

MEDICINE TODAY

Spring | 2026

20 YEARS: THE **EVOLUTION** FROM FITZSIMONS TO **ANSCHUTZ**

PAGE 6

MORE INSIDE

AI ENHANCES
CLINICAL CARE | PAGE 14

DEFINING 'MUSCLE
HEALTH' | PAGE 4

A RESEARCHER'S FOCUS
ON FUNGI | PAGE 22



Spring 2026

Volume 39 | Issue 1

On the Cover

Building 500, known today as the Fitzsimons Building, was constructed in 1941.

Present-day photo by Melissa Santorelli.

CU MEDICINE TODAY

is published twice a year by the University of Colorado Anschutz School of Medicine. Views and opinions expressed in this publication are not necessarily those of the University of Colorado, the School of Medicine or the Medical Alumni Association. Contributions to support this effort are welcome and appreciated.

OFFICE OF ALUMNI RELATIONS

13001 E. 17th Pl., Mailstop A080
Aurora, CO 80045

E-mail: healthalumni@ucdenver.edu
303-724-2518/877-HSC-ALUM
www.ucdenver.edu/healthalumni

SCHOOL OF MEDICINE

John Sampson, MD, PhD, MBA
*Dean, Vice Chancellor for Health Affairs,
University of Colorado*

EDITOR

Mark Couch
*Chief of Staff,
Associate Dean of Public Relations*

MANAGING EDITOR

Kara Mason
Senior Content Writer

ASSISTANT EDITOR

Chanthy Na
Assistant Dean of Communications

PHOTOGRAPHY

Melissa Santorelli

WEB CONTENT

Tonia Twichell

PRODUCTION

CU Design & Print Services

WRITERS

Greg Glasgow
Taylor Shaw
Mark Harden

1 LETTER FROM THE DEAN

2 IN THE NEWS

4 Q&A

Finding a Common Definition for
Muscle Health

6 COVER STORY

Home Base for the CU Anschutz
School of Medicine

12 EDUCATION

Treating Cancer Across Species

14 INNOVATION

An Eye on AI in the NICU

16 INNOVATION

Studying Earthworms as a
Blood Substitute

17 RESEARCH

Advancing Cancer Immunotherapy

18 INFORMATICS

Investigating RA Treatment Strategies

20 ALUMNI CORNER

A Future Made Possible

22 RESEARCH

Gut Microbes

26 TECHNOLOGY

The AI Frontier in Radiology

28 COMMUNITY

Stepping Up for Colorado Seniors



BEST NIH RANKINGS IN 20 YEARS



John H. Sampson, M.D., Ph.D.

JOHN SAMPSON, MD, PHD, MBA

Richard D. Krugman Endowed Chair

Vice Chancellor for Health Affairs

Dean, University of Colorado Anschutz School of Medicine

Our School of Medicine in 2025 posted its best year in two decades in rankings of medical schools for National Institutes of Health (NIH) funding.

Each year, the Blue Ridge Institute for Medical Research compiles and shares NIH funding data for every medical school in the country. This year's rankings, released in February, offer several reasons to celebrate. Overall, the school ranked No. 8 among public medical schools in the nation.

Our Department of Pediatrics ranked No. 1 in the country, and we had three additional departments rank top 10: Pharmacology at No. 4, Orthopedics at No. 5, and Physical Medicine and Rehabilitation at No. 6.

The School of Medicine has nine clinical departments ranked in the top 15, up from six in 2024, and the school improved its overall ranking among all medical schools to 21st — from 22nd in 2024 — with an additional \$9.7 million in funding from the NIH bringing the total to nearly \$314 million.

The departments of Otolaryngology, Emergency Medicine, and Anesthesiology were ranked 11th respectively and the departments of Family Medicine and Dermatology both ranked 12th. Internal Medicine ranked 14th.

I am proud of the dedication to innovative research, clinical care, and world class education from our faculty. Many of our departments are just one major grant away from being in the top 10, so it's with great enthusiasm that I believe we're gaining impressive momentum on our journey to becoming a top 10 medical school in 10 years — a goal I set when I arrived as dean in 2024.

We may even be able to achieve it sooner than that. This historical NIH funding achievement for our departments and school is worthy of praise. NIH funding growth provides a solid foundation so that we can continue meaningful research and enhance the opportunities that ultimately make a difference in the lives of the patients we treat.

In the News

JOSEPH SCHACHT, PHD, associate professor of psychiatry, was featured in an article, “Can Ozempic Cure Addiction?” published by The New Yorker in February. Schacht is principal investigator of the country’s first randomized trial of semaglutide for heavy alcohol use, which began in 2023. “I fundamentally believe that a medication you can take in the privacy of your home—that doesn’t require disclosing to others that you have this problem—is essential to be able to offer,” he said.

STACEY FISCHER, MD, professor of medicine, was interviewed in February for a Science Friday segment about psilocybin therapy. Fischer is a palliative care specialist who co-leads the nation’s largest clinical trial for psilocybin use for advanced cancer patients facing mental health challenges. “We submitted a grant looking at, how do we conduct a large trial of psilocybin versus a placebo in conjunction with therapy to help people facing a serious cancer improve feelings of anxiety, depression, and existential distress?” she said. “The grant was funded, and the study began in 2021. And now we’re here in our fourth year of the study. We’ve now recruited more patients than have been enrolled in any other cancer-focused trial in this space.”

MATTHEW MISHKIND, PHD, associate professor of psychiatry and deputy director of the Johnson Depression Center, in an interview in February with the ABC affiliate in Denver, discussed the mental health risks that Olympians and other elite athletes can face. “You’re on this amazing high, and then it goes away,” Mishkind explained. “And if you don’t have those connections, if you don’t have sort of people around you that are really providing that ongoing support—not just that periodic support—that definitely can, I think, lead to some crashes for people. And a lot of identity issues, like, ‘Who am I without the sport?’”

YANA KLEIN, MD, senior instructor of emergency medicine, was quoted in a February report by Associated Press about Olympic skier Lindsey Vonn’s decision to compete despite a torn ACL. “She might blow out her knee entirely,” she said. “At these really high racing speeds, the big risk is that the knee is just not stable enough to compete.”

BONNIE JORTBERG, PHD, associate professor of family medicine, was quoted in February by The New York Times in an article about a Super Bowl ad for Raisin Bran. In the spot, William Shatner of “Star Trek” fame beams from a spacecraft and tosses boxes of Raisin Bran to people. “Honestly, I’m glad the conversation is switching from protein to fiber,” Jortberg said. “What we know is that 90% of Americans don’t get enough fiber in their diet.”



MICHELLE BARRON, MD, professor of medicine, told Colorado Public Radio in February that she supports a move by the State of Colorado to join the Global Outbreak and Response Network of the World Health Organization. “It is extremely important for the scientific community to remain engaged and active with other scientific organizations in the world, especially those tracking emerging infections,” she said. “This is a great opportunity for learning, collaboration, and for preparedness.”

TREVOR NYDAM, MD, professor of surgery, in February gave the Denver affiliate of Fox a breakdown of the total 10,000 transplant surgeries that have been performed at UCHHealth. “We have done 5,000 kidney transplants, 3,000 liver transplants, 1,000 lungs, and 1,000 hearts. It takes a huge team to take care of these patients. Everybody makes a huge contribution. We take people with a very high morbidity and mortality rate, we transplant them, and they have a whole new opportunity at life.”



LINDA COOK, PHD, associate director for population sciences at the CU Anschutz Cancer Center and professor of epidemiology, explained in a report on the Denver affiliate of CBS the importance of the Vanguard Study. CU is one of eight hubs nationwide involved in the study, which aims to understand if multi-cancer detection tests can reliably identify signals in the blood that point to different cancers, including several with no current screening options. “It’s like one-stop shopping,” she said. “And the exciting part of this is that perhaps these can detect cancers that we don’t have screening for, right? So, pancreatic cancer, ovarian cancer, and stomach cancer; we don’t have screenings for those cancers. Wouldn’t it be great if we could detect those along with the ones that we can already screen for?”



SUCHITRA RAO, MD, associate professor of pediatrics, was quoted by NBC News in December for a report about how flu season arrived earlier than usual and was hitting people – mainly children – especially hard. “I don’t think I ever remember seeing it this severe, this soon,” said Rao, who is an infectious disease specialist at Children’s Hospital Colorado. “Our emergency department is full of kids coming in with the flu.”

KEVIN MESSACAR, MD, PHD, professor of pediatrics, discussed with NBC News in January the declining rate of vaccinations and an increase in the number of cases of bacterial meningitis. “It’s really a devastating disease that keeps pediatricians up at night,” he said. “It’s difficult to recognize, and we often see patients who are too late to bring back.”



LILIA CERVANTES, MD, professor of medicine, discussed the importance of providing care to immigrant communities in an article published in February by The Colorado Sun. “The big picture is that when the most neglected and marginalized groups have no access to care, it’s not only that they’re more ill, but we are as a society more ill,” she said.

JAMES BURTON, MD, professor of medicine, told the NBC affiliate in Denver in February that alcohol-related liver disease accounts for nearly half of all liver transplants at UHealth. “I haven’t seen it start coming down, and it is still a major problem in the United States,” he said. “Now we’re seeing young women who might have children, living functional lives, but consuming too much alcohol. Women are more susceptible to the effects of alcohol than men.”

BEN HUGHES, MD, associate professor of clinical practice in pediatrics, was quoted in February in the Grand Junction Daily Sentinel, discussing a proposed cut in state funding that supports training programs for resident physicians. “We already have a shortage of doctors in general, pediatricians especially, so my greatest fear would be a decrease in the number of (people) who can train at Children’s Colorado, which, of course, would have a tremendous negative impact on access to pediatric care for Colorado,” he said.

LIA GORE, MD, professor of pediatrics, was interviewed by the Denver affiliate of CBS for a report, “Colorado family prepares as funding to Pediatric Brain Tumor Consortium comes to an end,” that aired in February. “Pediatric brain tumors are the second most common malignancy among children with cancer. They are the most deadly of childhood cancers,” she said, adding the ending of the federal funds “feels like it is a direct insult to those who have invested their lives in doing this.”

JUDY REGENSTEINER, PHD, distinguished professor of medicine and director of the Ludeman Family Center for Women’s Health Research, commented in The New York Times in December about a study finding that people with prediabetes who get their blood sugar under control may cut their risk of death from heart disease or heart failure by half. “It’s a good proof of concept,” she said. But, she added, “If these really well done studies have low success rates in getting people to those numbers, what do we do differently?”

DAVID HIGGINS, MD, MPH, assistant professor of pediatrics, commented in the Washington Post in December on a decision by federal officials to scale back its recommendations for childhood vaccinations. “I have never been more concerned about the future of vaccines and children’s health than I am now,” he said.

JAMIE STUDTS, PHD, professor of medicine, was quoted by The New York Times in a January article about patients feeling shame after receiving a lung cancer diagnosis. Although not every cancer patient is well enough to tolerate surgery, chemotherapy, or radiation, those with lung cancer disproportionately count themselves out, he said. “I don’t deserve treatment, I don’t deserve palliative care, I deserve to suffer,” he recalled patients saying.

MICHELLE BARRON, MD, professor of medicine, was one of the physician experts quoted in an article about the flu that was published in February by The New York Times. While there were fewer cases in January than in December, the risk still exists. “It’s certainly gone down. It’s not gone by any means,” she said.

Research Flex

Finding a common definition for muscle health

By Kara Mason

Do you have good muscle health? That answer may vary depending on the clinician and their specialty.

So far, no definitive definition exists for “muscle health,” but it’s worth exploring, says Michael Harris-Love, DSC, MPT, PT, FAPTA, professor of physical medicine and rehabilitation and associate dean of Physical Therapy Education at the University of Colorado Anschutz School of Medicine.

Harris-Love, who also directs the CU Physical Therapy Program’s Residential DPT Pathway and is a health scientist at the Rocky Mountain Regional VA Medical Center, leads the 3MAP Lab, which focuses on muscle plasticity in response to training, detraining, normal aging, and chronic disease. Thinking about what constitutes muscle health is often front of mind.

In a new literature review and proposed framework published in the *Journal of Functional Morphology and Kinesiology*, Harris-Love and his research colleagues explore some of the many definitions clinicians and researchers use and why standardization may be beneficial.

Harris-Love says a muscle health definition could unite clinicians and researchers and be meaningful for patients, too.

WHY IS A DEFINITION OF MUSCLE HEALTH IMPORTANT?

► In clinical practice, we often find that key questions about muscle health are raised only after an older adult experiences an injury or other disabling event. So, we hope that renewed discussion about this topic will amplify its importance among practitioners. It’s also important to work toward a common definition to ensure clinicians are speaking the same language and to aid the interpretation of research findings concerning muscle health.



MICHAEL HARRIS-LOVE,
DSC, MPT, PT

MUSCLE HEALTH SEEMS TO GO WELL BEYOND JUST THE MUSCLES. HOW DOES THAT PLAY INTO THIS WORK?

► The way a physician sees muscle depends on their specialty and the question they’re asking. When we talk about related concepts like muscle health and muscle quality, the imprecision of terms further removes us from a common definition or standardized assessments.

In some of the papers that our lab has written, we’ve mentioned that identifying the domains of interest is important — such as metabolic function versus muscle force production — to improve scientific communication and help provide a framework for muscle health assessment.

YOU AND YOUR COLLEAGUES WRITE THAT THERE’S NO STANDARD DEFINITION, BUT THERE ARE SOME THEMES THAT EMERGE WHEN CLINICIANS AND RESEARCHERS TALK ABOUT MUSCLE HEALTH. TELL ME ABOUT THOSE.

► We reviewed more than 300 papers and then got down to a smaller subset to ask this question of what muscle health is, and we were surprised by the large variety of different measures and assessment categories cited by investigators as components of muscle health. The three major components that we saw were body or tissue composition, some degree of muscle performance, and an assessment of functional performance.

Functional tests alone can never tell you wholly about how muscle performs, but you need good functioning muscle to perform these types of tasks. So, we would never use the results of functional testing in isolation and make conclusions about muscle health. However, if I measure muscle strength directly, assess your functional status, and consider the properties of muscle tissue, such as your muscle composition and how much muscle mass you have, then I can start to make some clinical decisions. I begin to have enough information to understand if muscle impairments are a large part of why you can't complete a functional task.

IF EVERYBODY IS THINKING ABOUT MUSCLE HEALTH A LITTLE BIT DIFFERENTLY, IS IT CHALLENGING TO REACH A CONSENSUS ON A GOOD DEFINITION?

► From a conceptual standpoint, I believe that we will come to an understanding or agreement about a common definition of muscle health. However, I think the definition of muscle health and how you assess muscle health are different questions.

An example of that might be when you're diagnosing a rheumatological disorder. There is no single definitive test for rheumatoid arthritis and a patient's results among a variety of diagnostic criteria serve to inform the clinical decision-making process. Moreover, access to more refined diagnostic tools such as advanced biomedical imaging varies based on the health care setting.

In a similar fashion, the diagnostic tools available to rehabilitation specialists who rise to the challenge of assessing muscle health will vary widely. Some will have access to simple body composition tools such as bioelectrical impedance devices, while others will have the ability to estimate both muscle mass and muscle composition using advanced imaging techniques. In some clinics, grip strength testing will be readily available, but in other specialized settings, isokinetic dynamometers may be employed to provide detailed assessments of muscle performance.

Given this clinical reality, I would suggest that our standards ultimately account for both low-cost assessment measures and more refined, confirmatory approaches. We need complementary, parallel pathways for researchers and clinicians to advance our understanding and improve practice.

“
Reaching a common understanding about muscle health will also allow us to collectively move on to the critical issues.
”

MICHAEL HARRIS-LOVE,
DSC, MPT, PT

WHAT WOULD A STANDARDIZED DEFINITION OF MUSCLE HEALTH MEAN FOR YOUR WORK?

► Bringing investigators together around common concepts for assessing muscle health will serve to strengthen our research endeavors. When you look at pulling together a collection of studies over time, the use similar measures and common terms will allow us to conduct higher quality meta-analyses to help identify key gaps and guide our future investigative efforts.

Reaching a common understanding about muscle health will also allow us to collectively move on to the critical issues: attaining consensus on standardized assessment protocols and addressing the details regarding test result weighting and interpretation. This is where the real work will begin.

DO YOU SEE A BENEFIT FOR PATIENTS, TOO?

► Diminished muscle health is often hidden behind slow physical decline, the cessation of previous physical activities, and the gradual increase in caregiver burden. As the saying goes in the clinic, “You can't manage what you don't measure.” Skeletal muscle impairments can erode quality of life long before they lead to an injury or medical event.

A proactive approach to assessment may lead to better patient outcomes and promote healthy aging.

Home Base for the CU Anschutz School of Medicine

20 years ago, the Fitzsimons Army Hospital Became CU Anschutz. Today, advancements continue to soar

By Kara Mason

On a warm February afternoon, the atrium of the state-of-the-art Anschutz Health and Sciences Building (AHSB) buzzes with quiet energy. Students study outside a cafe, faculty members meet at the ground-level restaurant, and an afternoon conference lingers on the second floor.

On the six floors above, researchers in lab coats sit at microscopes, clinicians welcome patients, and educators help chart the future for the University of Colorado Anschutz School of Medicine.

It was here in early 2025 where Dean John H. Sampson, MD, PhD, MBA, outlined his goal of becoming a top 10 medical school in 10 years at his first State of the School address. A year later, the school boasts its best National Institutes of Health funding ranking in 20 years.

“Our Top 10 in 10 vision is not simply about rankings,” Sampson said at this year’s address. “It is about building a roadmap that positions the School of Medicine as a national leader across all our missions.” That future sits on a solid foundation.

Twenty years ago, the School of Medicine was just settling into its new campus in Aurora — a place that only a decade prior had been an anchor for military health — and leaders were designing the culture of collaboration they believed would be the difference.

EARLY HISTORY

In 2006, the campus once home to the country’s largest Army hospital officially donned the name “Anschutz” after philanthropist Philip Anschutz’s generous donations paved the way for growth. Since then, the campus has swelled in size, in employees, and in impactful research.

With two hospital partners, six schools, more than a dozen clinics that serve the community, and 60-plus health science centers and institutes, the 256-acre campus is almost unrecognizable from its former life as the Fitzsimons General Hospital.

“I love wandering around this campus,” says Richard Krugman, MD, who was dean of the School of Medicine when it made the move from Denver to Aurora in the early 2000s.

When his tenure began in 1992, the school was still located in Denver and the campus was tight for space. Meanwhile, five miles down the road in neighboring Aurora, Fitzsimons was bracing for possible closure. It wasn’t the first time threats of closure had hit the base.

In 1933, General R. U. Patterson sent a radiogram stating that Fitzsimons would be abandoned 15 years after being established to care for injured troops in World War I. Then-Congressman Lawrence Lewis led the charge in opposition. After three years of back and forth on closure, President Franklin D. Roosevelt visited the hospital and vowed to keep it open.

In 1938, the federal government approved \$3.75 million to construct a new hospital at the base. At 290,000 square feet, it was deemed Colorado’s largest structure. The hospital, dubbed Building 500 and now known as the Fitzsimons Building on the CU Anschutz campus, was reported to house up to 2,252 beds, making it the largest Army hospital in the country.

Today, the former hospital houses various administration, school, and department offices.

In December 1941, just days after the new hospital’s dedication and the attack on Pearl Harbor, the first patients from World War II arrived at the updated Fitzsimons hospital. Soon, a camp was established near the hospital for Italian, anti-Nazi Germans, and Japanese prisoners of war, especially those with tuberculosis. The camp was razed in 1946. In 1955, President Dwight D. Eisenhower famously spent seven weeks at Fitzsimons recovering from a heart attack. A lot about the campus has changed since then, but the Eisenhower Suite remains a time capsule. It’s been renovated to reflect the former president’s stay.

LIVING HISTORY

Decades later, the Fitzsimons military history still anchors important research.

In 2019, the CU Anschutz Combat Medicine Research Center launched at the School of Medicine to address the U.S. military’s toughest clinical challenges and translate them into improved civilian care.

COMBAT Center co-founder Vik Bebartha, MD, professor and chair of emergency medicine, says the crucial work he and his colleagues do reflects the same mission of the former campus.

“This campus has a history of medical military innovation,” Bebartha says. “There’s no better place where we can do cutting-edge research, work with students, train them for a career in medicine, and engage in our community.”



Building 500 was completed in 1941, dedicated just days before WWII patients started arriving following the Pearl Harbor attack.

Despite constructing new barracks, a training center, and other facilities on the base, Fitzsimons continued to teeter on and off closure lists. Finally, in 1995, the hospital was slated for closure by a Base Realignment and Closure (BRAC) Commission decision, and the hospital closed its doors a year later.

In the early 90s, Fitzsimons stood out as the largest employer in Aurora with its 1,500 jobs, a reason local officials lobbied hard for remaining open.

Thirty years following the closure, economic activity has skyrocketed on the campus. In 2025, CU Anschutz contributed \$5.7 billion to Colorado's economy — more than the ski industry — and supported 27,400 jobs.

Hospital partners, research funding, and a culture of collaboration support crucial scientific breakthroughs, patient care, and education at the School of Medicine.

THE BIG MOVE

In 1994, the University of Colorado Health Sciences Center (UCHSC), which included the CU medical school, was brainstorming how it would continue its operations at 9th Avenue and Colorado Boulevard in Denver.

The campus needed more space, but surrounding residents in the neighborhood protested expansion, and when Denver City Council members voted against a plan for a new eye clinic, leaders accelerated their plan to relocate and build a new hospital. The school had been offered 55 acres at the former Lowry Air Force Base in Denver for \$6 million. Lacking funds, university leaders passed on the opportunity. Fortunately, another was on the horizon.

UCHSC then asked the federal government and the city of Aurora for the 186 acres of the defunct Army hospital. The plan was approved and in 1997, the School of Medicine leased a building at Fitzsimons with plans to totally relocate within 20 years.

"As our staff crunched the numbers, they figured we could probably get 80% of what was on 9th Avenue moved out here by 2012, and when I heard that, I said, 'Well, let's do it.' And that led to a bit of an explosion. There were, of course, some department chairs who were opposed," says Krugman, who was the last of the School of Medicine faculty and staff to make the move from the old campus to Fitzsimons.

By 2001, the new campus was home to a new cancer center, the Rocky Mountain Lions Eye Institute, and new outpatient clinics. Children's Hospital Colorado announced plans for a new hospital next to the University of Colorado Hospital. Redevelopment was rolling and expenses were starting to pile up.

The Anschutz Foundation stepped in with a \$25 million grant to the cancer center and then \$30 million more in 2001 to help with campus construction.

By 2006, Anschutz and his foundation had contributed an estimated \$91 million to various developments around the campus. That year, the site was officially named for the philanthropist.

MODERN TIMES

When John J. Reilly, Jr., MD, assumed the role of dean in 2015, most of the infrastructure pieces for the CU Anschutz campus were in place. He saw the opportunity and trajectory of the campus and knew significant growth was on the horizon.

Reilly focused on partnerships, working especially close with Children's Hospital Colorado and UHealth University of Colorado Hospital. The Rocky Mountain Regional VA Medical Center opened adjacent to the CU Anschutz campus in 2019.

Today, many School of Medicine faculty members have appointments across the separate entities.

"We have one of the largest faculty practices in the country now, certainly the largest physician practice in the state of Colorado," Reilly says.

That culture of collaboration has bolstered research projects, enhanced patient care, and provided the foundation for a robust medical education. Various partnerships allow medical students to train across Colorado, and the new Trek Curriculum prioritizes clinic time earlier.

"I'm proud of what our faculty, researchers, and students have accomplished at the CU Anschutz School of Medicine," Sampson says. "We have incredibly dedicated people who care about our future and the innovation it will take to get there. With a strong history, we can continue building."

CU Anschutz School of Medicine Timeline

1883: The School of Medicine legacy begins on the CU Boulder campus with two rooms, two professors, two instructors, and just two students.

1891: Nelly Mayo is the first woman to graduate from the school. From its origin in the 1880s, school bylaws required that women be accepted for admission on an equal basis with men.

1916: Charles Meader, MD, is named dean of the School of Medicine. He plays a pivotal role consolidating the schools of medicine and nursing into a central location in Denver, at the CU Health Sciences Campus at 9th Avenue and Colorado Boulevard.

1918: Army Hospital No. 21 opens in north Aurora to provide care for World War I soldiers returning from Europe with respiratory problems, mainly from chemical weapons and tuberculosis. A year later, the site is renamed the Fitzsimons Army Medical Center to honor Lt. William T. Fitzsimons.

1938: Federal funds are approved to build a new hospital. It will become the biggest structure in Colorado at the time.

1941: Injured World War II troops begin to arrive at Fitzsimons, just days after the new hospital is dedicated. During the height of the war, as many as 5,000 patients at a time were at Fitzsimons, according to military records.



1938 Fitzsimons Building 500 Construction

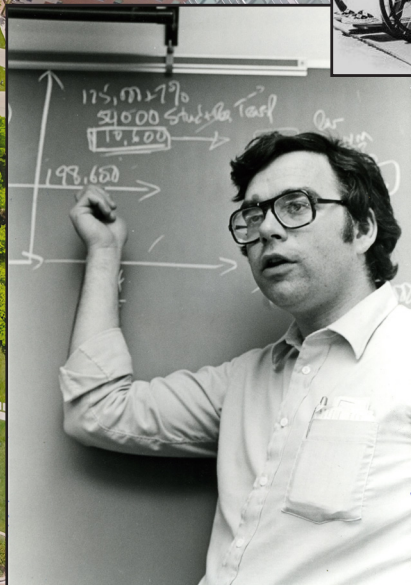


1945: Ambulance at Fitzsimons

1955: Dwight D. Eisenhower on the Roof of Building 500.



1955: President Dwight D. Eisenhower becomes the most famous patient of Fitzsimons after being treated for a heart attack.



Richard Krugman, MD

1992: After serving as interim for two years, Richard Krugman, MD, is named dean of the School of Medicine. He oversees the move from 9th and Colorado to the Aurora Anschutz campus.

1997: The City of Aurora and CU agree to the redevelopment of the Fitzsimons site after the Base Realignment and Closure Commission recommends the closure of the army hospital.

2006: Fitzsimons is renamed Anschutz Medical Campus, recognizing more than \$90 million in donations from The Anschutz Foundation to support constructing new state-of-the-art facilities.

2007: UCHealth University of Colorado Hospital and Children's Hospital Colorado open at CU Anschutz.

2015: John J. Reilly, Jr., MD, is named dean of the CU Anschutz School of Medicine. He serves the post for nine years.

2019: The Rocky Mountain Regional VA Medical Center opens at CU Anschutz, bringing the total number of hospital partners on the campus to three.

2021: The new Anschutz Health Sciences Building opens, providing nearly 400,000 square feet of functional space for education, research, and clinical programs.

2024: John Sampson, MD, MPH, is named dean of the School of Medicine, embarking on a journey toward becoming a top 10 medical school within the next 10 years.



John Sampson, MD, PhD, MBA



PAST TO **PRESENT** >>>

Vik Bebart, MD, is chair of the CU Anschutz Department of Emergency Medicine and spent 14 years on active duty as a U.S. Air Force combat physician. As founding director, he talks about the CU Anschutz Combat Medicine Research Center's beginnings and mission

By Mark Harden

HOW DID THE CENTER FOR COMBAT RESEARCH COME ABOUT?

► When I was on active duty, I saw how fast the battlefield was changing – new threats, new technologies, new injury patterns. As a research leader in the military, I found that the U.S. Department of Defense was not always getting the best solutions for battlefield issues like traumatic brain injury, suicide, blood transfusion, burns, and more. We needed to close those gaps, but our academic research partners just weren't moving at the same speed.

When I came to CU Anschutz 10 years ago, I realized we have remarkable talent here, in a state with a military focus, and the gaps in the military's research needs could be easily filled by our people here. So, we decided to build a bridge between civilian researchers and the military to close those gaps. We took the scientific depth of this top-tier medical campus and aligned it with the real-world needs of the military health system.

WHAT DID THE COMBAT CENTER LOOK LIKE AT THE BEGINNING?

► It was a grassroots program that started from the bottom up. Co-founder Kathleen Flarity, DNP, PhD, and I launched the center with 1.2 FTEs and just a couple of investigators, but the Department of Defense was wildly impressed. Our folks were coming to the table to say, “What problem do you need us to solve?” We went after each problem and solved it.

We built the center to close the gap between the speed of war and speed of academia, and not just studying problems in theory, but problems that show up in a helicopter at 2 a.m.

Basically, we met our three-year goals in three months, and continued to grow. In the military community, we went from unheard of to the leader in the field of military casualty-care research. We focus on building trust that we will deliver on time, and we want to move fast – rigorously, but with urgency.

GIVEN YOUR BACKGROUND CARING FOR SERVICE MEMBERS IN WAR ZONES, WHAT DOES THE CENTER MEAN FOR YOU AT A PERSONAL LEVEL?

► Service members are sacrificing for our country, and they deserve the best science we can deliver, coming from people at CU who care about that work. That’s the personal component to it for me.

“
We took the scientific depth of this top-tier medical campus and aligned it with the real-world needs of the military health system.
 ”

VIK BEBARTA, MD

YOU SPEAK OFTEN ABOUT THE SPIRIT OF COLLABORATION AT CU ANSCHUTZ. HOW IMPORTANT IS THAT SPIRIT TO THE COMBAT CENTER’S WORK?

► It’s very important, because we can leverage all the capabilities on this campus to solve these problems – and not just at this campus, but at CU Boulder and elsewhere. A problem might need a bioengineer, an orthopedics PhD, a wound-care infection specialist, a hospitalist, and an emergency physician to come together to find a solution. Collaborators are a force multiplier here.



COMBAT Leaders

COMBAT Center co-founders Vik Bebarta, MD, right, and Brig Gen Kathleen Flarity, DNP PhD, left, with former COMBAT Center innovation fellow MAJ Donald B. Hoffmann Jr. on the CU Anschutz campus.

THE COMBAT CENTER IS BASED ON A CAMPUS WITH A RICH HISTORY AS A MILITARY MEDICAL CENTER, AND A MAJOR VETERANS ADMINISTRATION HOSPITAL IS NEXT DOOR. HOW MEANINGFUL IS THAT BACKGROUND TO THE CENTER’S MISSION?

► The spirit of military medicine and veteran care has always been here. History has shaped the culture here. It’s a legacy of readiness and service. But we’re not operating in the past. We’re operating something that’s modern and nationally relevant. The throughline from Fitzsimons to COMBAT is a focus on service, readiness, and impact.



Tristan Seawalt with the radiation plan he created for treating a thymoma in a rabbit.

A Course in Comparative Oncology

The Flint Animal Cancer Center offers students a glimpse into treating cancer patients of a different kind

By Mark Harden

Tristan Seawalt discovered he was the first University of Colorado Anschutz medical student to take a comparative oncology course at Colorado State University's renowned Flint Animal Cancer Center when someone asked to take his picture.

They snapped the photo a couple of days into the course saying, "We've never had a human medical student before."

The two-week elective course gives students of human medicine a glimpse of how the Flint Animal Cancer Center (FACC) uses medical, surgical, and radiation oncology in a veterinary setting, and exposes students to the center's comparative oncology research.

The experience often leads to better treatment for both animals and humans. It's also a specialized training opportunity for students at the CU Anschutz School of Medicine's Fort Collins Regional Medical Campus at CSU.

Several of FACC's researchers – including its director, Susan Lana, DVM – are CU Anschutz Cancer Center members, collaborating on one of the most advanced comparative oncology research programs in the world. They seek to translate research on prevention, diagnosis, and treatment of naturally occurring cancer in pet animals to benefit both pets and people.

The FACC course was a great fit for Seawalt, who is focused on radiation oncology. "It's been one of the best courses I've ever taken," he says. "It was an amazing rotation. It was just a couple weeks, but the experience will be very long lasting for me. I would highly recommend it for anyone, even if they're not thinking about going into oncology specifically."

THE BIG DRIVER: FATHER'S CANCER DIAGNOSIS

Seawalt grew up in the Denver area and earned his bachelor's and master's degrees at Colorado School of Mines. His master's was in quantitative biosciences and engineering. He also did neurology research work on the CU Anschutz campus.

His says the "big driver" of his path into medicine – and his focus on cancer – was the experience of helping to take care of his father, who was diagnosed with early-onset prostate cancer. Radiation was part of his father's treatment.

"Thankfully, it was caught early and all the right steps were done," Seawalt says. "But that journey motivated me to advance the field and be part of an amazing medical system. I feel like a lot of people don't know how much goes on behind the scenes with oncology."

When it came time to go to medical school, CU Anschutz seemed an obvious choice, he says, "but I wanted a bit of a change of scenery, and my partner was doing her PhD in Fort Collins at CSU, so it seemed like a great opportunity for me to go up there."

ACADEMIC ADVANTAGE

Seawalt was one of 12 in the Class of 2026 at the School of Medicine's Fort Collins branch campus, the second class there since the outpost opened in July 2021. The program is housed in the Health and Medical Center at CSU, a university recognized as one of the top veterinary science schools in the nation.

"With the small class size, I've felt very connected to the other students. It's a great community," he says. "And as for the academic advantage, the professors and education are top notch. With our small class size, we're able to ask more questions of the lecturers and really understand the material."

Seawalt already had been doing research work involving FACC through CSU's Translational Medicine Institute. "It was amazing to see the similarities between animals and humans. So, I was already looped into the system when I heard of their comparative oncology course, and I thought, 'I have to do this. I have to see what it's like to treat cancer in cats and dogs and rabbits.'"

HANDS-ON EXPERIENCE

The course enabled Seawalt to get more hands-on experience with radiation therapy than he had previously. In particular, he was able to go deeper into contouring, the process of outlining a tumor using medical images to more precisely target radiation delivery and protect healthy tissue nearby.

"That had not been something I'd done in human medicine up to that point, but I did it regularly at the veterinary hospital," he says.

Seawalt says there's much to take away from the experience.

"The first thing I'll carry with me is respect for the veterinarian medicine practitioners, because what they do is almost exactly the same as what we do," he says. "And in some ways, it may be a little bit harder, because they have to know several different species, and also their patients can't talk about how they're feeling, which is such a big part of human medicine."



Tristan Seawalt poses with radiation oncology residents/fellows at CSU's Flint Animal Cancer Center at a LINAC radiation-therapy machine used to treat veterinary patients.



AN *EYE ON AI* IN THE NICU

CU Anschutz ophthalmology researchers build algorithms to better spot ROP

By Tayler Shaw

When ophthalmologist Emily Cole, MD, steps into the neonatal intensive care unit (NICU) at Children’s Hospital Colorado to evaluate an infant’s eyes for retinopathy of prematurity (ROP), it’s not uncommon for parents to decide to leave during the exam.

“It can be heart-wrenching to watch,” says Cole, an assistant professor of ophthalmology. “These exams are difficult because these babies are very fragile, and we have to move them during their exam.”

What if artificial intelligence could make the exam faster, more objective, and more precise? What if AI could help detect other systemic diseases through the eyes? AI researcher Praveer Singh, PhD, an assistant professor of ophthalmology, collaborates with investigators across the globe to develop AI-based algorithms designed to do exactly that.

With the goal of helping more patients, Singh and Cole have teamed up to further hone the capabilities of AI and understand the best ways for clinicians to apply these tools in the NICU.

“We’ve been developing all these algorithms, but the key is ensuring they have real clinical utility and can be effectively translated from bench to bedside,” says Singh, a faculty member in the Division of Artificial Medical Intelligence in Ophthalmology. “That’s what makes this collaboration so exciting.”



EMILY COLE, MD



PRAVEER SINGH, PhD



We've been developing all these algorithms, but the key is ensuring they have real clinical utility and can be effectively translated from bench to bedside.



PRAVEER SINGH, PhD

SCREENING CHALLENGES

ROP typically affects infants born before 31 weeks or who weigh less than 3.3 pounds. The disease is caused by abnormal blood vessels in the retina.

Most cases are mild, but the American Association for Pediatric Ophthalmology and Strabismus estimates that between 1,100 and 1,500 infants each year in the U.S. develop a more severe case of ROP that requires medical treatment.

The standard way to screen for ROP is to dilate an infant's eyes and examine the retina for abnormal vessels by placing a camera on the surface of the eye.

A key step for determining whether an infant needs treatment — which could be injecting medication into the eye, performing a laser procedure, or surgery — is assessing the retinal blood vessel tortuosity. When ROP is severe, the blood vessels can become wavy and wiggly.

"Typically, we describe how wiggly the vessels are — and how severe the disease is — by categorizing the condition as either 'plus disease,' meaning very wiggly, 'pre-plus disease,' meaning kind of wiggly, or 'not plus,' meaning it is not wiggly," Cole says.

Not every clinician will categorize in the same way, which can lead to issues when patients are referred to another provider who may not agree with the original diagnosis.

AI can help change that. Instead of using the three categories, clinicians can use an AI algorithm to scan an image of the retina — taken as part of the ROP exam — and classify how tortuous the vessels are on a scale from one to nine, with nine representing the most severe disease. This is called a vascular severity score.

In 2022, Cole led research showing the potential of this AI tool to reduce the variability in diagnosing plus disease among patients with ROP.

"The algorithm can predict disease severity using just one picture of the back of the eye. When I get that vascular severity score, it that can help influence how I approach patient care," Cole says. "This AI tool helps create a common language for all providers. Hopefully, it will reduce our exam time, standardize diagnosis, and help us better predict which babies will need treatment."

YEARS IN THE MAKING

While Singh was a postdoctoral research fellow at Harvard Medical School, he contributed to research that assessed the ability of an AI-based algorithm to diagnose ROP, specifically examining whether the algorithm worked in external datasets from India, Mongolia, and Nepal.

"AI models often generalize poorly on external test sets, especially when imaging devices or patient demographics differ. Surprisingly, our algorithm performed pretty well," he says. "A likely explanation is that, rather than operating directly on raw fundus images, which can differ substantially in intensity and pigmentation, we first segmented the retinal vasculature and then performed image analysis on those standardized vessel maps. This strategy improved robustness across external sites."

The research specifically used an AI-derived vascular severity score to identify infants who would develop treatment-requiring ROP. The study found that using the AI tools appeared to help identify high-risk infants and could reduce the number of exams that low-risk infants endured. One challenge, however, especially in developing countries, is the cost of imaging devices.

That led to Cole and Singh, in collaboration with investigators from Oregon Health & Science University, to test the efficacy of smartphone-based telescreening for ROP. The researchers found that, despite lower image quality, a smartphone-based imaging device demonstrated a high probability of accurately detecting severe ROP.

FROM COMPUTERS TO CLINICS AND BEYOND

The next step is determining how this tool can best be used in the clinic.

Cole plans to interview stakeholders for input and gauge potential implementation. She'll also measure how clinicians adopt the technology through pilot trials and assess how it affects clinical workflow.

Using AI to scan images of an infant's eyes can also provide insight into other systemic health conditions, Singh explains.

He's led research that examines whether retinal images obtained as part of the ROP exam may contain features associated with cardio-pulmonary diseases, such as bronchopulmonary dysplasia (BPD) and pulmonary hypertension (PH), both leading causes of morbidity and mortality in premature infants. The research suggests that retinal imaging-based AI tools can potentially predict the diagnosis of BPD and PH in premature infants. This may lead to infants being diagnosed earlier and reduce the need for invasive diagnostic testing.

While Singh is building the algorithm and predictive model, Cole is working to develop a workflow with neonatologists and NICU leaders to determine where this tool would be most helpful in their care.

One of the biggest challenges of bringing AI into the NICU, however, will be getting clinicians on board.

"We're going about this in a holistic way," Cole says. "This tool can potentially help us predict who will need treatment, improve the speed of exams, standardize diagnosis, and improve access to care."

Studying Earthworms as a Blood Substitute

New research suggests alternatives for preserving human organs

By Greg Glasgow

Heiko Yang, MD, PhD, is digging into research about how earthworms could help sustain organs from deceased donors.

Yang, who is assistant professor of urology in the CU Anschutz Department of Surgery, and fellow researchers have been awarded a grant from the National Institutes of Health (NIH) for discovering that earthworms offer a potential mechanism for keeping human organs viable prior to transplantation.

“In a nutshell, we have derived a blood substitute from earthworms to keep human and animal kidneys alive outside the body,” Yang says. “Currently, most organs are kept alive using donor blood, but blood is expensive, has a short shelf life, and degrades quickly during machine perfusion. As it turns out, earthworms have a very shelf-stable hemoglobin-like oxygen carrier that has a number of properties that make it favorable for kidney perfusion.”

PERFECTING PERFUSION

Yang, who conducts research on perfused organs, says he has long looked for a substitute for red blood cells, which release toxic chemicals when they burst, to use in the perfusion system that uses an artificial lung and heart to keep organs viable.

“I eventually connected with Jake Elmer, PhD, at Villanova University, who has been working with earthworm hemoglobin, and we did some pilot studies and saw that you can actually keep kidneys alive with this earthworm material,” he says. “The basis of this grant is to explore how we can optimize this use and see if we can keep kidneys and other organs alive this way. We want to find out what’s the best concentration to use, if we need to stabilize it chemically, and if we can get a kidney to survive for several days on this material that contains no red blood cells.”

SUITABLE SUBSTITUTE

The two-year, “high-risk, high-reward” NIH grant is designed so that Yang and his co-researchers can apply for further funding once they have refined and proved their concept. If all goes as planned, it could be a significant advance for medical research, Yang says.



HEIKO YANG, MD, PhD

“It’s really exciting on several levels,” he says. “There are a lot of problems when we rely on blood to do our experiments — the content, the quality, having it readily available. This solves those problems for the general medical community. People have been looking for blood substitutes for decades, but none of them have panned out. So, we still rely on donated blood products and red blood cells to save lives. This brings us one step closer to creating a viable blood substitute.”

TRANSPLANT TRIUMPH

The discovery may also be a boon to clinicians and surgeons in transplant medicine, he says, who currently must rely on a variable and inconsistent blood supply when keeping organs alive prior to transplant.



“There’s the whole field of organ perfusion related to transplantation medicine, where people are trying to keep organs alive outside of the body to extend their viability and get donor organs to recipients more efficiently,” he says. “They’re running into the same limitations that we’ve been running into, so having something like this could impact that field in a major way. Rather than getting blood from blood banks, why can’t we just use something that’s off the shelf, that you can store for a long period of time, and it just works?”

Advancing Cancer Immunotherapy

Thymic tissue research shows promise of improving immune response

By Greg Glasgow

Research at the University of Colorado Anschutz Cancer Center may help cancer doctors better predict which cancer patients are more likely to respond to immunotherapy.

Antonio Jimeno, MD, PhD, co-leader of the Developmental Therapeutics Program, says his team's research with thymic tissue could help develop better-targeted care.

"The current response rate to immunotherapies is well under 50% and in many cases, under 20%," Jimeno says. "That means that we're using extremely expensive and burdensome therapies with a low likelihood of response. Any tool that can help us achieve therapy individualization is going to be a great advancement for cancer patients."

EDUCATING THYMUS CELLS

Jimeno's research, conducted with his longtime collaborator Holger Russ, PhD, at the University of Florida and the biopharmaceutical company Tolerance Bio, involves taking peripheral blood cells from a patient and generating pluripotent stem cells from those to differentiate them into cells identical to those found in the thymus, an organ that teaches immune cells to attack cells or organisms foreign to the person (be it virus, bacteria, or abnormal/cancerous cells). By implanting the patient-generated cells into an animal model, along with a sample of the patient's tumor, researchers found they could activate the immune system much more effectively than in animal models without thymic tissue.

"When we compared animal models that had human immune cells only, versus animal models that had human immune cells and patient-derived thymic tissue, in the animal models that had the patient-derived thymic tissue, the immune cells became activated, circulated more, and invaded the tumor and made it shrink," Jimeno says. "It's an advanced animal model by not just implanting human immune cells, but also by making sure those human cells actually know what they're looking for."

MELANOMA AND BEYOND

Jimeno detailed the findings in a November 2025 article in the journal *Cancer Research Communications*. The published research was conducted on melanoma, but Jimeno recently received NIH funding to continue the work in his area of specialty, head and neck squamous cell cancer.

“

Over the past 15 years, we have generated increasingly complex laboratory and animal models that can bear both human immune and cancer cells, which we call humanized animal models, to realize the promise of immune therapy.

”

ANTONIO JIMENO, MD, PhD

"This research has legs, and we're going to continue working on it," he says. "Over the past 15 years, we have generated increasingly complex laboratory and animal models that can bear both human immune and cancer cells, which we call humanized animal models, to realize the promise of immune therapy. A fundamental limitation of humanized animal models is that the fidelity of the interaction between the immune and tumor cells is limited by the lack of the organ that facilitates immune cell education."

THYMUS HAS PROMISE

Jimeno estimates it will take years to get the process to the point where it can be used in cancer patients, but he sees great promise in preserving, restoring, and manipulating the function of the thymus, an organ that is most active in childhood and shrinks after puberty.

"This could be a therapy by itself, because it could boost a patient's immune system," he says. "It could also be a diagnostic to make better animal models and determine prior to therapy how a patient will respond."

"More than 75% of head and neck cancer patients, and many other cancer patients, do not respond to immunotherapies, and now that we have multiple immunotherapies, it would be a great way to figure out which ones to use," he adds. "It potentially would be another tool in the toolbox to try figure out which one is going to be a good fit for patients. Right now, we have very limited ways to individualize immune therapy."

Advancing RA Treatment Strategies

Data, AI, and New Technology Help Research Autoimmune Diseases

By Kara Mason

More than 15 million Americans — nearly 5% of the population — have been diagnosed with an autoimmune disease. These conditions include rheumatoid arthritis (RA), Type 1 diabetes, multiple sclerosis, lupus, psoriasis, and others, and occur when the immune system mistakenly attacks part of the body.

Treatment is not always straightforward. With RA, as many as half of people diagnosed with the condition don't respond to the limited number of treatment options available. For Fan Zhang, PhD, that challenge has been the foundation for her lab at the University of Colorado Anschutz School of Medicine.

Zhang, an assistant professor of rheumatology and a faculty member in the Department of Biomedical Informatics, focuses on single-cell data-driven computational method development and systems immunology. Those methods paired with artificial intelligence (AI) are helping lead the way toward potential new treatment options for RA and other autoimmune diseases.

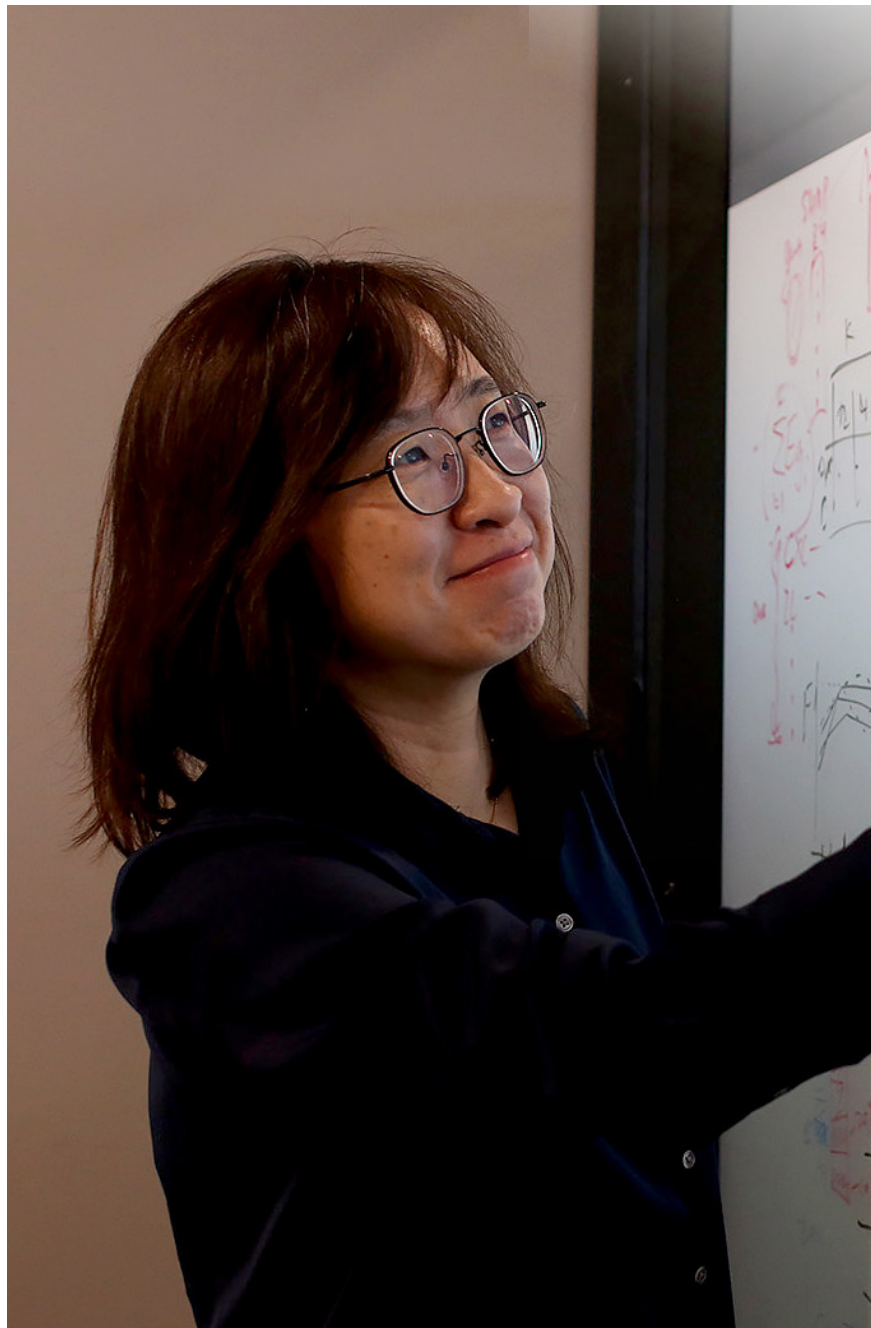
"The goal in our work is to identify new biomarkers for drug targets, and to do that we use cutting-edge single-cell technologies and create advanced data tools that can dig into huge amounts of data," says Zhang, who last summer received \$2 million from a National Institutes for Health (NIH) R01 grant to use AI and single-cell technologies to study novel immune cell interactions that could be helpful in discovering new RA therapeutic strategies.

The Zhang Lab also received \$500,000 in NIH funds to focus on women's health and autoimmune diseases.

CLARITY IN BIG DATA

The road to new autoimmune condition treatments is paved with data — and lots of it. More high-dimensional sequencing data means researchers can place patients into different subgroups based on immunology and genomics. This ultimately results in a more personalized approach to treating conditions such as RA.

"Without more data we cannot describe anything with clarity," Zhang says.



“

What we're doing is exciting because AI helps us to integrate data from multiple angles so we can move along the process faster and with greater accuracy.

”

FAN ZHANG, PhD

Single-cell transcriptomics — the Zhang Lab's specialty — is used to study gene expression of individual cells from patients. Doing so unveils important information about a single cell's composition, how it's developed, and the role it plays in health and disease. Collecting that data on many single cells, sometimes across the body, gives researchers a more complete picture of what's happening and potentially why.

In a 2023 research paper published in *Nature*, Zhang and colleagues described omics efforts that yielded a cell atlas revealing six different subgroups of RA based on their cellular makeup. Then, in 2025, her lab and collaborators published another study in the *Journal of Clinical Investigation* identifying immune signatures that may point to new ways to prevent the disease.

Zhang describes these efforts as a starting place for precision medicine discovery. Now, researchers can build on that data.

“Sometimes the current treatment strategy for RA just does not work for certain patients,” Zhang says. “With single-cell sequencing, we can stratify the patient heterogeneity based on their unique molecular profiles, which helps guide more personalized care.”

With the recent NIH grant, Zhang and her collaborators — CU rheumatology professor V. Michael Holers, MD, and researcher Laura Donlin, PhD, from the Hospital for Special Surgery in New York — will work together to integrate cutting-edge single-cell spatial transcriptomics with advanced AI methods to uncover novel immune cell interactions. These efforts will focus on the connection between pathogenic macrophage subsets and complement activation pathways.

TRANSLATING SUCCESSES

While Zhang and her lab staff have taken a keen interest in RA, they say their efforts can be translated to other conditions.

The grant from the NIH's Office of Research on Women's Health is focused on deciphering sex-biased phenotypes. Zhang and her lab will use the funds to develop novel computational AI methods that may help unravel the complex interactions between sex and autoimmune disease.

Making a difference in patient's lives will ultimately come with the help of AI technologies.

“In medicine, there's a bottleneck of what to do for precision medicine. When these treatments that are readily available don't work, there's a need for something else,” Zhang says. “What we're doing is exciting because AI helps us to integrate data from multiple angles so we can move along the process faster and with greater accuracy.”

ALUMNI CORNER

A FUTURE MADE POSSIBLE



THE CLASS OF 1967 REACHES ITS SCHOLARSHIP GOAL

During their 40-year reunion, the Class of 1967 gathered to reconnect, reminisce, and reflect. Many practiced medicine across Colorado and beyond, built programs in their communities, and launched research careers.

As they shared stories, a simple yet ambitious idea began to emerge — could they create a legacy that would open doors for future medical students the way the University of Colorado Anschutz School of Medicine had for them?

The idea sparked an 18-year philanthropic effort that has now resulted in a milestone unmatched by any other CU Anschutz School of Medicine reunion class: an endowed \$1.2 million scholarship capable of providing full, in-state tuition to one medical student every year.

A SIMPLE CONVERSATION

The concept originated with alumnus David Gordon, MD, who suggested the possibility of a class gift during the reunion. His classmates immediately recognized the value in supporting the next generation of physicians. Many recalled moments from training that shaped their careers, such as nights on call, formative mentors and the bond created in the anatomy lab, where they first learned what it meant to become physicians.

As the idea gained momentum, a small group volunteered to stay in touch with every member of the class. They divided the roster and committed to regular outreach through emails, phone calls, reunion updates, and simple check-ins. Over the years, this web of connection held the group together and kept the scholarship effort alive.

This grassroots approach proved remarkably effective. Nearly 40% of the class ultimately contributed, an extraordinary participation rate for a group nearly six decades removed from graduation. For many, the project offered a chance to give back and strengthen the community they had formed in medical school.

ALREADY MAKING A DIFFERENCE

The Class of 1967 Endowed Scholarship was formally established in late 2007 and was supported by the school's administration, including former dean Richard Krugman, MD. Krugman was instrumental in ensuring that as contributions to the endowment grew, so did its impact. Recently, the fund has supported two outstanding students: Michael Levy, MD, who graduated debt-free, and current fourth-year student Noah Nigro.

Their experiences reinforced the class's belief that financial burden shouldn't limit a student's ambition, career choices or ability to serve where they're most needed. The decision to continue growing the fund toward a full-tuition scholarship reflected that commitment.

CELEBRATED AT SILVER & GOLD

At the 2025 Silver & Gold Alumni Awards Banquet, the Class of 1967 Fundraising Committee — Gordon, John Sharp, MD; Brock Willett, MD; James Mallow, MD; and Robert Stofac, MD — was formally recognized for its exceptional achievement. More than 130 alumni, faculty and students attended the celebration.

"We benefited from our CU education," one member shared. "This was our chance to give back and ensure that future students could pursue medicine without being limited by financial pressure."

A MODEL FOR THE FUTURE

Members of the class hope their accomplishment will inspire other reunion classes to give financially and consider what can be achieved together. In fact, Sharp has met with other class committees to use the Class of 1967 as an example and to encourage them to pursue their own philanthropic endeavors.

The Class of 1967's story is one of philanthropy but also sustained community — classmates who stayed connected, supported one another and shared a long-term vision for impact. Today, their legacy stands as a testament to what is possible with gratitude and determination. Their scholarship will help shape medical education at CU Anschutz for generations, ensuring that students can pursue careers defined by purpose rather than debt.

CU MAGAZINE 2025 SILVER & GOLD ALUMNI AWARDS

For more than five decades, the CU Anschutz Medical Alumni Association has celebrated excellence through the Silver and Gold Alumni Awards, a cherished tradition honoring alumni whose careers exemplify extraordinary leadership, service, and dedication to the practice of medicine. This year's celebration, held on November 13, brought together alumni, students, faculty, and staff to recognize physicians whose work continues to shape health care delivery, medical education, and community well-being in Colorado and beyond.



HOWARD WEINER, MD '69 -

Silver and Gold Award

The highest honor from the Medical Alumni Association, this award recognizes exceptional humanitarianism, citizenship, and professionalism in medicine.

Howard Weiner, MD, is internationally recognized for his groundbreaking contributions to neuroimmunology and his lifelong commitment to advancing patient care, research, and education. He serves as the Robert L. Kroc Professor of Neurology at Harvard Medical School and senior neurologist at Brigham and Women's Hospital, where he founded and directs the Brigham Multiple Sclerosis Center and co-directs the Ann Romney Center for Neurologic Diseases.

Over the course of his career, Weiner has authored more than 600 peer-reviewed publications and trained more than 110 clinicians and scientists. His pioneering research has reshaped the understanding and treatment of multiple sclerosis, Alzheimer's disease, ALS, and Parkinson's disease. He helped introduce the Timed 25 Foot Walk test, now a global standard in multiple sclerosis care, and has led numerous clinical trials and translational studies.

As remarkable as his professional impact has been, those closest to him speak most warmly of his role as a father, mentor, and grandfather, a reminder that excellence in medicine is measured not only by discovery, but by humanity.



NIA SCHWANN MITCHELL, MD (RESIDENCY '10) - Distinguished Achievement Award

This award is presented to alumni and housestaff alumni who have made outstanding contributions to medicine, health care, and their communities while advancing the mission of the CU Anschutz School of Medicine.

Since completing her internal medicine residency and research fellowship, Nia Schwann Mitchell, MD, has remained a passionate advocate for the CU Anschutz School of Medicine and its alumni community. For the past eight years, she has served on the CU Medical Alumni Association Board, where she has played a central role in advancing philanthropic initiatives, including the stethoscope, scholarly service, and scholarship programs.

Her leadership was instrumental in establishing the Charles Blackwood, MD, Endowed Scholarship, which has already supported nine medical students committed to serving their communities, reflecting her dedication to expanding access and opportunity in medical education.

Beyond CU Anschutz, Mitchell is a nationally recognized physician-scientist and mentor. At Duke University, where she serves as associate professor and director of the General Internal Medicine Fellowship, her NIH-funded research focuses on advancing health equity, particularly among African American women.

Through her scholarship, mentorship, and sustained service, Mitchell exemplifies the values at the heart of this award.



GREG FEINSINGER, MD '68 -

Humanitarian Award

This award honors lifelong service and leadership that benefit society, recognizing alumni who exemplify compassionate citizenship and community impact.

Greg Feinsinger, MD, has devoted his life to serving others through compassionate care, community leadership, and a deep commitment to disease prevention. His career in family medicine in Glenwood Springs, CO was defined by a focus on helping patients live healthier lives, work he has continued and expanded since retirement.

Feinsinger has long championed preventive health care through nutrition-focused and accessible medical services. He has founded multiple initiatives aimed at reducing chronic disease risk and eliminating barriers to care, particularly for underserved communities. His innovative approach includes lifestyle counseling, grocery store visits, and cooking classes designed to empower patients to take control of their health.

A published author, newspaper columnist, and philanthropist, Feinsinger and his wife, Kathleen, established the Feinsinger Endowed Fund at CU Anschutz to integrate nutrition and food as medicine into the medical curriculum. His work exemplifies the spirit of this award and the values of the CU Anschutz medical community.



ADAM SEIDL, MD (RESIDENCY '14)

- Recent Graduate Achievement Award

This award celebrates early career alumni who demonstrate a strong commitment to leadership, service, and advancing the practice of medicine.

Adam Seidl, MD, is an associate professor in the Department of Orthopedics at the CU Anschutz School of Medicine and chief of orthopedic surgery at UHealth Highlands Ranch Hospital, where he has led the development of a full-scale orthopedic surgery program recognized for quality and innovation.

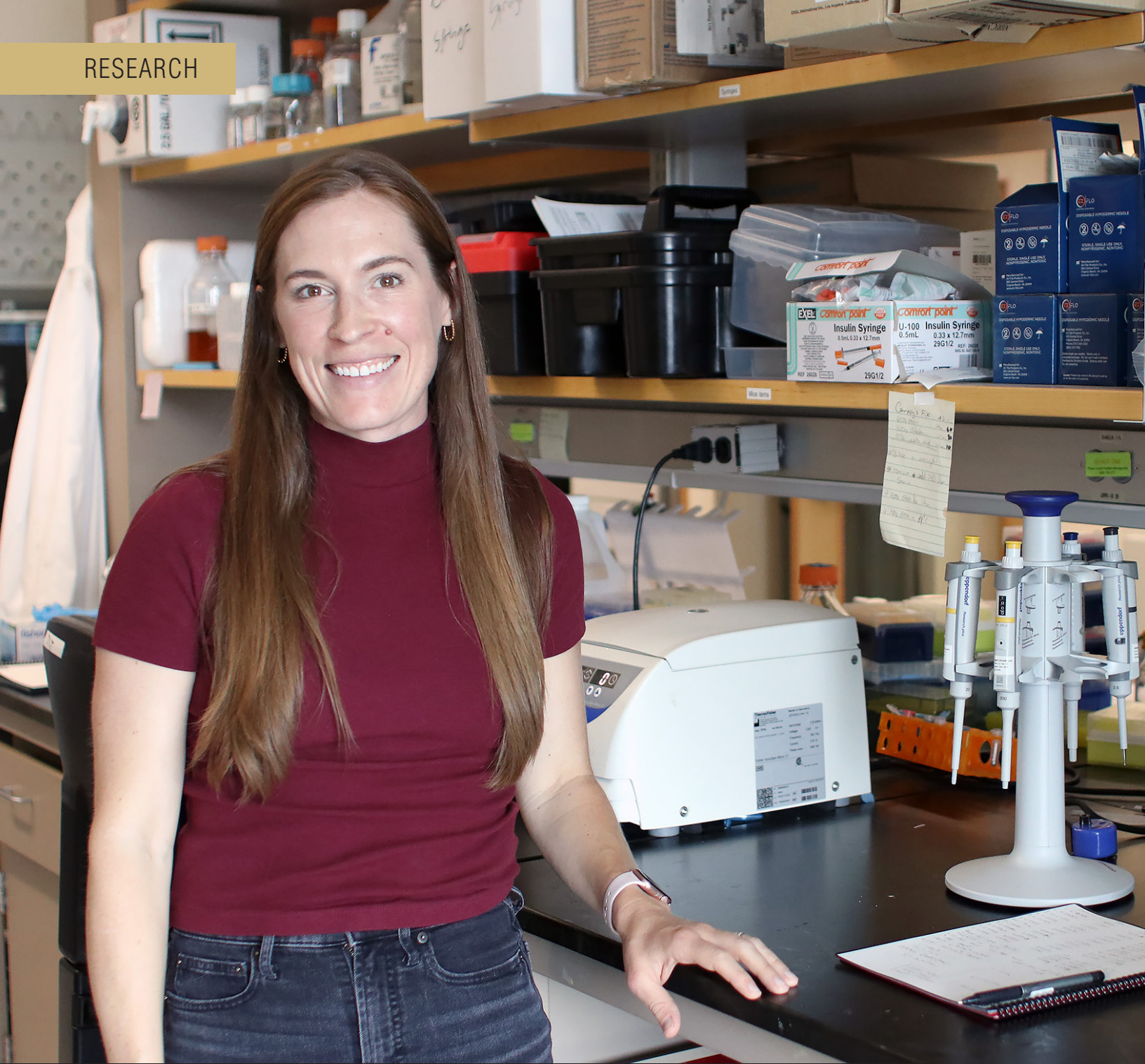
A proud CU Anschutz residency alumnus, Seidl has dedicated his career to advancing shoulder and elbow surgery through clinical excellence, research, and education. He completed fellowships at Thomas Jefferson University and the Medical University of Nice, France, and he now directs the American Shoulder and Elbow Surgeons (ASES) Shoulder and Elbow Fellowship at CU Anschutz.

Seidl has authored more than 40 peer-reviewed publications, contributed to multiple book chapters, and presented widely at national and international conferences. Recently honored as Physician of the Year at UHealth Highlands Ranch, he is also a committed mentor, educator, and leader in professional societies and hospital committees, inspiring the next generation of orthopedic surgeons through both expertise and example.

SAVE THE DATE

The CU Anschutz Medical Alumni Association will host the 2026 All Alumni Reunion from Thursday, September 24 through Saturday, September 26 for class years ending in 1 and 6. Festivities include class dinners, campus tours, an update from the dean, family activities, and more.

Interested in helping with the reunion?
Email alumni@cuanschutz.edu



INVESTIGATING THE ***'DARK SIDE'*** OF GUT MICROBES

Kayla Ost, PhD, leads researchers to better understand the cause the gut's bad actors

By Kara Mason

Scientific research takes guts — at least it does in the Ost Lab where University of Colorado Anschutz School of Medicine researchers investigate microbes that live in the intestinal microbiota.

“I am fascinated by the commensal microbes that live on us and live in us,” says Kyla Ost, PhD, assistant professor of immunology and microbiology. “They really challenge the perception that many of us grew up thinking about, which is that microbes and germs are bad. But we have this community of microbes that do incredibly important things, like helping us digest our food, shape our immune system, and even impact how our brain functions.”

Some members of this microbial community, however, can have a dark side.

“These microbes live in almost everybody and for the most part they are what we call ‘peaceful colonizers,’ but in certain cases — like in the case of inflammatory bowel disease or people who are immunocompromised, for example — certain members of this community can cause really significant disease.”

Ost and her lab staff of two post-doctoral fellows, two PhD graduate students, and four undergraduate interns, zero in on these microbes, the ones that can become bad actors, because they contribute to inflammatory diseases when they aren’t kept in check.

Learning how and why that occurs is the foundation to better understanding the diverse dynamic of the gut microbiota and designing strategies to prevent some microbes from becoming pathogenic and negatively impacting health.



A FOCUS ON FUNGI

In many ways, the gut microbiome is its own ecosystem. There are bacteria — lots of bacteria — archaea, viruses, and fungi all cohabitating and maintaining the body’s overall health.

Fungi have become the main interest of the Ost Lab for their vital role in gut health and immune health and because they can sometimes go from existing in a non-pathogenic state to wreaking inflammatory havoc.

One example of this is *Candida albicans* (*C. albicans*), a fungus that stimulates immune response. It shapeshifts when it turns to the dark side.

When harmless, *C. albicans* are typically a round balloon shape, but when they turn long, sort of like a sword, they also become pathogenic. As much as 80% of the population live with *C. albicans* in the intestines, and while these microbes mostly keep that balloon shape, the sword-like *C. albicans* can be troublesome when the fungi bloom out of control of the immune system and invade the walls of the intestines. This can cause illness such as Crohn’s disease and ulcerative colitis, both forms of chronic inflammatory bowel disease.

Ost and her team are diving deep into what causes that change and asking vital questions that could lead to discoveries that may prevent or treat inflammatory bowel diseases.

“What are the interactions in our gut that maintain these microbes as a nonpathogenic commensal? It’s important to understand how they’re constrained to these nonpathogenic states for us to understand how to then restore them to a nonpathogenic state in patients who are at risk,” Ost says.

IMMUNE RESPONSE KEEPING BALANCE

Understanding *C. albicans* also requires understanding the immune system's response to the community of microbes living and working in the gut.

"Our immune system is sort of like a military within our body that targets and tries to kill or protect us from invading pathogens, but in the gut that gets complicated," Ost explains.

"We have this microbial community that lives with us always, so there must be a balanced response from targeting and eliminating pathogens but also allowing microbes to live in the gut. It's almost as if it's constant communication between the immune system and the microbiota within the gut to limit pathogenesis while also being able to maintain colonization," she says.

Communication between the gut and immune system has become the source of many questions for the Ost Lab. One key immune interaction the researchers are currently focused on is the role of intestinal antibodies in preventing the fungi from causing disease.

Ost previously discovered that IgA antibodies in the gut selectively target molecules that are almost exclusively on the pathogenic *C. albicans* and facilitates the suppression so that it trains the *Candida* to primarily colonize the gut as the nonpathogenic type of *C. albicans*, the balloon-shaped version of the fungi.

"Here was an example where this antibody response isn't targeting and clearing a microbe, but actually changing the biology of the microbes such that it's less pathogenic, somewhat constraining it," Ost says. "Since starting my lab, we have found that for other fungal species that come commonly colonize the gut, they are also targeted and regulated by that by IgA, but it's really dependent on the strain of fungus, and we're trying to now figure out why certain strains of fungi can stimulate this IgA response, and certain strains don't."

The researchers suspect it's correlated with a strain's pathogenic potential. Strains of fungi that are more adhesive and have increased capacity to escape the gut and cause disseminated infection are the ones that are stimulating an IgA response during normal colonization of the gut.

THE GUT'S GREAT UNKNOWNNS

Researchers like Ost who are investigating the gut microbiota and its connection to health still have a lot to learn.

"We don't truly grasp all the important things that the microbiota is doing for us. But it's also important to remember that a number of these important commensal microbes can be pathogenic, and we know this because many of the deadliest infections in our country driving many deaths are from these organisms that are called 'all opportunistic pathogens,'" Ost says.

"These are pathogens that are not generally thought of to infect and harm people who have healthy immune systems but are a huge problem in people who have compromised immunity or other health or other medical vulnerabilities, and we really don't understand why."

By understanding gut microbes and immune responses, researchers can begin thinking about how to prevent infection and disease. In the realm of Ost's work, one option could be using vaccines to target and control microbes.

"Many of these microbes also have beneficial roles. By blocking the 'dark side' behaviors that some of these microbes, we can help make sure we maintain them as commensals," Ost says. "Using vaccination against these fungi to prevent against infection and limit their damage they can cause during chronic intestinal inflammation is just one potential avenue. There are a ton of therapeutic and translational avenues that you can take from the discoveries that that we make in understanding how these fungi are controlled."

“

Our immune system is sort of like a military within our body that targets and tries to kill or protect us from invading pathogens, but in the gut that gets complicated.

”

KYLA OST, PhD





The AI Frontier in Radiology

New technology summarizes electronic health records for radiologists

By Kara Mason

A significant part of a radiologist's job is understanding their patient's health journey, even if they never meet with them face-to-face.

"How you interpret medical imaging depends heavily on the patient's story," says Nikhil Madhuripan, MD, assistant professor of radiology at the University of Colorado Anschutz School of Medicine and interim section chief of abdominal imaging.

This often requires sorting through a patient's electronic health record (EHR) to understand why the patient underwent imaging and what might be relevant from the patient's past that could impact the radiologist's reading of a scan and the diagnosis. To do this kind of investigatory work takes time – but Madhuripan and colleagues believe artificial intelligence (AI) could offer some support.

Madhuripan and Aakriti Pandita, MD, assistant professor of medicine, have spent the past two years building an AI assistant that works with Epic, a popular hospital charting software, that performs contextual EHR data extraction for radiologists. The first-of-its-kind tool, called AIDA, can summarize an EHR for the radiologist, saving them time and maximizing efficiency.

"Our goal is to improve reporting quality at scale by helping radiologists access information faster," says Pandita, who is also an investigator at the Adult and Child Center for Outcomes Research and Delivery Science (ACCORDS).

THE POWER OF AI

When Pandita and Madhuripan first teamed up to work on an AI tool, they asked clinicians what they wanted to see. Overwhelmingly, the duo found, specialists wanted help in summarization and no such tool existed for radiologists, who heavily rely on a patient's medical history and EHR data.

The project moved forward with support from experts including Justin Honce, MD, associate professor and vice chair of informatics for the Department of Radiology; Justin Moore, artificial intelligence and research computing division manager for Information Strategy and Services at CU Anschutz; and IT leaders across UCHHealth.

"We don't need AI to help diagnosing patients, we need AI to help the tasks that are repetitive and redundant and administrative in nature," Pandita says.

Madhuripan has first-hand experience on that front. When he opens a scan, he might not have crucial information, like a cancer diagnosis for example, ready to inform his reading. That often takes opening the patient's chart and several clicks to find.

"Then, I have to parse through a bunch of different chunks of notes to get to the information I need," he says. That can be burdensome given the workload many radiologists experience.

Another challenge, Madhuripan and Pandita say, is that an EHR itself can be a massive repository of data.

"The challenge isn't getting the data, it's making it accessible," Pandita says. "How do we sort, filter, and dig through an EHR in an efficient manner so that the radiologist can spend more time focusing on the patient's scan instead of all this searching?" This is where AI can make a significant contribution to the work.

LEVERAGING TOOLS THAT MAKE A DIFFERENCE

So far, 18 radiologists have piloted AIDA. Their feedback has been overwhelmingly positive.

William Colantoni, DO, MBA, section chief of emergency radiology, works at two clinical sites – one that has access to AIDA and another that does not.

"The difference is striking. On the days I do not have AIDA, I genuinely miss it," he says. "It smooths out my workflow in a way that is hard to overstate and helps me deliver higher quality, more impactful reports, especially for complex patients."

Likewise, Garvit Khatri, MBBS, DNB, assistant professor of radiology and director of quality and peer learning in the abdominal imaging section, explains that "while many AI tools are emerging in this space, the real challenge is identifying, synthesizing, and evolving with those that truly add value to clinical care." That can save a radiologist time and help them enhance quality – two perks that go hand-in-hand.

A FRONTIER AND THE FUTURE

Radiology may be the starting point for AIDA. Madhuripan and Pandita can see how the tool could help transform other specialties, too.

"I've tested AIDA as I'm admitting patients and for me, it acts as a second set of eyes, just to make sure I'm not missing anything," Pandita says. For now, the researchers will continue fine-tuning AIDA and the interface with hopes of it making its way into the hands of radiologists across the country following a clinical trial.

The team has received five awards so far, including Colorado SPARK, the Faculty Well-being Innovation award from CU Thrive, and CU Anschutz Healthcare Innovation and Entrepreneurship Initiative.

Another perk of the tool is that early use has also revealed examples where AIDA helped catch tumor nodules early in a patient that can be challenging to diagnose without the proper context. Those instances make the tool beneficial for everybody, from the radiologist to the patient.

"Radiology workflows don't exist in silos," Pandita says. "Their work is closely tied to our workflow on the bedside site."

Ultimately, AIDA could be a win-win for health care systems.

"In the clinical study, we'll be looking at multiple outcomes, including clinician burnout, the tool's effect on reducing cognitive load for radiologists, how it impacts time savings and quality of documentation," Pandita says. "This is one of the first homegrown projects integrating AI to be deployed in the EHR and with so many firsts come a lot of questions and we're excited to see where this promising technology takes us."

“

We don't need AI to help diagnose patients, we need AI to help the tasks that are repetitive and redundant and administrative in nature.

”

AAKRITI PANDITA, MD

Stepping Up for Colorado Seniors

A new project aims to prevent falls before they happen

By Mark Harden

As we age, our risk of falling rises – and that means a greater threat of broken bones and other injuries that can change the way we live.

“Falls are one of the leading reasons why older people lose their independence and end up institutionalized,” says Elizabeth Goldberg, MD, ScM, FACEP, an associate professor and associate vice chair for research in the University of Colorado Anschutz Department of Emergency Medicine and a leading investigator in fall prevention.

“Any emergency department doctor will tell you that about 10% of what they see every day is falls,” Goldberg adds. “It’s the most common injury-related complaint that we see among older adults.”

About half of adults over the age of 85 have had a fall in the last year. “It’s a very life-changing event if it results in a serious injury, because it’s often a trigger for moving folks out of their current home into a more supervised environment,” says Cari Levy, MD, PhD, head of the CU Anschutz Department of Medicine’s Division of Geriatric Medicine and director of the CU Anschutz Multidisciplinary Center on Aging (MCoA). “And if there’s a broken bone, there are big consequences. Mortality after a hip fracture is very high in our over-75 population.”

In 2023, more than 158,000 older Coloradans went to the emergency department because of falls. Colorado’s death rate from falls is higher than the national average.

Both Goldberg and Levy say that the best way to address the problems caused by falls is to prevent falls in the first place. That’s why they have joined forces with their colleague Bethany Kwan, PhD, MSPH, a professor and associate vice chair for research in the Department of Emergency Medicine, on a major project to expand capacity across Colorado to deliver fall prevention programs to older adults, including in rural areas and other underserved communities.

Their initiative is known as STEP in Colorado, for “Scaling Trusted Evidence-based Prevention.” And it recently secured a \$4.65 million, four-year funding award from the U.S. Department of Health and Human Services’ Administration for Community Living – the only grant to be awarded in a nationwide call for proposals.

‘A DEEPLY PERSONAL ISSUE FOR US’

In talking about STEP, all three project leads spoke in personal terms about the impact of falls on family members and patients.

“My grandmother went through this scenario,” says Kwan, director of dissemination and implementation science at the Colorado Clinical & Translational Sciences Institute (CCTSI) and an investigator with the CU Adult & Child Center for Outcomes Research and Delivery Science (ACCORDS). “This is a really common problem that meets many of us, not only at the end of our life, but even early in life. It affects our parents and grandparents. This is a deeply personal issue for many of us, as well as being a significant public health problem.”

Goldberg’s research has identified a few key factors behind falls that lead to emergency department visits. One is medication – “you were recently put on a medication that affects your brain, is psychoactive, causes sedation, and might have reduced your ability to respond quickly and react quickly to your surroundings,” she says.

Another is diminishing physical function – “things such as lower-extremity strength issues, like you don’t get up off the sofa much, so you don’t have much by way of quads or hamstrings, and your balance is affected.”



BETHANY KWAN,
PhD, MSPH



CARI LEVY,
MD, PhD



ELIZABETH GOLDBERG,
MD, ScM, FACEP

FALLING OFF A FUNCTIONAL CLIFF

Until recently, Goldberg says, “these people would continue to be discharged from the emergency department, and then they’d come back again with another fall. The rate of recurrent falls is very high.”

There are evidence-based fall-prevention programs available, such as A Matter of Balance, Stepping On, and CAPABLE. For example, A Matter of Balance seeks to help older adults reduce their fear of falling by learning to view falls as controllable. The program trains at-risk people to set goals for increasing their activity levels, make small changes to reduce fall risks at home, and exercise to increase strength and balance.

But Goldberg, Kwan, and Levy say that programs of this sort aren’t being used as widely as they should.

Also, only about one in four older adults who fall tell their primary care doctors about a fall – partly because of shame, stigma, and fear of losing independence – which means few of them get connected to a prevention program by referral.

Under private and federal insurance programs, clinicians and hospitals “aren’t really that incentivized to look at these questions of prevention,” Goldberg says. “And a lot of primary care doctors will tell you they don’t have time to do a full fall risk assessment,” which might identify issues at home that could lead to falls.

But the need to prevent falls is crucial, Goldberg says. “If you fall, have a hip fracture, and end up in the emergency department, then you get a surgery, and then you have a protracted recovery from that surgery, and then you need way more caregiver support than you ever needed. Some people never get back to their baseline function. So as a clinician, I think it’s worth all the effort that we can put in to prevent people from falling off that functional cliff.”

CONNECTING TO PROGRAMS

Last year, with a small initial grant, Levy and her colleagues launched the Colorado Statewide Falls Coalition, partnering with the state Department of Human Services and the Area Agencies on Aging serving each Colorado county.

The STEP program will work with the coalition, which aims to bring together experts and community members to help address falls and provide resources. Thomas Johnson, MD, an assistant professor of geriatrics and leader of UCHealth’s falls clinic, heads the coalition and is a co-collaborator on STEP.

The four-year STEP project’s key goals are to connect older Coloradans with proven community fall-prevention programs, strengthen statewide partnerships, and generate knowledge that can inform national policy and practice. It emphasizes developing ways to spread and sustain fall-prevention programs so they’ll be used widely, including in rural areas and underserved communities.



With age, the risk of fall increases. STEP offers a way to help communities across Colorado prevent falls and the loss of independence that typically follows.

One objective is to make it easier for doctors to refer patients to fall-prevention programs. A tool has already been developed within the electronic health records system used by UCHealth, which sees more than 600,000 emergency-department patients per year, that automatically refers at-risk patients to fall-prevention programs.

PARTNERING WITH COMMUNITIES

STEP will draw on 10 partner groups in communities across Colorado that already offer a fall-prevention program or are willing to start. The new federal grant will help the project provide training, funding, and outreach materials to help these sites succeed, as well as to offer support services such as transportation, home care, and meals to make programs more accessible.

As the project unfolds, the fall-prevention programs it promotes will be tested to see how well they reach people, get adopted, and are sustained.

Ultimately, the STEP collaborators hope to engage up to 750,000 older adults in Colorado in fall-prevention programs over the next three years through referrals and outreach. STEP will gauge results by assessing whether emergency-department visits decrease, and by surveying participants to determine whether they feel safer, more independent, and less isolated.

“Our goal is that you don’t need to come to the emergency department,” Goldberg says. “We want you to see that there are exercise programs in your community to optimize your physical health, so you can spend time with your grandkids outdoors, go to graduation ceremonies, and do all the things that are important to your quality of life.”



EASING FINANCIAL BURDENS, **ELEVATING** MEDICAL FUTURES

The CU Anschutz Medical Alumni Association (MAA) Scholarship Endowment supports exceptional medical students who demonstrate academic excellence, community engagement, financial need and active MAA participation. Resources from this fund help ease financial burdens, allowing scholars to focus on their education. Its impact inspires recipients to pay it forward through peer mentorship, volunteer service and investing their talents to advance the future of medicine.

To empower the next generation of medical professionals, visit giving.cu.edu or contact **Keiley Jaszczak** at keiley.jaszczak@cuanschutz.edu or **303-724-8317**.



“ Receiving the CU Medical Alumni Association scholarship was an honor, and the high interest rates on student loans made its impact even more significant, ultimately saving me more than twice the amount originally awarded. Being a past recipient has inspired me to pay that generosity forward through volunteerism and philanthropic support of the CU MAA. I have also come to deeply appreciate the value of the CU MAA network in my clinical practice at Heart of the Rockies in rural Colorado. ”

Jessica L. Parr, MD, FACC | Class of 2016
Cardiologist