous Annual Reports and Quarterly Newsletters can be found at: <https://medicine.osu.edu/departments/davis-heart-lung-research-institute/message-from-the-director>

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

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

