



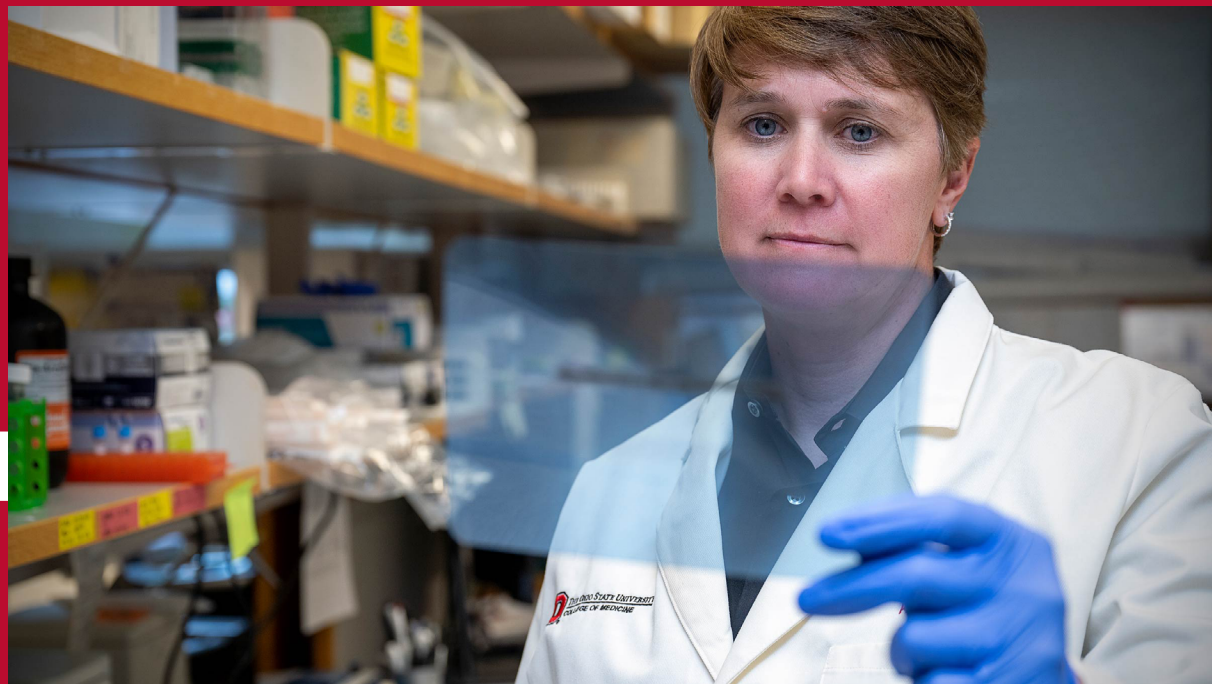
THE OHIO STATE UNIVERSITY

WEXNER MEDICAL CENTER

Dorothy M. Davis Heart and Lung Research Institute

Quarterly Newsletter

Summer 2023



Dr. Kristin Stanford (Physiology and Cell Biology), DHLRI Associate Director, was recently featured in an OSU Health and Discovery article for her research on exercise

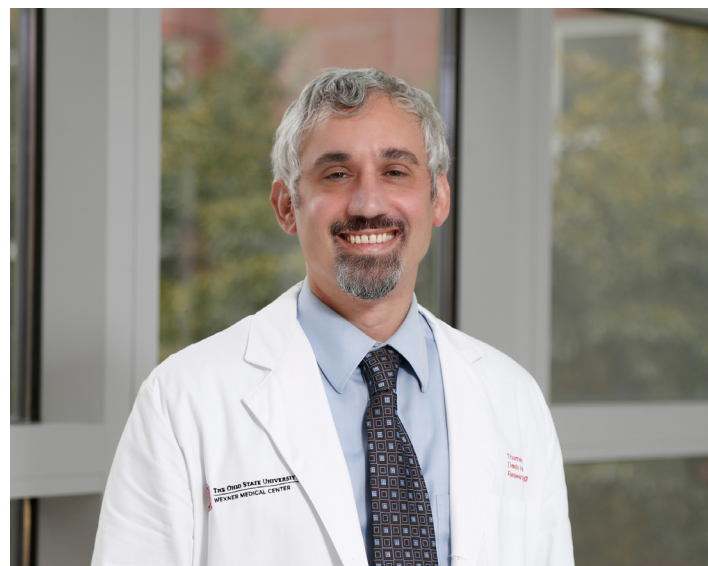
473 West 12th Avenue
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www. <https://medicine.osu.edu/departments/davis-heart-lung-research-institute>

A Message from the Director -

Campus is buzzing again with new and returning students, which means the days of summer are numbered! Although it may feel a little unsettling to think we've only got a couple weeks to complete our summer to-do lists, there's an undeniable electricity with the start of the new academic year. We were thrilled to celebrate the opening of the new Pelotonia Research Center in May with a "ribbon cutting" ceremony that used a protein structure created by **Krishna Chinthapudi, PhD** [Physiology & Cell Biology (PCB)]! Not shortly after, the first of our investigators began moving in into the new building starting with the lab of **Seth Weinberg, PhD** [Biomedical Engineering (BME)] in June followed by the labs of **Sara Koenig, PhD** [Cardiovascular Medicine (CVM)] and **Peter Mohler, PhD** (PCB). A hearty round of applause for these brave pioneers, who are helping lay the foundation for vibrant research neighborhoods in the new building. Early reports are extremely positive about the work environment and support in the new building, which will truly be a game changer for interdisciplinary research at OSU.

An important goal for DHLRI over the next fiscal year is to bolster the infrastructure for interdisciplinary research on the cutting edge across campus, including in the new building. Of course, the most important ingredient to success in this space are the brilliant researchers doing the work but we need to make sure that they have the latest and greatest equipment and expertise to fulfill their vision. With that, DHLRI is making a concerted effort to grow impactful and sustainable core labs to complement our existing cores [<https://medicine.osu.edu/departments/davis-heart-lung-research-institute/core-labs-and-research-centers>]. We are delighted to announce the first of these new cores: Cardiovascular Imaging Research Center (CIRC) under the supervision of co-Directors **Yuchi Han, MD** (CVM) and **Orlando Simonetti, PhD** (CVM). This state-of-the-art resource provides expertise and support for studies on the following MRI systems in the Ross Heart Hospital or at Martha Morehouse Outpatient Care: 1) 1.5T Siemens MAGNETOM Sola; 2) 3.0T Siemens MAGNETOM Vida; and 3) 0.55T Siemens MAGNETOM Free.Max. We also are working with Faculty Director **Kim Powell, PhD** to expand the Small Animal Imaging Core into the



Pelotonia Research Center. Keep your eyes open for additional growth in the year to come. Finally, we take a moment to honor the memory of **Charles Webb**, a great friend and supporter of the DHLRI for many years, who passed away in June. Chuck will be remembered for his self-made success in finance, his exemplary work ethic and dedication, his commitment to family, and the many ways large and small he gave back to his community. His impact is evident across campus but his tie to the DHLRI and the Ross Heart Hospital was special. Going forward, his legacy at the DHLRI will live on in perpetuity with the Webb Family Distinguished Speaker at Research Day. Chuck enjoyed hearing about the day and joining in events or hosting a dinner the night before when possible. His generosity also made possible acquisition of several pieces of equipment to support cutting edge research that will churn out groundbreaking findings for years to come. On a personal note, I'll miss Chuck's warm and welcoming presence and his strong sense of shared responsibility for making the world a better place.

Read more about Chuck's life and legacy here: <https://www.dispatch.com/obituaries/pwoo0514174>

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



Kudos -

Bravo to our investigators who submitted grants over the summer and standing ovation for all the new awards! Notably, **Kristin Stanford, PhD** (PCB), **Loren Wold, PhD** (Cardiac Surgery), **Joshua Joseph, MD** (Endocrinology, Diabetes, and Metabolism), **Tamar Gur, MD, PhD** (Psychiatry), and **Timiya Nolan, PhD** (Nursing) received a \$4.3 million grant from the American Heart Association to study the effects of stress on cardiovascular health and if exercise can provide protection. Read more about this exciting project here: <https://wexnermedical.osu.edu/mediaroom/pressreleaselisting/aha-cvd-grant>.

Dr. Stanford (PCB) was also awarded a new R01 with **Daniel Gallego-Perez, PhD** (BME) from the NIH National Institute of Diabetes and Digestive and Kidney Diseases for their project titled, "Engineering the release of oxylipins through the skin."

Special shout out to **Kedryn Baskin, PhD** (PCB), who was awarded her first NIH R01 as principal investigator. This 5-year project will explore how the heart changes transcription of genes in heart failure.



Kedryn Baskin, PhD

Seth Weinberg, PhD (BME), **Rengasayee Veeraraghavan, PhD** (BME) and **Thomas Hund, PhD** (CVM/BME) were awarded a \$3.86 million NIH grant for their research that will address critical gaps in our understanding of cardiac function and heart disease.

Brandon Biesiadecki, PhD (PCB) was awarded an NIH R01 for his project titled, "Troponin I phosphorylation as a novel cardiac inotrope."

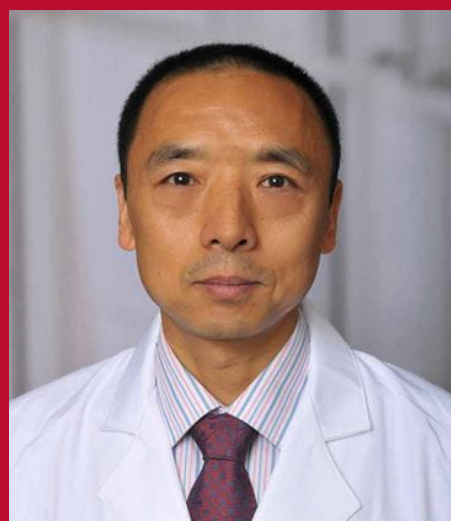
Xun Ai, PhD (PCB) was awarded an NIH R01 for her project titled, "Atrial and blood JNK in Postoperative AF."

Lufang Zhou, PhD (Cardiac Surgery/BME) was awarded an R01 from the NIH National Heart, Lung, and Blood Institute for his project titled, "Synergistically Target Mitochondria for Heart Failure Treatment," which seeks to improve treatment options for heart failure.

Richard Gumina, MD, PhD (CVM) was awarded an R01 from the NIH National Heart, Lung, and Blood Institute for his project titled, "Influence of T cell genotype/phenotype in atherosclerotic cardiovascular disease."

DHLRI member, **Julia Coleman, MD** (Trauma Surgery) received the AAST Research and Education Fund Trauma Critical Care Scholarship for her work on Sex Dimorphisms in coagulation.

Congratulations to **Jidong Fu, PhD** (PCB), **Vidu Garg, MD** (Nationwide Children's Hospital) and **Kotaro Nakanishi, PhD** (Chemistry & Biochemistry) on their 2023 OSU President's Research Excellence Accelerator Grant for their interdisciplinary project to advance our understanding of microRNA activity in heart development and disease.



Jidong Fu, PhD



Vidu Garg, MD

Congratulations to our members who received national awards, honors, and invited talks over the summer!

Loren Wold, PhD (Cardiac Surgery) was named Editor-in-Chief of the FASEB Journal effective August 1, 2023. We know that Dr. Wold will provide stellar leadership for this top journal in experimental biology!

Kymerly Gowdy, PhD [Pulmonary, Critical Care, and Sleep Medicine (PCCSM)] was named Associate Director of the College of Medicine MSTP training program, focusing on recruitment, community, and student wellness.

Shyam Bansal, PhD (PCB) was selected as a finalist for the ERIK Early Career Innovator of the Year.

Louisa Mezache (Veeraraghavan Lab) was awarded best student speaker award at the Microscopy Society of Northern Ohio annual conference.

Daniel Addison, MD (CVM) was appointed as a regular standing member of the NIH Basic Biology of Blood, Heart, and Vasculature Study Section.

Joshua Joseph, MD spoke at the 7th annual Heart in Diabetes meeting, discussing the need to advance equity in diabetes management, from clinical practice to community-based interventions. He also was featured by Columbus City Schools on their Wellness Wednesday series. **Daniel Addison, MD** (CVM) was selected as a standing member of NIH Basic Biology of Blood, Heart and Vasculature (BBHV) study section.



We were very excited to celebrate **Penny Jones**, Lead Administrator for DHLRI, on her selection for the HERS Network Leadership Institute in Denver, CO. Penny participated in the intensive training program together with dozens of higher education leaders from around the country.

American Thoracic Society International Conference

Several DHLRI researchers received awards at the 2023 American Thoracic Society (ATS) International Conference in May.

Paula Agudelo, PhD (Rojas Lab) received an ATS Underrepresented Trainee Development Scholarship Award

Ana Mora, MD (PCCSM) received an ATS Recognition Award for Scientific Accomplishments.

Sourabh Soni (Mebratu Lab) received an Assembly on Respiratory Cell and Molecular Biology Abstract Scholarship Award.

Jose Ovando Ricardez, BSc (Rojas / Mora Lab) received the PAR Abstract Scholarship.



Paula Agudelo, PhD along with mentors Mauricio Rojas, MD and Ana Mora, MD at the 2023 ATS Conference



Ana Laura Lopez Serrano, PhD with Wilton Wells Webster fellowship awardees at the 2023 HRS Scientific Sessions

Heart Rhythm Society Scientific Sessions

Ana Laura Lopez Serrano, PhD (Deschenes Lab) received the Wilton Wells Webster Fellowship in Electrophysiology at the 2023 Heart Rhythm Society Scientific Sessions in New Orleans.

At the same meeting, results were presented from the EASY AF study reporting that a device invented by **Emile Daoud, MD** (CVM) significantly reduces the risk of esophageal injury after radiofrequency catheter ablation therapy (Dr. Daoud was not an author on the study). Dr. Daoud is co-founder and Chief Medical Officer of an Ohio State spinoff S4 Medical Corp, which has raised funds to take the device to market.

Happenings -

Four Metro high school students, nine undergraduate students, and one medical student joined the DHLRI team for the second annual **JB Project Summer Fellowship Program** in which students from Ohio State and beyond worked under DHLRI investigators for the summer.



JB Cardiovascular Fellowship Students touring the DHLRI Neighborhoods at the new Peletonia Research Insitute

The DHLRI Administrative Team also wrapped up the five-part DEI Workshop Series in collaboration with the **OSU Office of Diversity and Inclusion**. The last session was a Q&A Panel Discussion with leaders from across the University and Medical Center. **Dean Bradford** from the College of Medicine gave closing remarks.



Dean Carol Bradford, MD (College of Medicine) addressing the audience at the DHLRI DEI Workshop Series Wrap Up

DHLRI Research In Progress will resume for the Autumn semester on Friday, August 25 from 1-2pm (note the change in time from previous years) in DHLRI 170. The intended schedule for the first half of the semester will be as follows:

- August 25: **Rebecca Vanderpool, PhD** (OSU, Cardiovascular Medicine)
- September 1: **Postdoc of the Year Finalists**
- September 8: **Predoc of the Year Finalists**
- September 15: **Rongxue (Rosie) Wu, MD, PhD** (University of Chicago)
- September 22: **Laura Serwer, PhD** (CRISPR Therapeutics)
- September 29: **Joseph Palatinus, MD, PhD** (University of Utah)

Save the Date for DHLRI Research Day!
Tuesday, October 10
More information to come

Dr. John Warner (CEO, Wexner Medical Center) visited the DHLRI within his first week on campus to meet with researchers and tour lab spaces. On a subsequent visit, he toured the Bob and Corinne Frick Center for Heart Failure and Arrhythmia and met with Frick Chairs, **Vadim Fedorov, PhD** (PCB), and **Isabelle Deschenes, PhD** (PCB).



Dr. Warner touring Dr. Fedorov's lab



Dr. Warner with members of the Mora / Rojas Labs

To view the DHLRI FY22 Annual Report, please visit <https://medicine.osu.edu/departments/davis-heart-lung-research-institute/our-people/message-from-the-director>.

Here you can find information on DHLRI publications, funding, programs, and departmental updates, as well as current projects and future goals.

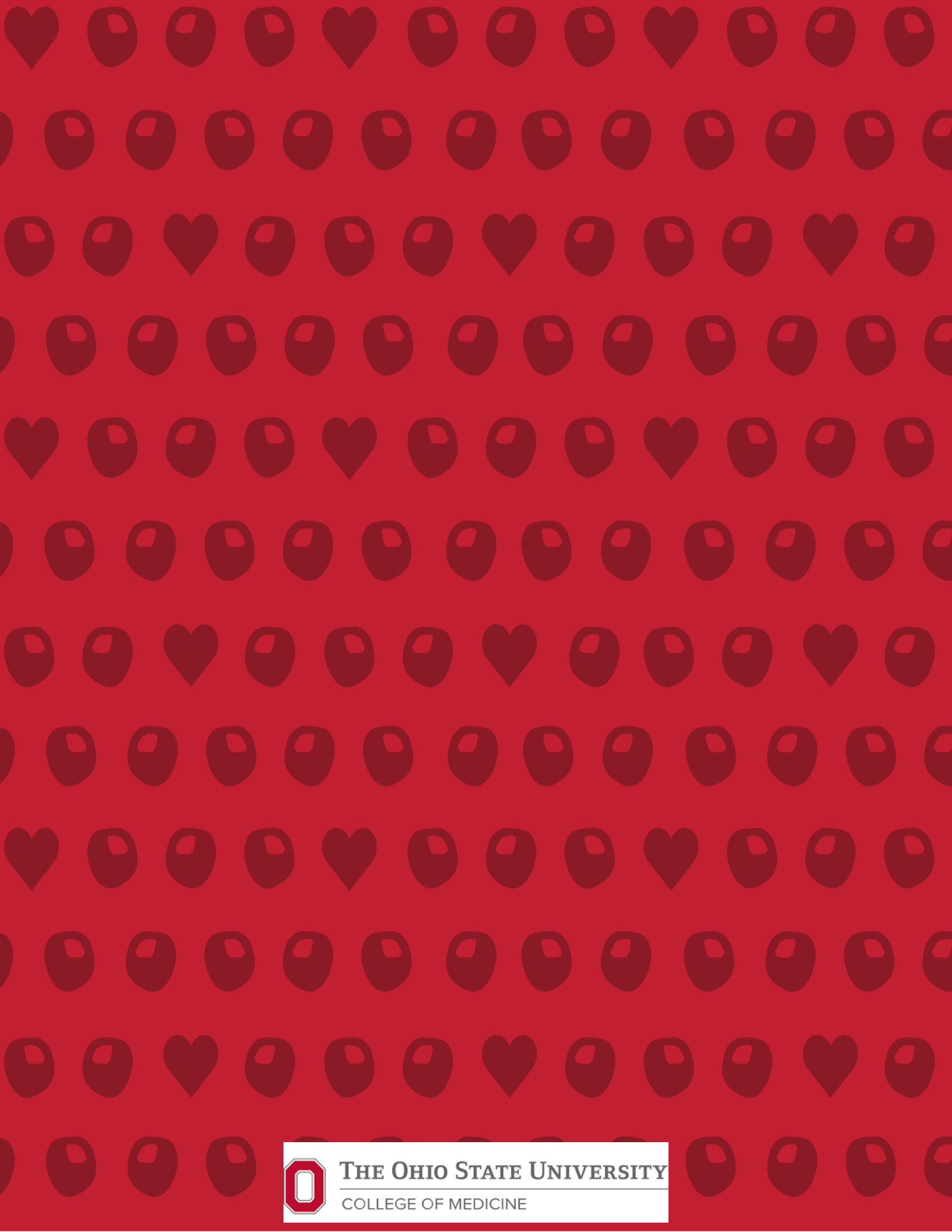
The DHLRI website has also been updated for the quarter, including a new featured story, featured publicatoins, a new events & outreach schedule, and administrative staff updates.

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



Dr. Warner with DHLRI Members and Leadership





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