

Transforming Health

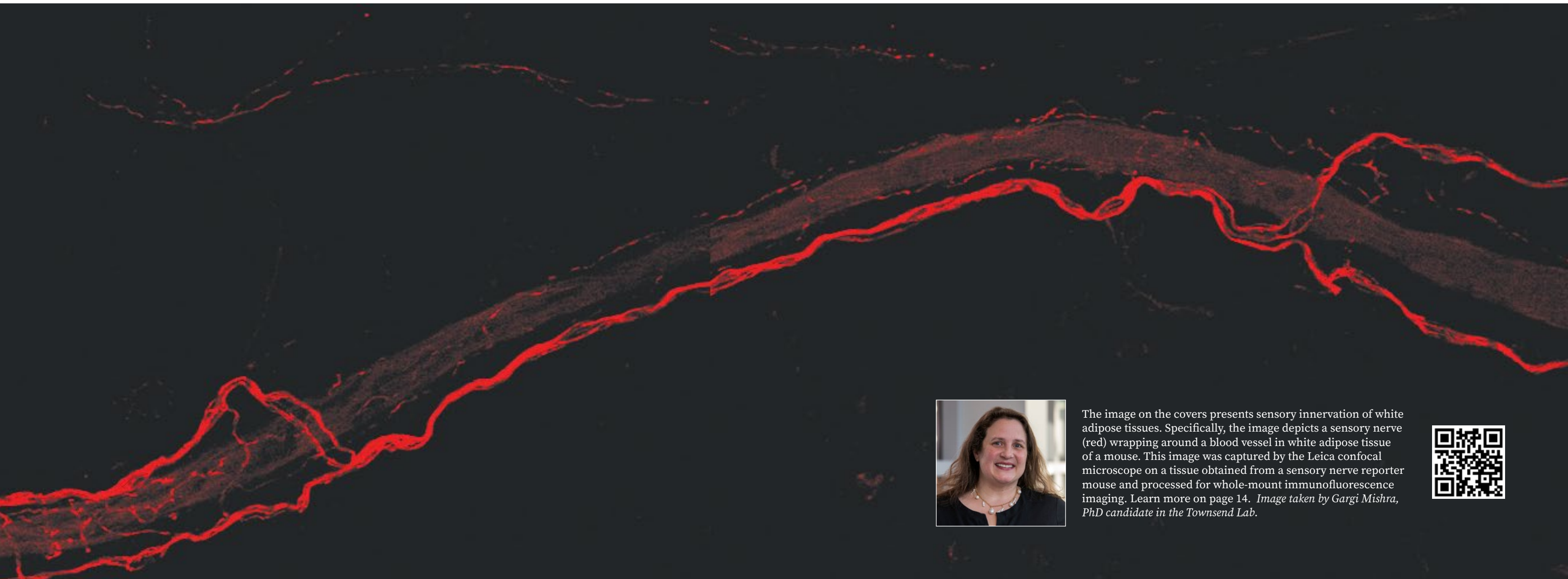
Annual Report | 2023

We're creating solutions
needed now.



**THE OHIO STATE
UNIVERSITY**

COLLEGE OF MEDICINE



The image on the covers presents sensory innervation of white adipose tissues. Specifically, the image depicts a sensory nerve (red) wrapping around a blood vessel in white adipose tissue of a mouse. This image was captured by the Leica confocal microscope on a tissue obtained from a sensory nerve reporter mouse and processed for whole-mount immunofluorescence imaging. Learn more on page 14. *Image taken by Gargi Mishra, PhD candidate in the Townsend Lab.*





Learn more about how Dean Bradford is addressing big challenges in health care through collaboration.



“I could not be prouder of the dedication and impressive work of our faculty, staff and learners. We have achieved great things this year and we are making an enormous impact on the lives of others for years to come.”

– Carol R. Bradford, MD, MS, FACS

Letter from the Dean

Dear Colleagues,

Academic medicine is my passion. To put an even finer point on it, academic medicine at a public institution like The Ohio State University is truly something special. Through the myriad accomplishments highlighted within this report, I am thrilled to share with you just how special we are!

With 5,000 learners, more than 4,000 staff members and over 2,700 faculty, our Ohio State College of Medicine community is even bigger than some small towns. I have seen firsthand how our size, talent and reputation offer us an unparalleled wealth of opportunities to come together in support of the three areas of our tripartite mission — discovery, patient care and education. And together, we are demonstrating our unique power to transform the health of our communities.

In this report, you will read about our record research funding with more than \$400 million in total awards, as well as our groundbreaking clinical trials and research studies. You will read about our world-class patient care. And you will read about our innovative education programs that are developing the next generation of health care professionals and biomedical researchers, who will ultimately perform cutting-edge research and deliver extraordinary patient care themselves.

We have great stories to tell from each part of our mission, but the most powerful stories lie at the intersection of all three areas. When discovery, patient care and education come together, the results are truly transformative. Academic medicine drives innovation. Nearly every new medicine, treatment and cure was discovered by physicians and researchers working collaboratively to push the boundaries of knowledge and solve the world’s most challenging health problems.

As part of one of the most comprehensive academic health science campuses in the nation, the Ohio State College of Medicine is at the forefront of scientific discovery, pursuing novel research and developing unique, effective therapies months — and even years — before other health care systems. I could not be prouder of the dedication and impressive work of our faculty, staff and learners. We have achieved great things this year and we are making an enormous impact on the lives of others for years to come.

I hope you enjoy reading this report and that it makes you as optimistic as I am about the future of medicine and the health of our communities!

Sincerely,

Carol R. Bradford, MD, MS, FACS
Dean, The Ohio State University College of Medicine
Vice President for Health Sciences, The Ohio State University Wexner Medical Center
Leslie H. and Abigail S. Wexner Dean’s Chair in Medicine



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By the numbers



The Ohio State University College of Medicine

Ranked No. 28 in research by *U.S. News & World Report*

\$400M+ in total research funding

20 clinical departments

8 basic science departments

2K+ active research studies and clinical trials

5K+ total learners



The Ohio State University

65K+ undergraduate, graduate and professional students

39K+ full-time equivalent employees

580K+ living alumni around the world

18 colleges and schools

250+ majors



The Ohio State University Wexner Medical Center

24.7K+ employees

1,824 attending physicians

1,031 residents and fellows

5,455 nursing staff

\$4.89B revenue



The Ohio State University Comprehensive Cancer Center – Arthur G. James Cancer Hospital and Richard J. Solove Research Institute (OSUCCC – James)

1 of 56 NCI Comprehensive Cancer Centers (designated since 1976)

Third-largest cancer hospital in the country

\$64.2M in total NCI grant funding in 2022

23 NCI grants awarded in 2022

687 clinical trials available

5.2K+ faculty and staff and **250+** volunteers

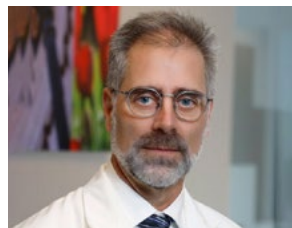
1.7K+ cancer researchers



Welcoming new leaders



John J. Warner, MD, MBA
Chief executive officer of The Ohio State University Wexner Medical Center and executive vice president at The Ohio State University



Aaron Clark, DO
Associate professor and chair of the Department of Family and Community Medicine



Whitney Luke, MD, MBOE
Professor and chair of the Department of Physical Medicine and Rehabilitation



Amy Darragh, PhD, OTR/L, FAOTA
Director and vice dean of Health and Rehabilitation Sciences Professor, Division of Occupational Therapy



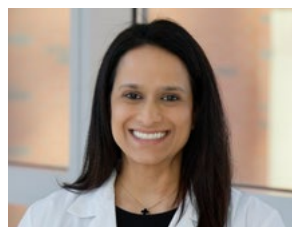
Darren Mays, PhD, MPH
Assistant dean for Faculty Affairs and associate professor of Internal Medicine



Gloria Fleming, MD
Assistant dean for Diversity and Inclusion for Faculty and professor of Ophthalmology and Visual Sciences



Matthew Ringel, MD
Professor and chair of the Department of Molecular Medicine and Therapeutics



Maya Iyer, MD, MEd
Assistant dean for Faculty Affairs and associate professor of Pediatrics



Henry Young II, MD
Assistant dean for Diversity and Inclusion for Learners and associate professor of Emergency Medicine



Learners and faculty collaborate in pursuit of next-generation solutions at new Pelotonia Research Center

The Ohio State University's Pelotonia Research Center opened in May, providing new opportunities for learners and faculty to collaborate with researchers across multiple colleges and disciplines. The center will feature "laboratory neighborhoods" focused on finding solutions to the most challenging life sciences questions facing our generation.

This five-story, 305,000-square-foot facility features more than 100 labs and will ultimately be home to up to 1,000 researchers and staff from several colleges. The College of Medicine will occupy 75-85% of these laboratory neighborhoods.

They are joining forces to develop next-generation techniques and therapies to address cancer, heart disease, neurological diseases, behavioral health, food insecurity, gene and cell therapy, microbiome science and more.



“Having varied researchers in the same facility enhances creativity by exposing faculty and learners to ideas different from their own,” says Dana McTigue (pictured below), PhD, associate dean for Foundational Research at the Ohio State College of Medicine. “Faculty and trainees can take their work in directions they otherwise would have never dreamed. This is the way transformative scientific advances are produced.”

“The center demonstrates our commitment to our mission as a land-grant university, a dedication to creating and providing research-based programs and knowledge to improve the well-being of the state and beyond,” says Peter Mohler (pictured at left), PhD, executive vice president for Research, Innovation and Knowledge at Ohio State and chief scientific officer at The Ohio State University Wexner Medical Center and College of Medicine.

“Ohio State continues to support our world-class faculty, foster innovative learning and provide opportunities for scientists to blaze the trail for tomorrow’s breakthroughs,” Dr. Mohler says. “The center furthers these efforts by bringing together researchers from multiple disciplines in one of the most technologically advanced new research buildings in the country.”

“The center is a place where the ‘old school’ type of science is a thing of the past, supplanted by large groups of experts from different fields bringing their collective expertise to an array of scientific questions,” Dr. McTigue adds.

“Students learning in the center will gain the skills, knowledge and connections they’ll need to become the next generation of scientific leaders,” she says. “They will benefit from being present in the time and place where science took off from its current inflection point to reach unthinkable new levels and witness groundbreaking new advances.

“The center is intentionally designed to foster interactions that allow scientists to interpret and leverage comprehensive, complex data in an environment where the capabilities of scientific techniques are advancing rapidly.”

“As a result, trainees flourish as well,” Dr. McTigue says. “They’re immersed in interactions and engagement with faculty and other students, and together, they’re part of a scientific collective for which the whole is much greater than the sum of its parts.”

The facility in Carmenton, Ohio State’s innovation district, is named in recognition of the partnership with Pelotonia, an annual bike ride that has raised more than \$274 million for cancer research at Ohio State since 2008.



Team receives \$12 million grant to research the best medication to treat gestational diabetes

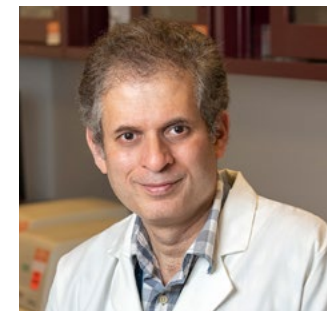
The Patient-Centered Outcomes Research Institute awarded a grant to a team led by co-principal investigators Kartik Venkatesh (pictured at right), MD, PhD, assistant professor of Obstetrics and Gynecology, and Mark Landon, MD, professor and chair of the Department of Obstetrics and Gynecology. They will lead the study, which involves 20 other institutions, to compare the effectiveness of oral metformin versus injectable insulin in pregnant individuals experiencing gestational diabetes.



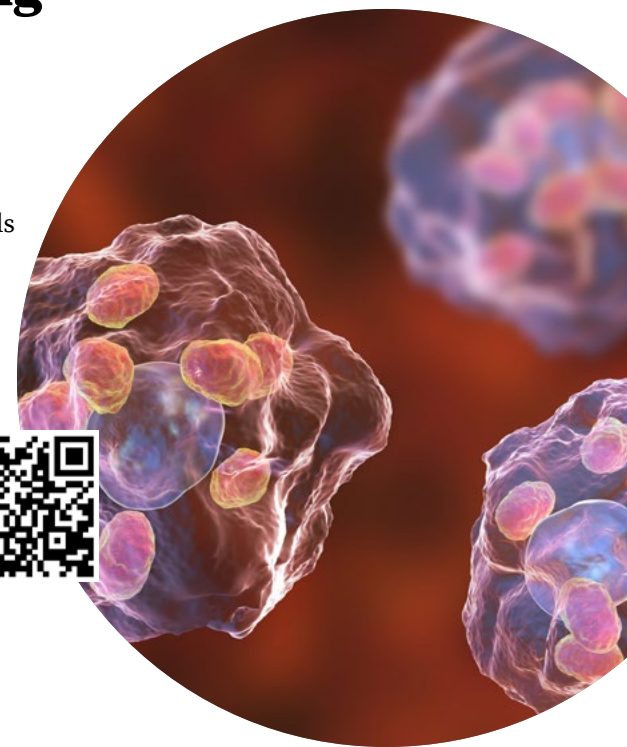
Learn more about how this research will inform the way we treat gestational diabetes for years to come.

Newly developed vaccine targeting Leishmania mexicana

Abhay Satoskar, MD, PhD, professor of Pathology, has developed a vaccine targeting *Leishmania mexicana*, a parasite found in South, Central and North America. He is now beginning phase I human trials with a vaccine targeting *Leishmania major*, the species that is found in the Eastern Hemisphere. These parasites cause a disfiguring skin disease that affects about 12 million people globally.



Learn more about how this vaccine can lead to lifelong immunity against further disease.



This illustration presents sensory innervation of white adipose tissues. Specifically, the image depicts a sensory nerve (red) wrapping around a blood vessel in white adipose tissue of a mouse. This image was captured by the Leica confocal microscope on a tissue obtained from a sensory nerve reporter mouse and processed for whole-mount immunofluorescence imaging.
Image taken by Gargi Mishra, PhD candidate in the Townsend Lab.

Discover more
research advancements
from Ohio State.



Kristy Townsend, PhD, receives prestigious research award from W.M. Keck Foundation to study brain and adipose tissue connections

The W.M. Keck Foundation awarded \$1.2 million to a multi-center team, led by researchers at The Ohio State University College of Medicine and The Ohio State University Wexner Medical Center, to explore the neural feedback loop between the brain and adipose (fat) tissue.

The team, led by Kristy Townsend (pictured at right), PhD, associate professor of Neurological Surgery at the Ohio State College of Medicine and a researcher with the Dorothy M. Davis Heart and Lung Research Institute, Diabetes and Metabolism Research Center, Comprehensive Cancer Center and Neuroscience Research Institute, leads the investigative process of using mouse models to evaluate how and which lipids (fatty compounds that help maintain certain cellular functions) are communicated to the brain by nerves in adipose tissue.

This new funding has steered the team to determine that adipose sensory nerves are likely “nociceptors,” or sensors of noxious stimuli, or stimuli strong enough to damage or threaten the body tissue. This breakthrough process and its outcomes exist through a collaboration with a number of Ohio State departments and divisions and external collaborators at the University of Maine, University of New England, the National Institutes of Health, and Berg, a biotech company.

Dr. Townsend says the interdisciplinary consortium spans neuroscience, advanced imaging, lipid biochemistry and metabolic health and holds the promise of scientific breakthroughs that can improve lives now and in the future.

“We will collect foundational data about the function of adipose sensory nerves and the diversity of information they communicate to the brain,” Dr. Townsend says. “The aim is to understand how the use of adipose may help maintain healthy tissue functions and prevent metabolic diseases like obesity.”

They also plan to investigate the loss of neural communication between the tissue and the brain and how this important communication route of noxious stimuli may be lost.

“Communication to the brain via the sensory nerves is a significantly understudied aspect of the basic biology of adipose tissue function,” Dr. Townsend says. “We lack an understanding of how these nerves respond to local signals, including lipids, and whether they serve as a neuronal ‘fuel sensor’ for the brain.”

The Townsend Lab is one of only a handful of labs around the world specifically working at the interface of metabolism, adipose tissue plasticity and function, metabolic health and the role of the brain and peripheral nerves in these systems.

Novel imaging techniques have the potential to illuminate the function of these sensory nerves by determining what roles they play in metabolism, including sensing and communicating the types and quantities of lipids stored in adipose tissue for fuel.

“This potential feedback loop may be harnessed in the future to drive beneficial sensory nerve signals from adipose tissue to the brain to promote metabolic health and decrease risk factors for associated illnesses such as diabetes, cardiovascular disease and numerous cancers,” Dr. Townsend says.

This adipose sensory nerve function research, co-authored by Dr. Townsend and Gargi Mishra, PhD candidate, who is in the Molecular, Cellular and Development Biology Graduate Program at Ohio State, was just published in a high-impact review in *Nature Metabolism*.

The W.M. Keck Foundation is an American philanthropic foundation supporting scientific, engineering, education, community service and medical research in the United States.





Read more about how this technology is helping cancer patients live longer on Ohio State's Health & Discovery website.

Ohio State surgeons use robotic technology to give patients with pancreatic cancer 'the gift of time'

Nearly 10 years ago, few surgeons had attempted robotic-assisted pancreaticoduodenectomy, a surgery for patients with pancreatic cancer, the third-deadliest form of cancer in the United States.

Now, The Ohio State University Wexner Medical Center has emerged as a national leader in performing the procedure. At the forefront of this effort is Mary Dillhoff (pictured above), MD, a clinical professor of Surgery at The Ohio State University College of Medicine and a surgical oncologist at The Ohio State University Comprehensive Cancer Center – Arthur G. James Cancer Hospital and Richard J. Solove Research Institute.

During surgery, Dr. Dillhoff controls four arms of a da Vinci robot. One arm has a tiny 3D camera to provide detailed views, while the other three have surgical instruments allowing her to cut, sew and move organs with precision.

Using this procedure helps reduce the risk of infection by making a few small incisions rather than one large incision. Patients generally experience reduced blood loss and faster recovery times.

"Our goal is to give every patient the gift of time. They get to attend the weddings of their children and meet their grandchildren. They live longer and better. That's what keeps us moving forward," Dr. Dillhoff says.

Proton therapy and FLASH research revolutionize personalized cancer care

The Ohio State University Wexner Medical Center's new \$100 million proton therapy cancer center, in collaboration with Nationwide Children's Hospital, is offering patients highly tailored cancer treatment in a 55,000-square-foot wing of The James Outpatient Care.

Arnab Chakravarti, MD, chair of the Department of Radiation Oncology and the Klotz Chair in Cancer Research at The Ohio State University College of Medicine, is a renowned expert on proton therapy. He's worked for the past decade to bring the new center to its culmination in fall 2023. The James Outpatient Care has the first ProBeam 360° Multi-Room System to become operational in the world and houses next-generation precision proton therapy technology that's designed to be continuously updated as technology advances.

"This is an opportunity to leverage precision medicine. We're not just helping patients, but in certain cases, we're curing them of cancer," Dr. Chakravarti says.

The center provides unique advantages in the field of proton therapy. It features rooms housing two gantries for pencil beam scanning intensity modulators and a room with a fixed beam used to test FLASH proton therapy, a form of proton therapy that administers an ultra-high dose rate of radiation to deliver cancer treatment in less than one second.



This is an opportunity to leverage precision medicine. We're not just helping patients, but in certain cases, we're curing them of cancer.

– Arnab Chakravarti, MD



Learn more about how Ohio State is developing approaches in fighting the war on cancer on Ohio State's Health & Discovery website.

Ohio State Professor Emeritus receives FDA approval for Duchenne muscular dystrophy treatment

Back in 1969 when Jerry Mendell, MD, was a young neurologist working at the National Institutes of Health, one of his patients was a 7-year-old boy who struggled to get up off the floor.

Dr. Mendell couldn't do a lot for him, and that bothered him. At the time, there weren't any treatments for what the boy had, Duchenne muscular dystrophy, a rare and inherited disease that damages and weakens muscles, including the heart and lungs.



In June, after five decades researching how to stop the disease, Dr. Mendell, a Professor Emeritus in the Department of Pediatrics at The Ohio State University College of Medicine, had a breakthrough. The gene therapy treatment he co-developed with Louise Rodino-Klapac, PhD, received approval from the U.S. Food and Drug Administration for children aged 4 to 5. It's the first gene therapy treatment the FDA has approved for Duchenne muscular dystrophy.

Balloons and champagne awaited Dr. Mendell outside his office door on June 22, the day the FDA's decision was made public. He got teary-eyed. "I had dreamed of this possibility," he says. "Fifty years of work went into this."

Duchenne muscular dystrophy is caused by a mutation in a gene that produces dystrophin, a protein that strengthens muscle fibers and protects them from being injured when muscles contract and relax. Without dystrophin, muscle cells die and aren't replaced. Duchenne primarily afflicts boys, hindering them from walking, running, even standing.

The gene therapy treatment Drs. Mendell and Rodino-Klapac developed is a one-time infusion of Elevidys, artificially made genes that can produce dystrophin and prevent further muscle deterioration.

Since 2004, Dr. Mendell has been principal investigator in the Center for Gene Therapy at the Abigail Wexner Research Institute at Nationwide Children's Hospital in Columbus. But much of his early career was spent at The Ohio State University College of Medicine. In 1972, he was hired to teach and do research. He carried out the first gene therapy trial in muscular dystrophy on campus in 1999. His early efforts in gene therapy were supported by the Muscular Dystrophy Association (Jerry Lewis' Labor Day Muscular Dystrophy Association Telethon). Funding from many other sources — including philanthropic — later supported the trials leading up to their FDA approval of the gene therapy treatment.

"Every step of the way we learned something," Dr. Mendell says of his many years and studies testing treatments.

With the FDA approving the gene therapy treatment for 4- to 5-year-olds, Dr. Mendell says he continues to work to get the agency's approval of Elevidys for older and younger children, so their lives won't be limited so severely.

**"I get a hug from these boys, and that's when the tears come. You know that you've changed their lives."
— Jerry Mendell, MD**

In clinical trials of Elevidys, Drs. Mendell and Rodino-Klapac have treated over 200 patients with Duchenne muscular dystrophy. For the majority of them, the treatment has significantly changed their lives, allowing them to run, stand and walk without struggling.

"I get a hug from these boys, and that's when the tears come," he says of his own emotional response to seeing his patients after they've been treated. "You know that you've changed their lives."



Learn more about how our partnership with Nationwide Children's Hospital spurs research and education.



NATIONWIDE CHILDREN'S
When your child needs a hospital, everything matters.™

Ranked No. 6 in the nation by U.S. News & World Report

Nationwide Children's Hospital is the permanent home of the College of Medicine's Department of Pediatrics, and many of its medical staff also hold faculty positions at Ohio State through our longstanding partnership. This partnership has fostered collaboration in education, research and clinical programs, offering diverse educational experiences in bedside care, clinics, communities and research labs at Nationwide Children's.



New tech center adds another dimension to teaching medical students

Wearing virtual reality headsets, medical students at The Ohio State University have practiced responding to the scene of a subway bombing with a lot of people injured and limited time.

They've looked inside a human body, peeling back layers of skin, muscle and nerves without using a knife.

Faculty at The Ohio State University College of Medicine now have easy access to virtual reality (VR), 3D printers, recording equipment and other technology for teaching anatomy, emergency preparedness and other critical subjects.

“It’s an amazing resource for both the faculty and the students. It allows them to visualize things in ways they couldn’t really do before.”

– Kellen Maicher, MFA, MS

On the 4th floor of Prior Hall, a new technology center opened last year, welcoming students and faculty to train and use the equipment. It’s called the EdTech Incubator.

There, students and faculty can 3D print anything that might help them learn — organs in the body, prosthetics, a tumor. Using virtual reality, students can explore on their own the different tissues of the body and how they’re arranged.

“VR allows students to ‘remove’ multiple structures, piece by piece as they look deeper and deeper into the body, and then with a single click of the controller they can reset the model,” says Derek Harmon (pictured below), PhD, a clinical associate professor of Anatomy.

Students in his classes can follow a guided lesson that will instruct them on what tissues to identify, select and remove from the model, and along the way will ask them relevant questions to consider about each tissue.

Also in Dr. Harmon’s classes, students use a CT or MRI scan to 3D print the body part that was scanned to more closely study it.

In an anatomy visualization lab, students can isolate organs and organ systems. They can turn off the visibility of the muscle tissue and leave the skeletal and nervous system viewable. They can also examine interactive cross sections of a body from any angle they wish.

The technology will supplement, rather than replace, gross anatomy labs; students still will have a chance to dissect cadavers.

Using VR applications, some College of Medicine faculty have taught students to respond to various scenarios where they’ll need to make rapid decisions on how to help. Instructors in other health science colleges across campus can also tap into the EdTech Incubator’s offerings to use in their lesson plans.

“It’s an amazing resource for both the faculty and the students,” says Kellen Maicher, MFA, MS, coordinator of the EdTech Incubator. “It allows them to visualize things in ways they couldn’t really do before.”

The EdTech Incubator also welcomes students to bring their ideas, such as for a new interactive VR application, Maicher says.

“Everyone has ideas,” he says. “That’s where we really hope the best innovation will come from.”



Being first: Health and Rehabilitation Sciences offers unmatched education and training to create tomorrow's leaders

HRS alumna first advanced respiratory care therapist in the nation

The Ohio State University School of Health and Rehabilitation Sciences (HRS) was the first in the nation to offer the Master of Respiratory Therapy (MRT), an advanced practice clinical master's degree for respiratory care. The first class of learners graduated in the spring of 2021.



This innovative program advances respiratory therapists in the field and provides them more opportunities to be in leadership roles and diagnose and direct therapy. It prepares them to prescribe, order, dispense and administer drugs, medical care and medical devices related to patients' hearts and lungs, all under the supervision of physicians.

The master's degree program is designed to prepare advanced practice respiratory therapists (APRTs) to become clinical specialists in a variety of settings and open additional career doors in the burgeoning field.

The success of the program is clear — Mindy Conklin (pictured above), an alumna from the first graduating class, is now the first APRT in the nation, recently landing a job at the Department of Veterans Affairs Maryland Health Care System.

Georgianna Sergakis, PhD, RRT, program director for both the Bachelor of Science in Respiratory Therapy and the Master of Respiratory Therapy programs, says HRS faculty, leaders and staff anticipated the need in the profession and stepped up to fill it.

“There's a strong need for advanced practice providers with expertise in cardiopulmonary care,” Dr. Sergakis says. “We anticipate their job prospects will be similar to those of nurse practitioners, physician assistants and other advanced practice providers.”

HRS is proud of its leading role preparing respiratory therapists, like Conklin, to deliver advanced and specialty care at major institutions in the country.

“The students are exceedingly grateful to view health care in action. They're driven, compassionate students who are interested in being healers, and this gives them their first taste of it.”
— James Crick, DPT, PT

HRS offers first course to fill critical gap in care

Another pivotal effort by HRS puts undergraduate learners at the forefront of helping solve a major challenge for some hospitalized patients, with the first undergraduate course that simultaneously gives students clinical exposure and helps address health system needs. This initiative fills a critical gap in care by keeping patients active, addressing physical and cognitive declines from patients being in a hospital bed for days at a time.

Beginning in January 2023, students majoring in health sciences could apply to take a course that gives them experience collaborating with patients — helping them walk, taking them outside in a wheelchair or just talking to them at their bedside. Students are assigned to various departments in The Ohio State University Wexner Medical Center, assisting with patients at highest risk of functional decline or delirium.

“The students are exceedingly grateful to view health care in action,” says James Crick, DPT, PT, course lead for Cultivating Augmented Resilience-Building Efforts and Systems for Transitions, Rehabilitation, Education, Access and Maintenance (CARESTREAM).

“They're driven, compassionate students who are interested in being healers, and this gives them their first taste of it.”

CARESTREAM is a series of state-funded initiatives at Ohio State designed to simultaneously give students clinical exposures, help address health system needs and prevent the nationwide problem of patients falling, becoming frail or losing function during or soon after their hospital stay. Helping patients stay active mentally and physically allows the students to have a meaningful impact on clinical staff as well, giving staff members more time to focus on the skilled care they provide and reducing staff burnout.

The course development team, comprising clinicians and faculty, hopes to expand the innovative program to also include students from other colleges at Ohio State, such as biology and chemistry majors, to help fill a gap in patient care and give undergraduates opportunities for direct hospital experience. Another first that's crucial to a learner's success.





Read more about James Shannon's story with CAST on Ohio State's Health & Discovery website.

Ohio State leads the way in specialized health care education for adults with autism

The Ohio State University has taken a bold step toward providing specialized and patient-centered care to adults with autism spectrum disorder. At the heart of this groundbreaking initiative is the Center for Autism Services and Transition (CAST), an innovative primary care clinic that caters exclusively to young adult patients, aged 18 and older, who are on the autism spectrum. CAST was created in 2014 to create safer and more accommodating services for individuals with autism. The program has since evolved into a national model that's redefining how health care is delivered to this population with unique needs.

"CAST is the only place in central Ohio — and one of only a few in the nation — where patients can access primary care physicians with experience providing comprehensive and often complex care for people with autism," explains Christopher Hanks (pictured at right), MD, CAST's founding medical director and a



“CAST is the only place in central Ohio — and one of only a few in the nation — where patients can access primary care physicians with experience providing comprehensive and often complex care for people with autism.”
 — Christopher Hanks, MD

clinical associate professor of Internal Medicine at The Ohio State University College of Medicine. “We have better preventive care rates, and we have lower ED visit rates than the overall U.S. population of autistic individuals.”

The tangible outcomes and success of CAST's research-based approach are supported by three physicians, along with experienced medical assistants, a dedicated nurse, a social worker and a clinical pharmacist.

Unlike conventional health care settings, CAST understands the distinct challenges that individuals with autism face in communication, information processing and sensory sensitivity. The clinic has an innovative approach that focuses on flexible and patient-centered care that encourages patients to use their preferred method of communication to ensure their needs are addressed effectively.

Extending CAST's reach to medical education learners

The success of CAST isn't limited to its clinical impact alone. We are capitalizing on this groundbreaking program to provide an unparalleled educational experience for our medical students and residents. Recognizing the pressing need for more health care professionals skilled in treating adults with autism, we've integrated CAST into the College of Medicine curriculum.

Close to 100 medical students and residents have gained invaluable practical experience by working with CAST patients, equipping them with the tools and knowledge needed to care for this underserved population. This emphasis on education ensures that the impact of CAST isn't limited to only its patients, but has far-reaching implications for the future of health care.

CAST supports Ohio State's mission

CAST exemplifies our commitment to innovation, patient-centered care and education. By bridging the gap between specialized health care and mainstream medical practice, Ohio State isn't just providing care, it's fostering inclusivity, understanding and excellence in medical education. Through this visionary approach, we are paving the way for a future where individuals with autism receive the care and support they truly deserve for their lifetime.



Ohio State, Heart of Ohio partner to improve health care for vulnerable populations

The Ohio State University Wexner Medical Center and Heart of Ohio Family Health have cultivated a new partnership centered around their shared missions to elevate the health of the community

With their common goal in mind, the two organizations began meeting in late 2021 to consider opportunities to improve the health and well-being of vulnerable populations in central Ohio. One of the first health functions they held together was a partnership event with the The Ohio State University Colleges of Optometry and Dentistry to provide vision and dental screenings for 80 scheduled patients. They accommodated walk-ins and ended up seeing 145, including one patient with retinal detachment who was sent to the emergency department to be admitted for surgery to prevent blindness.

Heart of Ohio Family Health is a nonprofit health care provider and Federally Qualified Health Center that serves nearly 18,000 patients at six clinics around central Ohio.

Together, this collaboration has not only led to improved health for those they treat, but also to better communication and connectivity between patients, primary care providers and specialists. With the help of a substantial grant from The Ohio State University Wexner Medical Center, Heart of Ohio has transitioned to the Epic electronic medical record system, allowing its providers to better communicate with other health systems in central Ohio.



“It’s ideal to have Epic — what local hospitals are using — so that when patients are referred, we are all in sync, and we are able to clearly see a patient’s history of care,” says M. Buhari Mohammed (pictured at right), MD, MBA, CEO for Heart of Ohio.

Adopting Epic allows Heart of Ohio to see patient lab results, imaging studies and emergency department visit details from any hospital in central Ohio, including Ohio State. When patients at Heart of Ohio require specialized care, the Epic system also provides an avenue for Ohio State specialists, such as cardiologists or endocrinologists, to connect with them quickly and virtually.

This arrangement also works in reverse: It allows Ohio State to connect patients who come to our emergency departments with primary care providers at Heart of Ohio for routine care.

“We’re intensely focused on health equity at Ohio State, and this partnership with Heart of Ohio is one example of how we can reach out and help vulnerable populations,” says L. Arick Forrest, MD, MBA, medical director of Ambulatory Services for the Ohio State Wexner Medical Center and vice dean of Clinical Affairs at the Ohio State College of Medicine. “By aligning our two missions, we hope to enhance the quality of care in the community.”

The two organizations also plan to embed Ohio State specialists at Heart of Ohio care centers part time to help bridge gaps between referrals and specialty appointments. In 2022 alone, there were more than 1,500 specialist referrals.

“Removing these barriers to specialized care is particularly important for patients in vulnerable, underserved communities,” Dr. Mohammed says. “To see a specialist can be an overwhelming experience for a patient. This partnership will help our patients feel comfortable seeing new doctors in a safe environment that they already know and trust.”

“We hope that growing the relationship between Ohio State and Heart of Ohio can offer important learning opportunities in the future,” Dr. Forrest says. “Our students understand how important it is to help people during a time of need. This partnership embodies the passion and empathy that we need our learners to see and embrace as they go through their training.”

“**This partnership will help our patients feel comfortable seeing new doctors in a safe environment that they already know and trust.**”
– M. Buhari Mohammed, MD, MBA






THE OHIO STATE UNIVERSITY

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370 W. Ninth Ave.
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**Our power is our collective strength.
All that each of us accomplish
means even more when
achieved together.**



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The image on the covers presents sensory innervation of white adipose tissues. Specifically, the image depicts a sensory nerve (red) wrapping around a blood vessel in white adipose tissue of a mouse. This image was captured by the Leica confocal microscope on a tissue obtained from a sensory nerve reporter mouse and processed for whole-mount immunofluorescence imaging. Learn more on page 14. *Image taken by Gargi Mishra, PhD candidate in the Townsend Lab.*