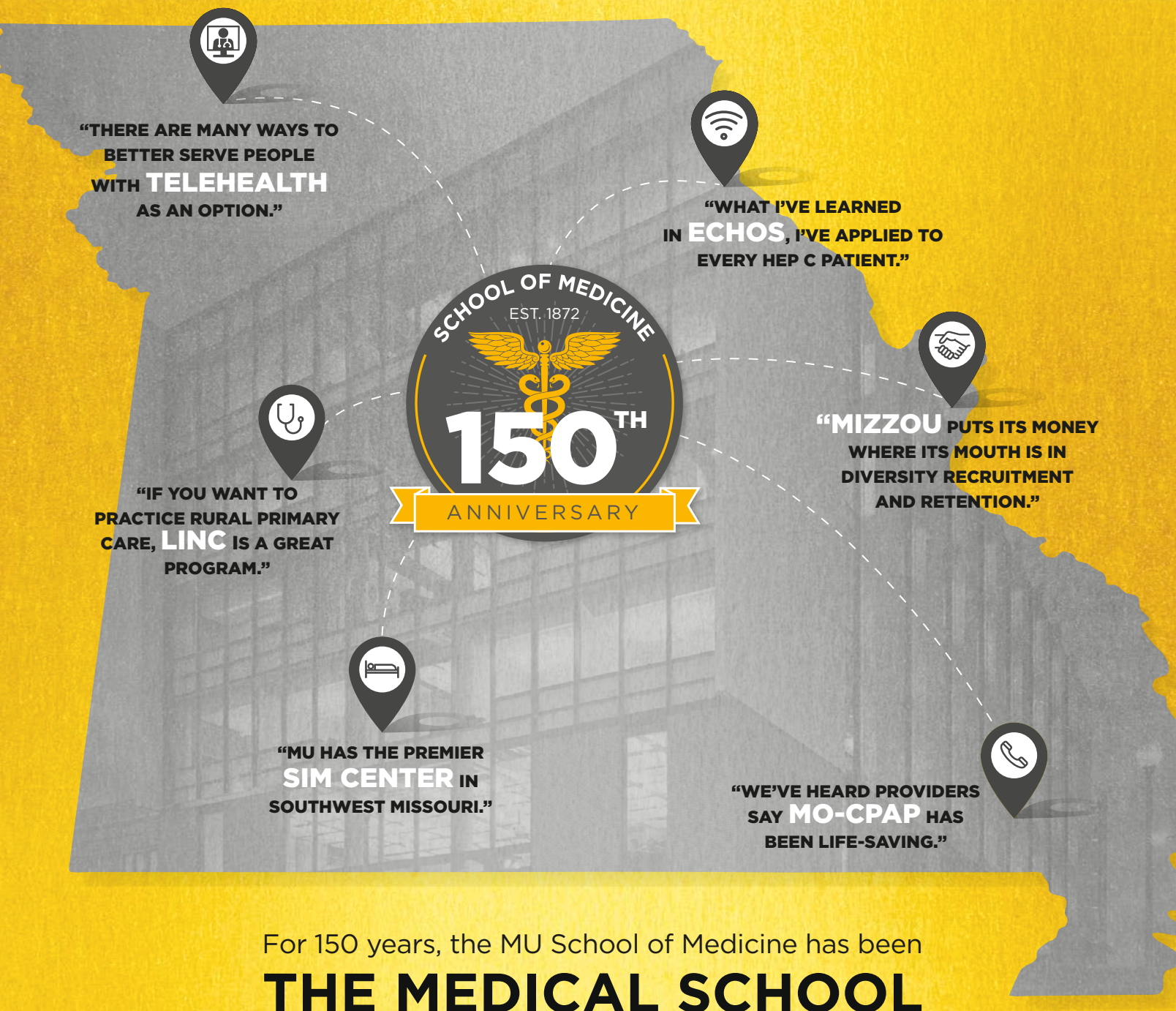
MU Medicine

University of Missouri School of Medicine 2022



For 150 years, the MU School of Medicine has been

THE MEDICAL SCHOOL FOR MISSOURI.

What starts in Columbia, reaches every part of the state.

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MU Medicine

MISSION STATEMENT
To save and improve lives through exemplary education, research and patient-centered care.

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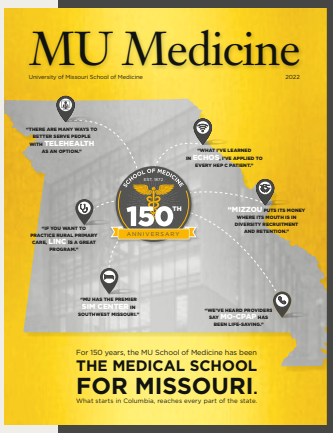

ON THE COVER:
The University of Missouri School of Medicine is invested in creating solutions for the state's biggest health challenges. Innovative programs have reached every part of the state to improve the health and well-being of Missourians.

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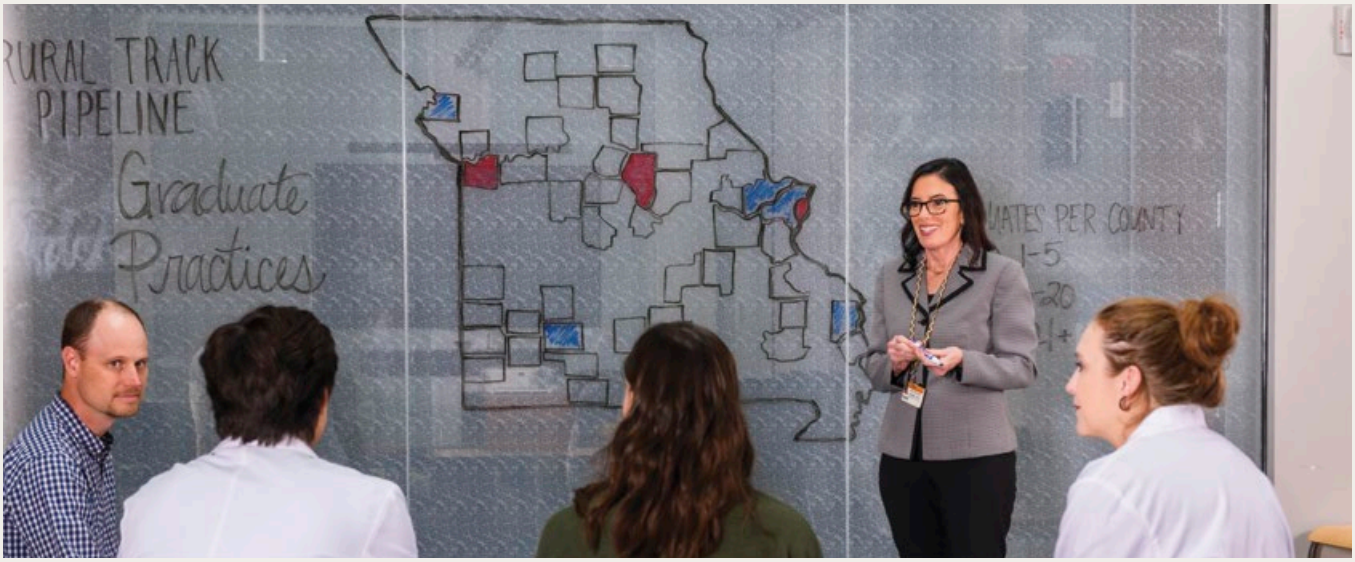
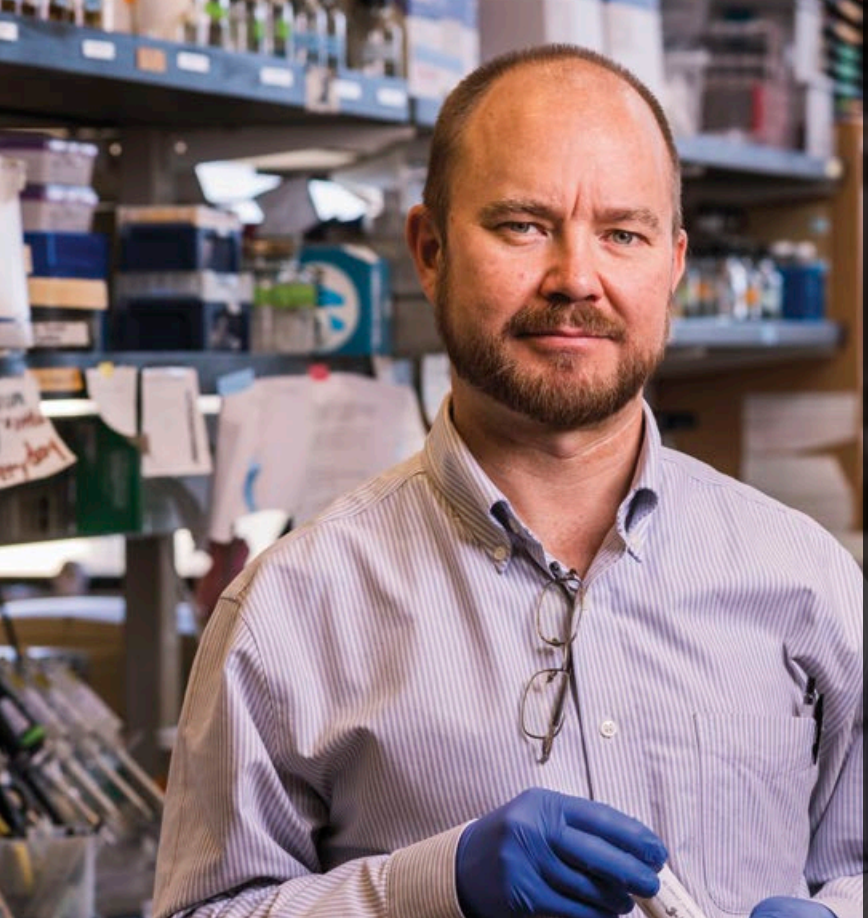


FOR 150 YEARS, THE MU SCHOOL OF MEDICINE HAS BEEN MORE THAN JUST A MEDICAL SCHOOL IN MISSOURI — **IT'S BEEN THE MEDICAL SCHOOL FOR MISSOURI.**

An important anniversary for the School of Medicine is a good time to reflect on MU's commitment to improving the health and well-being of the entire state through innovative education, research and patient-centered care.

In this issue of MU Medicine magazine, you can read about programs based at the MU School of Medicine dedicated to helping people in every part of the state. Learn about the virologist who answered the call early in the pandemic and helped Missouri create one of the world's best systems for tracking COVID-19 infections through wastewater analysis; the MO-CPAP and Missouri Telehealth Network initiatives that help residents in rural and underserved areas get the best possible care; and the LINC program that immerses students in a different kind of clerkship to prepare them to practice in rural areas.



WASTEWATER DETECTIVES GIVE MISSOURI A CLEARER PICTURE OF THE PANDEMIC

Marc Johnson, PhD, a professor in the Department of Molecular Microbiology and Immunology, has helped Missouri develop one of the world's most advanced systems for tracking COVID-19 infections and the emergence of variants.

In the spring of 2020, Marc Johnson, PhD, received a fateful email from the state Department of Health and Senior Services (DHSS). It asked if someone at the University of Missouri could lead a project that would test wastewater samples from around the state to track COVID-19 infection levels. Johnson, a virologist whose previous research was geared toward potential treatments for HIV, didn't know anything about testing wastewater.

But, given the circumstances, he volunteered for duty.

"If the state was coming to the university to ask us for help during a pandemic, I didn't think we should say no," said Johnson, a professor in the Department of Molecular Microbiology and Immunology.

More than two years later, Missouri's Coronavirus Sewershed Surveillance Project has become a national model for providing the most comprehensive, transparent and timely snapshots of the state's COVID-19 situation. The partnership between DHSS, the Missouri Department of Natural Resources (DNR) and MU has generated information that helps local public health officials — or anyone else — plan for the ebbs and flows of the pandemic.

Ultimately, the project also could help answer the big question that has captured Johnson's scientific curiosity: Where are the COVID-19 variants coming from? If that question can be answered, it will be easier to contain new variants before they spread widely.

"This is the most exciting thing I've ever done," Johnson said. "Tracking these variants has come to control my life. I spend all my time looking for these oddballs."

TEAM EFFORT

To get the project off the ground in May 2020, Johnson needed to find a partner with expertise in wastewater testing. He found one in chemist Chung-Ho Lin, PhD, from the MU College of Agriculture, Food and Natural Resources. Lin studies bioremediation — using living organisms to clean up environmental messes — and he had experience analyzing levels of contaminants in wastewater.

> **"Missouri has the most advanced sequencing system in the country, if not the world, right now. A lot of it is because we have this partnership with the state that's funding the research, but it's being driven by academics. "**
>
> — **Marc Johnson, PhD,** virologist, MU School of Medicine

Lin knew sewage was a mostly untapped resource for determining the health of a community by providing evidence of everything from the level of prescription and recreational drug use to the presence of pathogens such as COVID-19.

"Wastewater never lies," Lin said. "Give us 15 milliliters of water, and we can tell you a lot of stories."

Johnson and Lin work well together, although they are rarely together. Their labs are in different buildings, and they didn't physically meet until three months into the project … and only then because they were being interviewed for a TV news story. Their preferred schedules — Johnson is a morning person and Lin a night owl — create a natural workflow that allows them to test and analyze samples throughout the course of a day.

Each week, samples are collected from more than 100 wastewater treatment plants, sewershed access points, prisons and psychiatric institutions across Missouri and delivered to Johnson's laboratory in the Bond Life Sciences Building. Johnson's team spins the samples in centrifuges to extract the RNA and then stores them in freezers until they go to Lin's lab at the Anheuser-Busch Natural Resources Building. Lin's team uses qPCR machines to amplify the RNA, detect COVID-19 and quantify the amount present. All that information is recorded and shared with DHSS, which regularly updates the project's website.

"For scientists, this is a once-in-a-life-time experience. We get to come in and prove that higher education and science do make a positive impact in the community. I was able to witness that from scratch."

— **Chung-Ho Lin, PhD**, chemist, MU College of Agriculture, Food and Natural Resources

Lin, who served in the army in his native Taiwan, compared the wastewater surveillance project to a military operation because of the finely tuned cooperation and coordination between government agencies and the state's flagship university.

"For scientists, this is a once-in-a-lifetime experience," Lin said. "We get to come in and prove that higher education and science do make a positive impact in the community. I was able to witness that from scratch."

The cooperation between DHSS and DNR and their unwavering support of Johnson and Lin helped the Missouri project adapt as the virus evolved. By the end of 2020, variant strains of COVID-19 started to emerge. By February 2021, Johnson had developed a method for sequencing the samples to determine not just the level of COVID-19 in communities but the specific strains of the virus present.

"Once we started sequencing, that was right in my wheelhouse," Johnson said. "Missouri has the most advanced sequencing system in the country, if not the world, right now. A lot of it is because we have this partnership with the state that's funding the research, but it's being driven by academics. So Chung-Ho and I are constantly saying, 'Let's try something else and keep improving it.'"

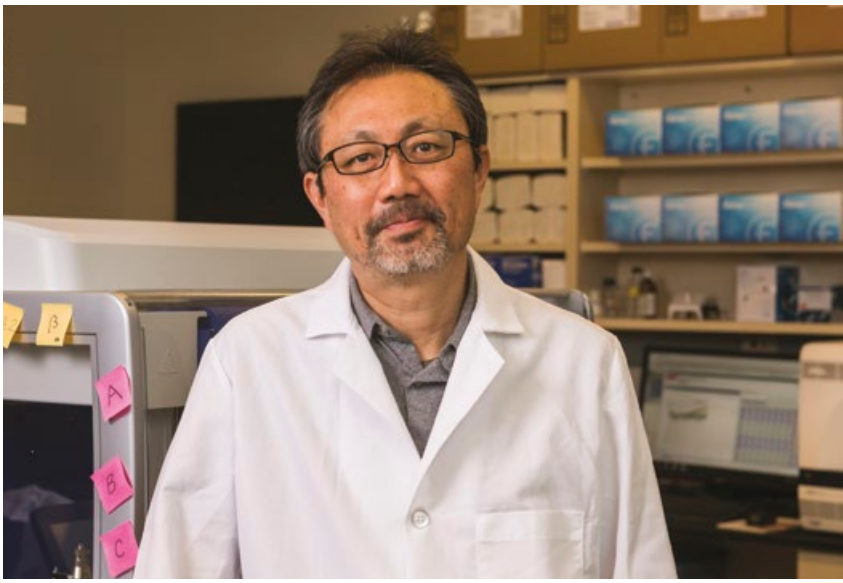
SEWAGE SLEUTHS

Mutations can occur all over the genome of the COVID-19 virus. While it is possible to sequence and map an entire COVID-19 genome from an individual positive PCR test, it is impractical to do that for a sample of viruses from the wastewater of multiple living things. Johnson compared it to trying to put together a jigsaw puzzle from a bag containing the pieces of 20 puzzles.

His solution was to sequence only one small region of the virus' spike protein, which is where most of the mutations occur as the virus is adapting to a new host. Johnson takes samples of RNA from the spike protein region and runs them through a genome sequencing machine. It determines the order of the four bases — guanine (G), cytosine (C), adenine (A) and thymine (T) — and spits out a text string with a combination of those letters.

"It's about 550 letters in a row, and we know what letters are there, what order they're in and which letters should go with the same letters in the same sentence," Johnson said. "No one else was doing it this way. Now, we have this sequence, so if anything new appears, we know it. We read the sequence and know, 'These mutations have not been seen before together.'"

In May 2021, Johnson first noticed a sample with evidence of the delta variant in one of Branson's two sewersheds. The next week, delta had taken over the first sewershed and was present in the second. The following week, it was erupting all over the Missouri map like popcorn.



▲ Chung-Ho Lin, PhD, an associate professor in MU's College of Agriculture, Food and Natural Resources, has used his experience testing wastewater for contaminants to improve the state's public health.

"I think a lot of people were taking trips to Branson and bringing a present home," Johnson said.

But for every delta or omicron variant that sweeps the world, there is another oddball whose sequence looks menacing on a computer screen but quickly fizzles. Understanding the origin story of variants has become something close to an obsession for Johnson. He keeps track of where new variants are popping up and collaborates with other COVID-19 detectives around the world who are trying to identify emerging mutants and trace them backward from the sewershed to an area as close as possible to the source.

"If it turns out the variant is coming from a person, it's in everyone's best interest — both the person and society in general — that that person is isolated and given any medication they can to clear that infection," Johnson said. "If they can clear the infection, the threat to the public is gone. If it's coming from an animal reservoir, it at least gives us a clue of where we need to pay attention. Maybe it turns out you would have to be more cautious around certain animals. If nothing else, it would tell you where you can do surveillance for potential new variants. Once we find the first one, everything is going to fall like dominoes and it might get boring, but for now, I would do this work for free."

LEARN MORE about exciting research taking place at MU at **medicine.missouri.edu/research**

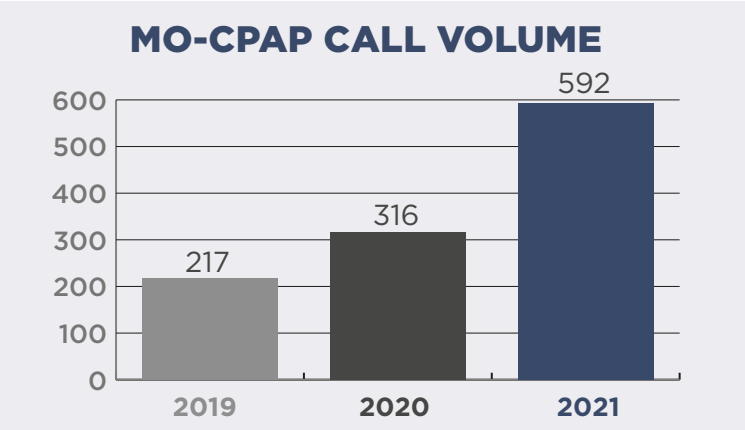
Laine Young-Walker, MD '97 the chair of the Department of Psychiatry, started the Missouri Child Psychiatry Access Project (MO-CPAP) in 2018. Since then, it has grown to a statewide program that helps primary care clinicians treat children with mild to moderate mental health disorders.

WITH MO-CPAP, CHILD PSYCHIATRY HELP IS A PHONE CALL AWAY

When Claudia Preuschoff, MD, a pediatrician in Poplar Bluff, Missouri, began her career in the mid-1980s, she had received "zero, zip, no behavioral health or psychiatric training." The reality of her job is she cares for kids with mental health issues every day. Preuschoff said in the last two years she has seen so many patients with anxiety and depression that she's written more prescriptions for behavioral health medications than she has for antibiotics or cold medicine.

For Preuschoff and more than 500 other primary care clinicians across the state, the Missouri Child Psychiatry Access Project (MO-CPAP) — a program based at the University of Missouri School of Medicine — is a way to help their patients get the care they need quickly. MO-CPAP has a child and adolescent psychiatrist available for same-day telephone consultations when clinicians need advice.

"I feel really comfortable treating general anxiety and depression in adolescents, but with younger kids, I tend to ask for help more," said Preuschoff, who calls MO-CPAP about once a month. "In those patients who have failed maybe one or two medication regimens who are clearly not improving, those are some of the kids for whom I get consultations."



Laine Young-Walker, MD '97, the chair of the Department of

> "There are not enough child psychiatrists to meet the needs of those who have depression and anxiety and other mental health issues. We can't just train more because we don't have enough psychiatry slots in residencies to meet the need. So there has to be a lot of ways you go at it."
>
> — **Laine Young-Walker, MD '97**

Psychiatry, is the force behind MO-CPAP and four other local, regional and statewide child psychiatry outreach projects that try to address the same big problem from different angles.

"There are not enough child psychiatrists to meet the needs of those who have depression and anxiety and other mental health issues," Young-Walker said. "We can't just train more because we don't have enough psychiatry slots in residencies to meet the need. So there has to be a lot of ways you go at it."

MO-CPAP, which is funded by the federal Health Resources and Services Administration, is one of those ways. Young-Walker started it in 2018 after learning about a similar program in Massachusetts. It began serving eight counties in the St. Louis area, expanded to eight more counties in mid-Missouri the next year and went statewide in November 2020. The expansion allowed doctors in rural Missouri — where access to specialists and resources for families are often scarce — to better serve their young patients.

"One in four children are struggling with a mental health disorder," said Wendy Ell, the executive director of MO-CPAP. "There are about 11 child psychiatrists per 100,000 children. What would be considered adequate is 47 per 100,000 children. Many children who need to see a psychiatrist will never see one. So if they have a mild to moderate mental health condition, it can be managed in a primary care setting with support from a psychiatrist from our program."

The program has been a great resource for Preuschoff. One recent example was the case of a young adult she has been seeing since he was a child. He is on the autism spectrum and was struggling with the transition from high school to working with a job coach.

"He has a heart of gold but clearly was having a difficult time controlling his emotions and lashing out physically," Preuschoff said. "I called and had a couple of consultations — one before Thanksgiving and one in February — to get some help in terms of behavior management and medication management. He came to see me in late March, and in the previous month had zero outbursts. He, himself, realizes he feels much calmer. That was because of some of the assistance I got from psychiatrists at MO-CPAP."

MO-CPAP
MISSOURI CHILD PSYCHIATRY ACCESS PROJECT

CLINICIANS WHO ENROLL IN THE FREE PROGRAM HAVE ACCESS TO THESE SERVICES:

CONSULTATION: MO-CPAP employs four child and adolescent psychiatrists. One is on duty from 10 a.m. to 6 p.m. each weekday and available to accept scheduled calls from clinicians or to respond to unscheduled calls within 30 minutes. The consultations can include help diagnosing an illness or managing medication.

LINKAGE AND REFERRAL: Clinicians whose patients need extra help, such as therapy, will receive assistance connecting their patients to community-based mental health care and other resources.

EDUCATION AND TRAINING: Online educational videos help clinicians build their knowledge in identifying, assessing and treating mild to moderate behavioral health issues.

CARE COORDINATION: MO-CPAP employs two support coordinators who follow up with the patients' parents to make sure they are getting the help they need and don't have unanswered questions.

TO LEARN MORE about the MO-CPAP program, scan the QR code to watch a video.

VIRTUALLY AMAZING

Missouri Telehealth Network helps clinicians bring expert care closer to home.

When Karen Edison, MD '89, began her career as a dermatologist, she assumed as long as there were cars and roads, people from distant parts of Missouri would drive to Columbia or other cities for important appointments. All it took to change her mind was getting in her own car and driving to Moberly to hold outreach clinics.

Early on, she saw a man in his 80s who had skin cancer on his eyelid, and she told him he needed to come to Columbia for treatment.

"He listened politely and said, 'Yeah, I understand all that, Doc, but I can't drive, all my friends are dead and my kids are two hours away. I'm not going to Columbia,'" Edison recalled. "That sort of thing happened a lot. I quickly realized there are all kinds of people who don't travel for health care."

In 1995 — back in the days of dial-up internet service — Edison joined the Missouri Telehealth Network (MTN), a program based at the MU School of Medicine that is devoted to using technology to bring health care to rural and underserved people throughout the state. In the beginning, executing that vision meant providing bulky teleconferencing units to Federally Qualified Health Centers around Missouri so patients could go to their local clinic and be seen virtually by specialists.

"I would go around the state and try to talk people into using it," said Edison, who retired as chair of the Department of Dermatology in 2019 but continues as the MTN senior medical director. "Most providers — if they used it and it worked well and they could see the value to their patients — would keep using it."

THE AGE OF ECHO

In 2014, MTN started Show-Me ECHO, which was modeled after an innovative program called Project ECHO that began at the University of New Mexico. It's a way to help primary care clinicians and other professionals learn from experts in various specialties — and from each other — during lunch-hour videoconferences in which a participant presents a real case for discussion and recommendations.

Show-Me ECHO, which stands for Extension for Community Healthcare Outcomes, started with two ECHOs on the topics of autism and pain management. It's grown to 38 topics, and MTN has become one of 14 superhubs worldwide that teach other organizations how to start their own ECHOs.

A good example of how the program works can be found in Hannibal. Tonya Stamper, DNP, a nurse practitioner for Clarity Healthcare, was seeing a surge in patients with hepatitis C sparked by the opioid epidemic. Three years ago, she started participating in hepatitis C ECHOs to ask specific questions, such as how antiviral treatments could interact with other medications, whether they were safe for a breastfeeding mom or whether they were causing an abnormal lab result.

> **"Patients realize that you can get your health care needs met from your home. It's been particularly useful for mental and behavioral health, parents of small children, the elderly and people with disabilities. There are certain groups of people that have a hard time going to a visit, and telehealth into the home is very important."**
>
> **— Karen Edison, MD '89**

The sessions gave her confidence to know she was making the right decisions. In February 2022, she cured her 100th patient with hepatitis C.

"What I've learned in ECHOs, I've been able to apply to every hep C patient," Stamper said. "The outcomes are so amazing. I have folks coming in who feel like they've made so many bad choices throughout their lives, and now they have this disease that they're not sure if they'll be able to get rid of. Even if they're in recovery, this is hanging over their head. When I say, 'We can cure this, and you can put this behind you,' they are so grateful that what they might have thought was a death sentence doesn't have to be."

In the northwest corner of Missouri, Jerry Wilmes, MD '87, is a family medicine physician in Maryville who has participated in ECHOs on multiple topics, including mental health. He was the longtime director of student health at Northwest Missouri State University, so he saw many students dealing with anxiety and depression who would have to wait months to see a psychiatrist. By presenting cases on the psychiatry ECHO, Wilmes learned whether he could manage the patient's medications or whether he needed to get the patient to a higher level of care.

"I've spent almost my entire career in rural areas, but personally I need the collegiality and intellectual stimulation of staying in touch with what is going on," Wilmes said. "When the ECHO concept came out, I thought, 'Holy cow, this is it.' I always said I wanted this and needed this, but I didn't want to move to a city. You're interacting with subject matter experts and colleagues from across the state. I hate to sound dramatic, but it's been a godsend for me."

Rachel Mutrux and Karen Edison, MD '89, are longtime leaders of the Missouri Telehealth Network, a program based at the School of Medicine that uses technology to bring health care to rural and underserved people throughout the state.

BREAKING DOWN BARRIERS

With the help of ECHOs, the size and scope of MTN continued to grow. But the biggest leap in telehealth happened out of necessity when COVID-19 arrived. In 2020, the U.S. Department of Health and Human Services changed a number telehealth rules to encourage doctors to treat patients remotely during the pandemic. That meant patients could receive telehealth anywhere, including their homes, and didn't need to have an established relationship with a doctor first. Providers were now free to connect with patients through Zoom, FaceTime or Skype.

Nationwide, the number of Medicare-billed telehealth visits jumped from 840,000 in 2019 to 52.7 million in 2020.

"We have never been as popular as we were in 2020," said Rachel Mutrux, MTN's director. "Before the pandemic, most clinicians hadn't done any telehealth visits. Now, most clinicians have. With the public health emergency order, it really opened up the ability for health care clinicians because there were true barriers to telehealth before the pandemic."

Another barrier to telehealth for some Missourians is lack of access to broadband internet, either because it isn't available in their area or they can't afford it. To address that problem in 2020, MTN partnered with the Missouri Department of Economic Development and three telecom companies to deliver Wi-Fi hotspots to Missourians who needed them for telehealth appointments. The hotspots went to Federally Qualified Health Centers and community mental health centers, who identified the people who needed them most and distributed them.

"We were able to get more than 9,000 hotspots in the hands of patients and clinicians, because some clinicians live in remote places where they didn't have good internet access either," Mutrux said.

In the future, as technology and internet access continue to improve, Edison estimated that at least 20% of all medical appointments will be handled through telehealth.

"Patients realize that you can get your health care needs met from your home," she said. "It's been particularly useful for mental and behavioral health, parents of small children, the elderly and people with disabilities. There are certain groups of people that have a hard time going to a visit, and telehealth into the home is very important."

> **"Even if they're in recovery, this is hanging over their head. When I say, 'We can cure this, and you can put this behind you,' they are so grateful."**
>
> **— Tonya Stamper, DNP**

LEARN MORE about services available through the Missouri Telehealth Network at **medicine.missouri.edu/mtn**

MU medical student Brittney Marshall, left, found a valuable mentor in Misty Todd, MD '17, who served as her preceptor in the new Longitudinal Integrated Clerkship (LINC). Marshall saw patients in a variety of settings throughout the year in Sedalia, Missouri.

LINC PROGRAM GIVES STUDENTS AUTHENTIC RURAL HEALTH EXPERIENCE

When Brittney Marshall arrived at the front door of the Bothwell Cole Camp Clinic for the first day of her clerkship in June 2021, she was a third-year medical student. As soon as she walked through that door, she became Student Dr. Marshall, which was the name her preceptor, Misty Todd, MD '17, insisted on calling her. Eventually, Todd's patients got to know Student Dr. Marshall well and came to trust her advice and value her interest in their lives.

Marshall was one of the first MU students to participate in the Longitudinal Integrated Clerkship (LINC). The curriculum allows medical students to get better insight into what it means to be a doctor in a rural area while learning medicine, building their own patient panel and gaining confidence navigating the complexities of the health care system.

TO LEARN MORE about how MU is addressing rural health disparities, visit **medicine.missouri.edu/rural-scholars**

"We're following patients for the whole year across all aspects of their care," said Marshall, a native of Republic, Missouri. "We see them in the clinics. We see them in the hospital. We see them when they have a consult with their specialist. That's been a really great experience, which I think might be a little more true to what my practice will be like in the future."

Marshall and classmates Madison Bulger and Magdaleno Gutierrez chose to be the pioneers of the LINC program, which is a partnership between the MU School of Medicine and Bothwell Regional Health Center in Sedalia, Missouri. Each year, MU third-year medical students live and learn in Sedalia as part of the program, which is one of the rural health initiatives funded by federal grants from the Health Resources and Services Administration and the Department of Health and Human Services. The program is expanding, with students also assigned to Hannibal in the coming year and St. Joseph the following year.

Rather than gaining clinical experience by progressing through seven core clerkships as in the traditional model, LINC students are assigned to a local primary care physician and learn multiple specialties by following select patients through every step of their care.

"We're following patients for the whole year across all aspects of their care. We see them in the clinics. We see them in the hospital. We see them when they have a consult with their specialist. That's been a really great experience, which I think might be a little more true to what my practice will be like in the future."

— Brittney Marshall

On one of her first days in Todd's clinic, Marshall met a woman who had just been diagnosed with inoperable lung cancer. Marshall followed the patient throughout the disease process, attending oncology and pulmonology appointments and rounding on her at her nursing home. As the disease progressed, the woman was hospitalized at Bothwell, so Marshall rounded on the patient each morning with Todd.

"She was pretty ornery, so sometimes we would have light-hearted conversations where we gave each other a hard time and goofed around with each other," Marshall said. "But there were some days when she was having a lot of pain and having a hard time breathing, and we would have to talk about whether she was ready to focus on her comfort or whether she wanted to keep fighting this. She was a fighter and fought for a long time before deciding to go on hospice. She passed away about a week later. But it was a really rewarding experience to get to know her so well and be a part of her care."

On the opposite end of the family medicine spectrum, Marshall joined Todd as she provided prenatal care to expecting mothers, assisted with delivery and then saw the babies for their well-child checkups. She also got to work with multiple specialists — such as emergency room doctors, hospitalists and surgeons — over the course of the year.

"Those are the experiences you don't get to have in a traditional curriculum where you are in a clinic, then a different clinic, then the OR," Todd said. "LINC is the best combination of those things every day, which is what my real-life job is like. I think it's important to let students know and experience how rewarding that can be. We're more than just doctors and more than just appointments. Patients do become our families and do come to trust us."

▲ Misty Todd, MD '17, insisted on treating third-year medical student Brittney Marshall as a valuable member of the team at the Bothwell Cole Camp Clinic, even hanging up a photo identifying her as "Student Dr. Marshall" in the office.

Todd recalled that when Marshall first arrived at her clinic, she was a little bashful about speaking up. By winter, Todd often walked in on Marshall confidently answering patients' questions exactly the way she would have answered them herself. By late spring, it was time for Student Dr. Marshall's photo to come down from the wall of Todd's clinic, but she was leaving with great experience and a role model to emulate.

"Dr. Todd's been a great mentor for me," Marshall said. "She taught me a lot about the science of medicine but also the business side of medicine and the heart of medicine."

A BRIDGE TO SEDALIA

The LINC program isn't the School of Medicine's only connection to Sedalia. The new Bothwell Rural Family Medicine Residency is now training resident physicians in Sedalia. The program accepts two medical school graduates each year. Participants spend their first year of residency in Columbia and second and third years in Sedalia under the guidance of program director Bob Frederickson, MD, of the Bothwell Regional Health Center.

FACULTY SPOTLIGHT

NEW APPOINTMENTS

JOSEPH BURRIS, MD, was named the chair of the Department of Physical Medicine and Rehabilitation and was awarded the endowed Encompass Health Chair. He continues as a professor of PM&R and medical director of Rusk Rehabilitation Center. Burris had served as interim chair of the department since April 2021.

MICHAEL CHICOINE, MD, was named the inaugural chair of the Department of Neurosurgery, which officially expanded from a division into a department in June 2022. Chicoine is also the Hugh E. Stephenson Jr., MD, Professor in Cancer Research. Chicoine was previously the August A. Busch Jr. Professor of Neurological Surgery at Washington University. He has broad experience in neurosurgery, including specialization in brain tumors/neuro-oncology, pituitary tumors, skull base surgery, cerebrovascular disease, trauma and Chiari malformations.

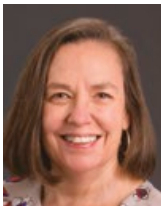
NIM CHINNIAH was appointed as MU's vice chancellor for health affairs. He works in partnership with the executive vice chancellor for health affairs and MU Health Care's leadership team on clinical scale, strategy, finance and operations. Chinniah has decades of experience at Vanderbilt University, the University of Chicago, Northwestern University and in investment banking.

BRANDI FRENCH, MD, was named the interim chair of the Department of Neurology. She joined the department more than 20 years ago and has served in multiple roles, including chief resident, vice chair for clinical affairs, medical director of the neurosciences unit and the Missouri Stroke Program, and program director for the vascular neurology fellowship.

JEAN RICCI GOODMAN, MD, was named chair of the Department of Obstetrics, Gynecology and Women's Health. Goodman is a professor of obstetrics and gynecology and received the William T. and Roberta Ann Griffin Endowed Chair in Obstetrics and Gynecology. Goodman came from Loyola University in Chicago where she was the director of the Division of Maternal Fetal Medicine, director of the Maternal Fetal Medicine Fellowship and the quality director for obstetrical services.

GERHARD CARL HILDEBRANDT, MD, was named the director of Ellis Fischel Cancer Center, the chief of the Division of Hematology and Medical Oncology and the Nellie B. Smith Endowed Chair of Oncology. Hildebrandt previously served as the division chief of hematology at the University of Kentucky. He specializes in cancers of the blood and lymph system, blood or bone marrow stem cell transplantation, and acute and chronic graft-versus-host disease.

ACCOLADES



LEE-ANN H. ALLEN, PHD, was named a 2021 fellow of the American Association for the Advancement of Science (AAAS). Allen is a professor and chair of the Department of Molecular Microbiology and Immunology and is the George Trimble Endowed Chair for Excellence in Medicine. For 2020-21, Allen was also the president of the Society of Leukocyte Biology and is currently a member of the FAEB board of directors.

DAVID GOZAL, MD, was honored as the world's most published author of obstructive sleep apnea (OSA) research from 2001-20. The Annals of Palliative Medicine found that Gozal had authored 234 articles during that span. Gozal is the Marie M. and Harry L. Smith Endowed Chair of Child Health. **LEILA KHEIRANDISH-GOZAL, MD**, professor and director of the Child Health Research Institute, ranked 10th on the list.

JULIE M. KAPP, PHD, received the American Public Health Association's 2021 Maternal-Child Health Section's Effective Practice Award. She was honored in October for her work combining academic and practical strategies for maternal-child health problems at the community, state and national levels. Kapp is an associate professor in the Department of Health Management and Informatics.

KIRT NICHOLS, MD, was the first winner of an award that bears his name — the W. Kirt Nichols, MD, Medical Staff Service Award — given by the School of Medicine's Physician Leadership Academy. Nichols is an emeritus professor of vascular and endovascular surgery in the Hugh E. Stephenson Jr., MD, Department of Surgery who has 50 years of service at MU, including 36 years as a member of the executive medical staff. The Physician Leadership Academy is a new program that hones the skills of 21 emerging physician leaders.

JAMES STEVERMER, MD, won the highest honor in medical education bestowed by the University of Missouri — the Jane Hickman Teaching Award — during the School of Medicine's annual Education Day on Oct. 7. Stevermer is medical director of Callaway Physicians, a residency training site in Fulton, Missouri, and a member of the U.S. Preventive Services Task Force. He is also vice chair for clinical affairs and professor in the Department of Family and Community Medicine.

HABIB ZAGHOUANI, PHD, was named a 2021 fellow of the National Academy of Inventors (NAI). Zaghouani is the J. Lavenia Edwards Endowed Chair in Pediatrics with appointments in the Departments of Molecular Microbiology and Immunology, Child Health and Neurology. He is director of the Immunity and Autoimmunity Research Laboratory, which focuses on the biology of T lymphocytes and their contribution to the development of immunity and autoimmunity. He holds 23 patents and has three that are pending.

Richard J. Barohn, MD, the executive vice chancellor for health affairs and dean of the School of Medicine, has worked closely with Talissa Altes, MD, the chair of the Department of Radiology, to recruit top imaging research scientists from across the country.

A CHAMPION OF COLLABORATION

New dean emphasizes team approach to solving problems.

Collaborative, curious, innovative. These characteristics define Richard J. Barohn, MD, a leader who firmly believes in not only pushing the envelope to solve the most pressing health care problems, but also inviting those around him to join in that journey. Barohn, executive vice chancellor for health affairs and the newly appointed dean of the School of Medicine, believes "there is always a way to make things better, and we must work every day to do so."

Whether he's working to improve how MU educates medical students, improving the quality of care and patient experience, identifying new ways to meet patient needs or initiating and engaging in research, Barohn relishes discovering and empowering new strategies and approaches.

A neurologist who specializes in rare diseases, he is constantly in pursuit of connecting people to foster the exchange of ideas.

"My goal is finding new innovative ways to encourage people to work together to solve problems and to see the ultimate benefit," he explained.

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Barohn has dedicated much of his career to public service — including serving in the Air Force, where he rose to the rank of lieutenant colonel — and is deeply inspired by the University of Missouri's position as one of only six public universities in America with schools of medicine, veterinary medicine, agriculture, engineering and law on the same campus. A native of St. Louis, he was among the first group of students in the UMKC School of Medicine's combined BA/MD program. Since joining MU in 2020 as the EVC and inaugural scientific director of the NextGen Precision Health initiative, he has created and capitalized on opportunities to connect the dots among clinical, academic and research pursuits.

"Having a clinical scientist lead the charge means that we have someone who cares deeply about and understands our missions," said Talissa Altes, MD, chair of the Department of Radiology. "He has extensive knowledge on what it takes to be successful in research, clinical care and education. Furthermore, he understands the importance of making sure the hospital, School of Medicine and the university are aligned and have the support they need to thrive."

When the university secured leading-edge imaging equipment — including a MAGNETOM Terra 7-Tesla MRI scanner — through its Alliance for Precision Health partnership with Siemens Healthineers, Barohn joined with Altes to recruit top imaging research scientists from across the country.

"Connecting research imaging scientists with scientists and

"He has extensive knowledge on what it takes to be successful in research, clinical care and education. Furthermore, he understands the importance of making sure the hospital, School of Medicine and the university are aligned and have the support they need to thrive."

— Talissa Altes, MD

clinicians on campus allows us to identify ways to leverage these new tools to benefit patient care and enhance research," he said.

"In the past, I have worked with others to hire staff. The difference in working with Rick were his insights, his time, as well as his willingness to make decisions quickly," Altes added. "He took the time to mentor a new hire and was helpful in promoting their career. It wasn't just getting them in the door, it was about setting them up for success. He takes the time to make the right introductions with new hires and existing staff members and to encourage collaboration."

Barohn has a long history of championing colleagues and mentees. As Barohn's first neuromuscular fellow, Carlayne Jackson, MD, professor of neurology and otolaryngology at the University of Texas Health Science Center San Antonio, credited Barohn's support as the reason she decided to stay in academic medicine.

"He has been an outstanding mentor and introduced me to colleagues that helped me advance my career. He is always willing to listen and problem solve," she said.

At MU, Barohn has continued his legacy of championing and challenging new physicians to work together to find new ways to improve patient care and the patient experience.

"Dr. Barohn is an inspiring leader," said Brandi French, MD, interim chair of the Department of Neurology. "He motivates us to think big and challenge ourselves to achieve more both clinically and academically."

Barohn recognizes that it is often necessary to break down barriers that hinder progress and improvement. Recognizing the access challenges facing rural communities, he implemented a telehealth ALS clinic for rural Kansans — long before the pandemic made telehealth a key component of care. He's initiated a task force to look at the role MU Health Care and the School of Medicine should play in bridging the gap for patients across Missouri.

He's committed to making these connections not from an "ivory tower" of academia but as an engaged community member. Barohn is intentional in his efforts to learn from his colleagues, neighbors and fellow leaders across the region to ensure he understands the "heart" of the communities MU serves.

Barohn's curiosity is also central to the culture he is committed to fostering across the university system. He arrived at MU in the midst of the movement for racial justice, at a moment when the murder of George Floyd had shone a critical spotlight on systemic inequities

▲ Richard J. Barohn, MD, attends a neurosciences unit daily huddle in August 2020. Barohn frequently attends huddles throughout the health system to engage with team members.

and the need for more attention to diversity, equity and inclusion initiatives. In close partnership with Laura Henderson Kelley, MD, associate dean for the Office of Diversity and Inclusion, he is driving collaborative approaches to ensure that everyone across the system feels seen and heard. His work with Henderson Kelley and other leaders led to the rapid implementation in the summer of 2020 of the Bias Hotline for reporting inappropriate, race-driven behavior.

"We must be compassionate and caring toward each other," Barohn said.

Central to advancing Barohn's ambitious vision is Mizzou Forward — a transformational faculty recruiting effort to strengthen innovation in research disciplines that will move the needle in the university's work to improve lives around the world.

"Dr. Barohn is very active in identifying and recruiting leaders, researchers and physician-scientists. He is committed to growth and progress. His attention, energy and network have accelerated and enriched ours," said Kristin Hahn-Cover, MD, chair of the Department of Medicine.

As Barohn serves in his dual leadership roles, he will continue to prioritize collaboration and compromise.

"We need to work across departments, divisions and schools," he said. "We need to seek the right balance to ensure that the mission of the hospital and the academic missions are truly aligned. We must capitalize on our opportunity, together, to find synergies and accelerate the positive changes we want to make at MU Health Care and the School of Medicine. We are the flagship, public health care institution for the state of Missouri. We take this seriously, and we will work tirelessly to ensure the Univeristy of Missouri School of Medicine and MU Health Care are nationally recognized and that all Missourians will be proud of what we are, what we do and who we train and take care of."

FORWARD-THINKING LEADER

As Department of Surgery chair, Barnes builds with a 14-year-old blueprint that's still very much in style.

A lot has changed in the 14 years since Stephen Barnes, MD, received a letter titled "Pay It Forward" that he still keeps on his desk. Barnes has more responsibilities, a bigger office and a longer title — the Hugh E. Stephenson, MD, Endowed Chair for the Department of Surgery — but he still reads the letter often to remind himself why he came to the University of Missouri and the kind of leader he wants to be.

The story begins in the fall of 2007, when Barnes made a trip to Columbia that was supposed to be a courtesy visit. He had just finished his active duty in the Air Force, where he had made quite a name for himself as part of the group that reimagined the way the U.S. military treated and transported wounded soldiers. He had planned to start his civilian career as a trauma surgeon at East Carolina University.

But when Barnes visited MU, he saw a lot to like. It offered a chance to build a trauma program in a great place for Barnes and his wife, Mary, to raise their four children. In fact, the job checked all the personal and professional boxes on his wish list except one: Columbia wasn't within 90 miles of an ocean … but Barnes figured the Lake of the Ozarks was a large enough body of water to make an exception.

There was still the matter, though, of informing the chair of surgery at East Carolina that he had changed his mind. That man, Michael Rotondo, MD, who is now vice dean for clinical affairs at the University of Rochester School of Medicine, had been excited about hiring a recruit he described as a "larger-than-life character and very self-assured, but with a degree of emotional intelligence that allows him to adapt and work extremely well with people." When Barnes told him about the opportunity at MU, Rotondo made a lasting impression with his response.

"He called me back and said, 'You should definitely take that job. That job is you,'" Barnes said. "Then he sent me this beautiful letter."

The letter begins: "OK, you have your job. Now here is what you owe me for my role in all of this." It goes on to highlight what Barnes should strive to be as a leader in clinical care, education and research.

He set out to live up to the challenge.

Within six months of his arrival in 2008, Barnes was put in charge of the new Division of Acute Care Surgery. That allowed him to help build a team of like-minded trauma surgeons and start focusing on improving outcomes.

"People who end up doing trauma run toward the smoke and flames rather than away," Barnes said. "It has some pretty decent parallels to being a firefighter. We sit and wait, and at a moment's notice, we respond and make decisions. I like the impact. You see someone who's nearly dead, and then you see them six months later and they're back to their life. What could be better than that?"

Ten months after Barnes' arrival, MU Health Care regained its status as a Level I trauma center, which it had lost in 2005. Three years after Barnes arrived, MU Health Care moved from the bottom decile to the top decile in the American College of Surgeons' Trauma Quality Improvement Program's system. It has maintained

▲ Stephen Barnes, MD, poses with a young patient in 2006 at a U.S. military hospital in Balad, Iraq.

its standing in both of those metrics ever since.

Barnes helped improve the division's educational profile by rebuilding the Surgical Critical Care Fellowship program. Among the division's research highlights was the establishment of the Combat Casualty Training Consortium made possible by a $5.3 million grant from the U.S. Department of Defense.

When COVID-19 advanced toward Missouri, the scope of Barnes' duties expanded. He was tabbed as the planning chief of MU Health Care's incident command team. He leaned on his military experience tackling the logistical puzzle of global patient movement to help the health system prepare for the pandemic and adjust to all its complications.

"I'm a numbers person, so I was not going to let panic and Facebook make the decisions for us," Barnes said. "We needed to figure out who was responsible for what and who had what skillset and figure out how to make some data-driven decisions for central Missouri that puts us in the best stance to take care of this thing we didn't understand. Then we rapidly learned to understand it. Our operating rooms have been open more than most others in our region."

In February 2021, he accepted the position as interim chair of the Department of Surgery. Six months later, he shed the interim label.

Barnes spent so much of the past year taking recruits out to eat, he joked that he's on a first-name basis with the servers at Columbia's top restaurants. Specifically, Barnes has been focused on expanding in the areas of neurosurgery — which was recently enhanced from a division to a department — plastic surgery and cardiac surgery.

Another key focus area has been improving the surgical training experience for medical students and resident physicians.

"Really, it's just an investment in time," Barnes said. "Rather than saying, 'Come watch me take care of a patient,' spend more time focused on the learners' needs."

Without realizing it, Barnes was voicing the sentiments in the final part of the letter on his desk — that the best way to repay the debt to his mentors is by giving generously to the next generation. He has become the leader he wanted to be.

"Your day will come when you have the same opportunity that I have had with you," the letter concludes. "Get to know a rising talent and assist in some small way in their development. Do it, not because you expect anything in return, but rather because you know that it is the right thing to do. It may cost you time and money, but in the end, you will further the cause and reap the benefit of joy in helping launch someone on a very important mission — a mission in which you believe deeply. Pay it forward."

GETTING TO KNOW STEPHEN BARNES, MD

SURF'S UP: In the late 1980s, as "Baywatch" captured America's imagination, Barnes decided to take a break from his pursuit of a mechanical engineering degree at Auburn University and become a professional lifeguard in Hilton Head, South Carolina.

"I was David Hasselhoff," he joked.

For 2½ years, he patrolled the island's beaches.

"There were riptides and shark attacks, and I remember driving about 90 mph on a four-wheeler down Harbor Town golf course because someone had keeled over after they teed off," Barnes said. "There's a lot of good memories from Hilton Head — I was able to become a paramedic and learn more about medicine — but a lot of it was silly questions from tourists all day long. Eventually, I came to the conclusion I should go back to school, pay attention and pursue a career in medicine."

MAN ON A MISSION: After four years of med school at the University of Alabama at Birmingham and seven years of surgical training at the University of Kentucky, Barnes began an Air Force active-duty stint in 2004. He was assigned to the Center for Sustainment of Trauma and Readiness Skills (C-STARS) program in Cincinnati and was part of a team that created a new global patient transport system and trained military medical personnel to use it in the wars in Afghanistan and Iraq.

"It really changed the face of military care forever," said Michael Rotondo, MD, a trauma surgeon at the University of Rochester who is one of Barnes' mentors. "It's never going to go back to what it was."

GREAT ESCAPES: Away from the pressures of work, Barnes enjoys the outdoors and spending time with his four children and wife, Mary.

"He's got kids who are excelling in what they do, and he's been able to dedicate so much of his life to this place and the department, and all of that is possible because Mary Barnes is a saint among mortals," said MU Health Care trauma surgeon Jeffrey Coughenour, MD, who has known Barnes for two decades. "She truly is an amazing person."

If Barnes and his family need a quick getaway, they can visit his 80-acre property near Moberly, Missouri, that he named "Sanity Maintenance." It has a house, barn, fishing pond and fields for hunting.

"I send photos to my friends in Alabama," Barnes said, "and they are in awe of the size of deer and turkey in Missouri."

ATTACKING OBESITY WITH PRECISION

Parks takes personalized approach to growing threat.

As a nutritional biochemist, Elizabeth Parks, PhD, sees the effects of the obesity epidemic every day on a cellular level. In her lab, using pictures from a microscope, she looks at tissue samples and sees fatty livers. Parks refers to the liver as the body's traffic cop, because it has to handle all the food we eat. When the liver is full of fat, it can be too sick to do its job, which leads to metabolic mayhem and an increased risk for diabetes.

Avoiding overeating is challenging because we don't just eat for sustenance, we also eat for pleasure … and temptation is all around us. It lurks even in the checkout line at the hardware store, where a grinning clown on a plastic package beckons us to try his orange-colored, banana-flavored, legume-shaped marshmallow treats.

"Why do we need Circus Peanuts at the hardware store?" Parks said. "We don't, but food is everywhere, and it's highly processed and can taste really good. We need to stop blaming people for overeating and have some understanding of how difficult it is to stay weight stable in this environment. And we need to understand that our bodies handle food very differently. How I taste food and how you taste food might be completely different. Some people have a sweet tooth. Some don't like bitter flavors or the tannins in red wine."

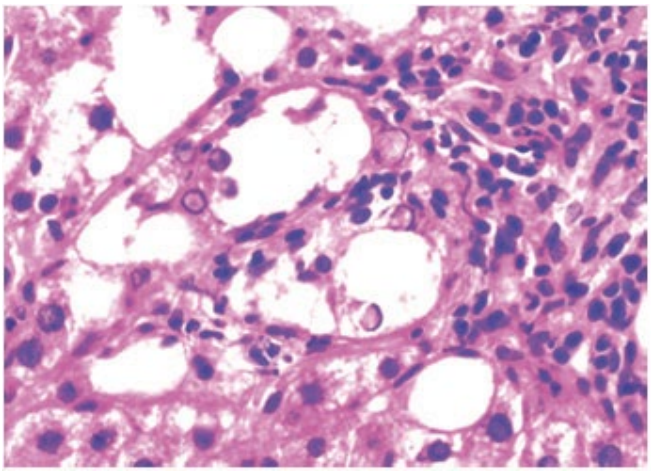
When making dietary recommendations, a one-size-fits-all strategy does not work. Rather, people need to use tactics suited to their own genetics, environment, food preference and lifestyle.

That is precision nutrition, and that is the sweet spot of Parks' research.

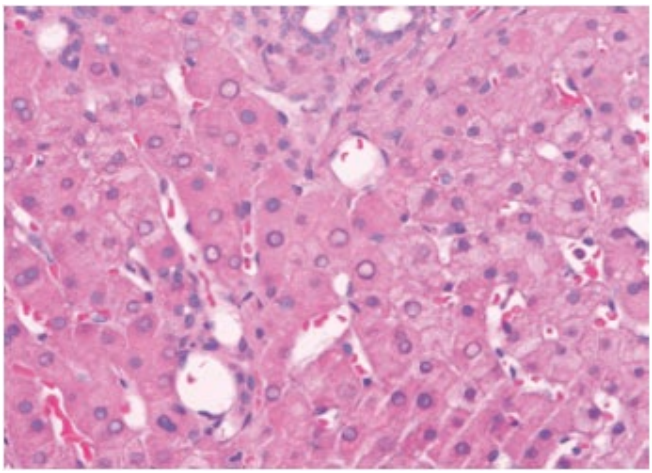
"We need the right treatment for the right person at the right time. We need to understand why some people have risks — not just genetically why they and their families struggle with weight, but how their genes affect the way they can be treated."

— Elizabeth Parks, PhD

WATCH a video about Elizabeth Parks' precision nutrition research at **youtube.com/muhealthcare**



A microscopy slide from the liver of a woman with fatty liver disease shows steatosis (white circles), inflammation (dark purple dots) and cell destruction.



A slide showing the now healthy liver of the same woman after she lost 61 pounds in Elizabeth Parks' research study.

"We need the right treatment for the right person at the right time," said Parks, who was elected to begin this fall as president of The Obesity Society, a scientific organization dedicated to the treatment of obesity. "We need to understand why some people have risks — not just genetically why they and their families struggle with weight, but how their genes affect the way they can be treated."

Parks is known best in her field for her expertise in human fat

Elizabeth Parks, PhD, is one of the leaders of a five-year clinical study that's examining the effects of exercise and weight loss on liver health in people with nonalcoholic fatty liver disease.

"Elizabeth is one of the few scientists in the world who is able to track how and where the body metabolizes dietary fats and sugars using stable isotope tracers and mass spectrometry. She uses sophisticated techniques to understand how fats are created in the body and how their storage contributes to disease development and progression."

— R. Scott Rector, PhD

metabolism. The liver converts sugars into fats, and in 2005 she made the discovery that this process causes fatty liver. That research explained why people who eat a low-fat, high-carbohydrate diet could still have high levels of triglycerides in their blood. The study has been cited thousands of times in medical journals and changed the way clinicians understood and treated nonalcoholic fatty liver disease (NAFLD).

"Elizabeth is one of the few scientists in the world who is able to track how and where the body metabolizes dietary fats and sugars using stable isotope tracers and mass spectrometry," said R. Scott Rector, PhD, associate professor in the Department of Nutrition and Exercise Physiology and associate director of the NextGen Precision Health building. "She uses sophisticated techniques to understand how fats are created in the body and how their storage contributes to disease development and progression."

Parks, Rector and hepatologist Jamal Ibdah, MD, have been collaborating with 11 other School of Medicine faculty colleagues on a five-year clinical study examining the effects of exercise and weight loss on liver health in people with NAFLD. Rector develops individualized high-intensity interval workouts that the participants perform three days a week. The team's dietitian, Jen Anderson, creates personalized menus to help people in the study lose 8 to 10% of their body weight — which means at least 20 pounds — in nine months.

"For some people, that may mean they need to restrict sugar intake, and for others, it may mean restricting fat," Parks said. "Jen tests a person's response to food — playing off their metabolism to find the best diet for them. If you're a patient of hers, she then focuses on your family situation, your work and the way you prefer to eat."

Personalizing the diet and workout plans requires more effort than treating everyone the same, but the payoff has been apparent, not only on the scales but also in the pictures under the microscope. When Parks looks at the before-and-after liver tissue samples of people who have completed the study, the white fat globules have disappeared, the liver is no longer inflamed and some subjects have less liver scarring. That suggests the liver, as the body's traffic cop, is back on the beat and NAFLD is reversible if addressed early in the disease's progression.

"With diet and exercise, we're trying to hit the disease of NAFLD with as big a hammer as we possibly can," Parks said. "The study of precision nutrition helps us understand how we can help people leverage taste preferences to make food choices that are more satisfying. The goal is to achieve lifelong healthy eating patterns."

Robin Clay, left, is improving the diversity of the School of Medicine's student body one relationship at a time. He recruited Ebony Page-Phillips, MD '21, right, in 2017. She's now an emergency medicine resident physician at MU Health Care.

THE STORY BEHIND THE STATISTICS

By building relationships, Robin Clay has helped the School of Medicine drastically improve the diversity of its student body.

When Ebony Page-Phillips was applying to medical schools, she was looking for a place close to her hometown of St. Louis, a place with a curriculum that emphasized small group learning and a place that matched its graduates in top residencies. The University of Missouri fit the bill.

But before she decided, Page-Phillips, who is African American, wanted to make sure she would feel valued and supported as an underrepresented-in-medicine minority student. That's when she began talking to Robin Clay, the School of Medicine's manager of diversity and inclusion initiatives.

LEARN MORE about diversity and inclusion at the School of Medicine at **medicine.missouri.edu/diversity**

"A lot of places had a tab for diversity on their website, but they weren't doing much work and they didn't have many programs in place to support students who were coming from underrepresented backgrounds," Page-Phillips said. "Mizzou was actively pursuing these initiatives, was getting input from the student body on ways to improve and they had Robin."

Flash forward five years, and Page-Phillips, MD '21, is quite busy as an MU Health Care emergency medicine resident physician and a new mom, but she still finds time to stop by Clay's office just to chat. Over the last decade, Clay has helped MU greatly improve its percentage of underrepresented minority medical students, but the story behind the statistics is the personal relationships Clay builds and maintains with students.

"His job is recruitment, but he's also a master of retention of students, particularly students of color, making sure they feel comfortable and supported here," Page-Phillips said.

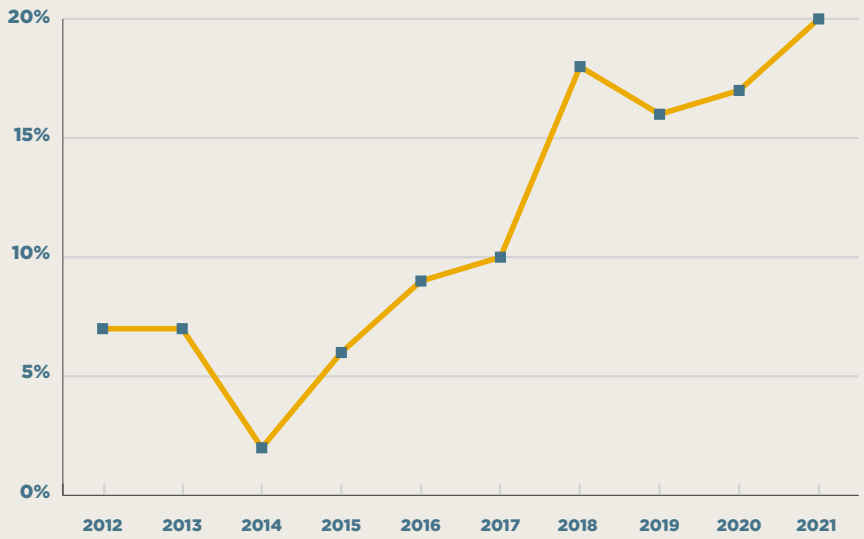
Clay, a native of Pasadena, California, came to Missouri in

"What we know is patients who are treated by physicians who look like them are more likely to comply with treatment plans and are more likely to come and see the doctor. We also need young children of color to see themselves as physicians at an early age so they may access resources early in life, yielding more physicians of color in the workforce."

— Robin Clay

DIVERSITY ON THE RISE

In the last 10 years, the MU School of Medicine has dramatically improved the percentage of underrepresented-in-medicine minority students in its incoming classes.



2003 to attend Lincoln University in Jefferson City. After graduating and spending three years working in student affairs at Lincoln, he made the short trip up Highway 63 to join the admissions office at the MU School of Medicine as a recruiter in 2011. His mission was to increase the numbers of students from racial and ethnic populations that are underrepresented in medicine compared to the general population.

"We want to create the best learning environment for all of the students here," Clay said. "There are many articles out there that speak to how having diversity improves learning outcomes for everyone — not just students of color — just because of constantly getting opportunities to expand your thinking.

"The end goal is to make our med school representative of what the patient population will be so we have enough physicians to serve these underrepresented populations. What we know is patients who are treated by physicians who look like them are more likely to comply with treatment plans and are more likely to come and see the doctor. We also need young children of color to see themselves as physicians at an early age so they may access resources early in life, yielding more physicians of color in the workforce."

Clay said his first step toward that goal was to recruit in his own backyard by becoming the advisor for MU's Minority Association for Prehealth Students (MAPS). He started holding the group's meetings in Acuff Auditorium so those undergraduate students could see themselves in the School of Medicine and meet faculty, staff and students. Then he expanded his scope and started developing relationships with undergraduates and premed advisors at historically Black colleges and universities that were sending a lot of students to medical schools — particularly Xavier University in New Orleans and Morehouse and Spelman colleges in Atlanta — and at predominantly Hispanic schools in Florida.

While Clay was making personal connections, the School of Medicine was expanding its premed outreach programs to engage with underrepresented minority and socioeconomically disadvantaged students. Mizzou MedPrep, which began in 2011 as a workshop to help students navigate the medical school application process, has quadrupled in size and scope. Pathways to Success (PAWS), which is patterned after the Rural Track Pipeline Program, now guarantees a spot in the School of Medicine to students who complete the program and meet the requirements, which are the same as the Rural Track's standards.

Clay said those efforts and several other initiatives helped MU reach critical mass in 2017, when underrepresented minorities made up more than 10% of the incoming class.

"At that point, we had enough students here so people wouldn't feel completely alone and isolated as a person of color," he said. "We could get more feedback from them. We could look at outcomes that showed their success."

That class, which included Page-Phillips, was important not just for its numbers but also the passion of its students. They became Clay's best advocates, getting on the phone with applicants and letting them know the school's commitment to diversity and inclusion was real.

"Six to 10 folks in my class tried to help Robin figure out what are things we can do to keep this momentum up," Page-Phillips said. "He was super important in recruiting a lot of folks in our class, particularly people who were coming from the coasts and previously had not really known much about Mizzou. Once he got the ball rolling, he got us to help him. That helped turn the corner for the next classes."

The percentage of underrepresented minority students in M1 classes continued to grow, reaching a record high of 20% in 2021. The racial makeup of the student body of the medical school now reflects the state of Missouri, where many of the students will ultimately practice. But it is the quality of the people who make up those numbers and the relationships he builds with those people that bring Clay the most satisfaction.

"He's authentic, and he truly cares," said Andrea Simmons, who works closely with Clay as the director of Mizzou MedPrep. "He doesn't recruit just for numbers. He recruits because he sees something in a student that will make a true difference in our school."

Racy Guinan celebrated Match Day with her son, Rory, on March 18, at the MU School of Medicine. Guinan will remain at MU for her residency training as an emergency medicine doctor.

EXITING THE STAGE AND ENTERING THE ER

Racy Guinan, MD '22, left Columbia as a teenager eager to explore her childhood passion for modern dance. She completed a fine arts degree at the University of Illinois then moved to New York, where she performed, choreographed and worked in theater administration for six years.

"I studied it in college and lived the life, but it's really difficult, especially if you want to be a parent," she said. "Fortunately, I found something different that I loved."

Photo courtesy of Natalie Fiol

Before medical school, Racy Guinan spent six years in New York as a dancer, choreographer and theater administrator.

She liked science and had a knack for remaining calm in chaotic situations, so she decided to become a volunteer EMT. She loved the work … and fell in love with one of her co-workers, a Brooklyn-born fellow volunteer EMT. Soon, she enrolled in paramedic school and then set her sights on medical school, which led her and her new husband back to her hometown and the MU School of Medicine.

On March 18, 2022, Guinan made her way through the packed halls of the School of Medicine with her parents, husband and 15-month-old son, Rory, for the annual Match Day ceremony.

When she opened her envelope, it confirmed what she already suspected, that she would remain at MU Health Care to serve her emergency medicine residency.

"I love the ER," Guinan said. "I would work in the ER for no money, although I'm happy to get paid. I like that you treat everyone who comes in the door, regardless of where they come from and where they're going back to. Everyone gets the same care. I think it's a very egalitarian specialty. And I like chaos a little bit, so it's a good environment for me."

Guinan said she ultimately would like to dance again for fun or dabble in the arts in some way. Medical school and motherhood haven't left her much free time for those pursuits, but she wouldn't change a thing about the experience.

"I made really good friends, which was something I didn't expect," Guinan said. "I wanted to come here, learn to be a doctor, be the best doctor I could be. That was all true and real and occurred, but I also made six phenomenal friends who will be in our lives and will be Rory's aunties forever."

MU MATCH DAY

- Total students: **110**
- Match rate: **96%**
- Staying at MU Health Care: **30%**
- Remaining in state: **43%**
- High-need specialty: **35%**

2022

Graduates of the School of Medicine's class of 2022 cheer after receiving their diplomas during the commencement ceremony on May 14 in Jesse Hall.

Steven Zweig, MD '79, presents Patricia De Castro, MD '22, with her diploma during his final commencement ceremony as the dean of the School of Medicine.

Chase Pitchford, MD '22, Ahdarsh Vallabhaneni, MD '22, and Cole Ohnoutka, MD '22, celebrate the completion of four years of medical school.

TO SEE MORE photos from the commencement ceremony, visit **medicine.missouri.edu/commencement22**

The Shelden Clinical Simulation Center at the School of Medicine's Springfield Clinical Campus includes lifelike mannequins that help medical students learn important skills before they need to use them on real patients.

SPRINGFIELD'S SIM CENTER OFFERS HIGH-TECH TRAINING

David Haustein, MD '05, is still a young man, but when he sees students using the Shelden Clinical Simulation Center at the Springfield Clinical Campus, he marvels at the technical advances since his days as a student.

HAUSTEIN

"When I was in school, I don't remember there being many mannequins or simulated patient experiences, so when I see students doing these simulations now, I'm really jealous," said Haustein, the associate dean of the Springfield Clinical Campus. "Our students learn how to handle delicate situations in a safe environment, from how to handle an unruly or aggressive patient or a patient having an allergic reaction in clinic or those trauma emergencies where you quickly need to assess and treat any life-threatening injuries. Students get to practice all of this before the clinical situation arises.

"Our students here can practice delivering a baby right before they go onto their labor and delivery shift where they'll get hands-on experience. It's a lot of just-in-time training where students train for delicate or critical situations in a safe environment prior to experiencing the situation in real life. I think that's extremely valuable."

Dena Higbee, the School of Medicine's director of simulation services, said Springfield's 10,000-square-foot sim center, which opened in 2020, has similar capabilities to Columbia's facilities. It has four simulation rooms with individual control rooms, six clinic rooms for examining patient actors, two procedure rooms for laparoscopic training and suturing, two debriefing rooms and two classrooms.

The equipment includes a birthing simulator, procedural trainers that mimic individual body parts such as arms and heads, and four other computerized mannequins — two adults, a child and an infant — with lifelike functions.

"They have heart sounds, lung sounds, the chests rise," Higbee said. "You can change the physiology of them as far as changing heart rate, respiration rate, blood pressure. You can add or subtract pulses. On the adult simulators, you can even do amputations at the elbow or knee to learn how to do blood control."

The Springfield sim center is available to train not only MU medical students but also health care workers from CoxHealth and Mercy, first responders and other community members who might benefit.

LEARN MORE about our simulation centers at **medicine.missouri.edu/simulation**

ABDI HELPS OTHER IMMIGRANTS NAVIGATE THEIR NEW WORLD

When Mehamed Abdi immigrated to the United States from Ethiopia in 2015, most of what he knew about speaking English came from the James Bond movies his family had watched on Friday nights back home. He knew how to make a suave introduction — "Abdi, Mehamed Abdi" — but not much else that would help a teenager interested in becoming a doctor to get ahead in America.

"I struggled with even applying to colleges because the high school counselor expected us to know what colleges are available, to know how to talk to people, to know how to write essays for colleges, to know about scholarships," Abdi said. "As someone who just moved here, I thought, 'How are we expected to know these things?'"

Abdi, who recently finished his first year at the MU School of Medicine, kept asking questions and seizing opportunities until he cleared the barriers between him and his goals. To smooth the path for others in his situation, he and Brian Barlay, one of his undergraduate classmates at Saint Louis University, co-founded a nonprofit organization called Missouri Young African Professionals in 2018. The group connects first-generation immigrant and refugee students in the St. Louis area with mentors who can help them navigate the path from high school to college or the professional world.

"One of the persons we helped didn't know how to apply for scholarships, and he applied for a scholarship but was missing some documents that I helped him fill out," Abdi said. "He reached out to me and said, 'I saved $8,000 because of that scholarship.' Helping them understand that is a very big relief for them and very rewarding for me."

Abdi knows the importance of financial aid to give eager students a chance to realize their dreams, because he is one of those students who needed a little help. A scholarship from the Medical School Development Gifts Fund has aided him on his path to becoming a doctor. He isn't set on a specialty but is leaning toward a primary care field with the intent of helping patients in underserved areas.

"Not only has this scholarship reduced the total amount of student loans that I will be taking out," Abdi said, "but it also has motivated me to do my best and shows that there are generous people out there willing to help and inspire students."

▲ Mehamed Abdi helped start a nonprofit to mentor immigrants and refugees in St. Louis.

"I struggled with even applying to colleges because the high school counselor expected us to know what colleges are available, to know how to talk to people, to know how to write essays for colleges, to know about scholarships. As someone who just moved here, I thought, 'How are we expected to know these things?'"

— Mehamed Abdi, MU School of Medicine student

CONTRIBUTE to the Medical School Scholarship Fund at **tinyurl.com/SOMdevelopmentscholarship**

FOUNDATION OF WORK YIELDS LEGACY OF GIVING

Ashley family has long history of philanthropy to University of Missouri.

"He was good to us kids, but he really took his career very seriously and caring for his patients very seriously. He loved his work. I never heard my father complain about office politics or hospital politics. He just put his head down and worked."

— Susan Pomerenke

The work ethic of Tom Ashley, MD BS Med '42 — a distinguished surgeon for more than 50 years in Springfield, Missouri — is ingrained in family lore.

Most days, he began with predawn calisthenics, left the house before the rest of the family ate breakfast and came home late to a reheated dinner. He insisted on rounding on his hospitalized patients on the weekend. He even returned to the hospital in the middle of the night if one of his patients was struggling.

But perhaps the most telling example came when, on one of his scheduled days off, Ashley piloted his own plane from Springfield to his hometown of West Plains, Missouri, to perform surgery. The landing gear didn't work, and he had to resort to a belly landing. The plane skidded off the runway, but he wasn't hurt, so after arranging for the aircraft to be removed and repaired, he caught a ride to the hospital and proceeded with the surgery.

Tom and Mary Ashley had 10 children who went on to earn 15 degrees from the University of Missouri. The entire family gathered in this 1969 portrait. Front row: Tom, Cindy, Susie, Marti and Mary. Back row: Jim, Patty, Mary Kay, Mike, Janie, Jennifer and John.

"When they stopped sending kids to college, they had a little money left over, and instead of going out and buying second houses or spending money lavishly, my parents gave money to create two endowments through the Medical School Foundation."

— John Ashley, MD '70

For Tom Ashley, even a plane crash wasn't a valid excuse to miss work.

"He was good to us kids, but he really took his career very seriously and caring for his patients very seriously," said one of his daughters, Susan Pomerenke. "He loved his work. I never heard my father complain about office politics or hospital politics. He just put his head down and worked."

The family matriarch, Mary Ashley, was just as diligent. She had 10 children to raise, and getting them where they needed to be every day was a feat of logistical magic. When something broke around the house, she fixed it. When her daughters needed dresses to wear to church on Easter or gowns for high school formals, she sewed them.

"Despite her having 10 kids, we all felt like she paid special attention to each of us individually," said John Ashley, MD '70, the eldest son and one of two doctors among the Ashley offspring. "That is of course impossible, but she made us feel that way."

Tom and Mary met in Columbia while she was a nurse and he was a student completing a bachelor's degree in medicine — the University of Missouri offered only the first two years of medical school in those days. They married before he finished his medical degree at Harvard. His surgical training was delayed a few times for service in the Navy — he was stationed in China during World War II and stateside in Oakland, California, during the Korean War — before beginning his career in Springfield.

Mary and Tom have both passed away — Mary in 1993 and Tom in 2002 — but their legacy lives on at MU, which has benefited greatly from the family's generosity. Their contributions to the university go beyond the tuition money that helped nine of their children earn a total of 15 degrees from MU and beyond the payments for the football season tickets on the 45-yard-line that have been in the family for more than 50 years. With their friend Hugh E. Stephenson, MD BS Med '43, Tom and Mary helped start MU's Medical School Foundation.

"When they stopped sending kids to college, they had a little money left over, and instead of going out and buying second houses or spending money lavishly, my parents gave money to create two endowments through the Medical School Foundation," John said.

Those endowments were the Thomas E. and Mary M. Ashley Memorial Endowment for Medical Education and the Cindy Ashley Endowment in Genetic Research.

Cindy was the youngest Ashley child, and she died tragically in a house fire at age 8. Cindy had Down syndrome, which spurred the Ashleys' interest in genetic research. The fund is currently supporting Shiyou Chen, PhD, DVM, the division chief of surgical research, and is an example of the School of Medicine using private donations to enhance precision medicine research.

Another area of family interest is promoting high-quality health care in Springfield and rural Missouri. Tom always advocated for medical and nursing students to train in Springfield. Although Tom didn't live to see the creation of MU's Springfield Clinical Campus, his son Michael Ashley, MD, created a fund in his parents' honor to support SCC students who demonstrate excellence in surgery. The family also enhanced and targeted another scholarship fund administered by the Community Foundation of the Ozarks to help SCC students.

Michael himself returned to Springfield in 1982 after his surgical training and practiced alongside his dad for 15 years. He got to see another side of his father, who was a no-nonsense disciplinarian at home but a jokester with the nurses and staff and an endlessly patient teacher with students and residents.

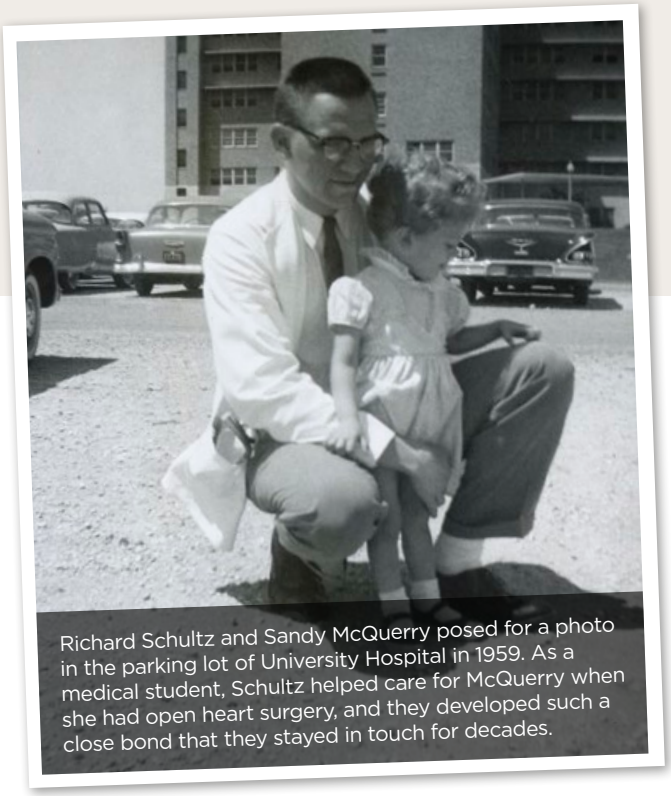
"He was easily the best doctor and surgeon I ever met," Michael said. "Now, that's a son saying something wonderful about his dad, but it's also true."

FAMILY HONORS

Three members of the Ashley family have received MU School of Medicine Alumni Awards. Tom was given the Medical Alumni Service Award in 1975, John received the Young Alumni Award in 1988 and Michael got the Honorary Alumni Award in 2018.

CONTRIBUTE to the Medical School Scholarship Fund at **tinyurl.com/SOMdevelopmentscholarship**

BONDED BY THE HEART



Richard Schultz and Sandy McQuerry posed for a photo in the parking lot of University Hospital in 1959. As a medical student, Schultz helped care for McQuerry when she had open heart surgery, and they developed such a close bond that they stayed in touch for decades.

"I remember I had my chair right by her bedside, and I think I spent three nights there with my finger on her radial pulse to make sure things were OK. That was the 1950s version of post-op monitoring."

— Richard Schultz, MD '60

As a student with dreams of becoming a surgeon, Richard Schultz, MD '60, was in the right place at the right time at the MU School of Medicine. The chair of the Department of Surgery, Hugh E. Stephenson, MD BS Med '43, maintained such a close relationship with Schultz and the medical students that he joined in their Sunday afternoon touch football games.

Stephenson, who performed the first open-heart surgery at University Hospital in 1958, made a lasting impact on Schultz's development as a doctor.

So did a curly haired 2-year-old girl.

Sandy McQuerry was born with a hole in her heart — a ventricular septal defect — and in May 1959, she travelled from her Kansas City home to University Hospital, where the problem could be fixed. Schultz was a third-year medical student assigned to her case. His job was to watch and learn from the attending physicians and to tend to some of Sandy's basic needs in the hospital in the days before and after surgery.

"Sandy didn't take to me initially. She probably didn't take to anyone in a white coat — that's usually how children are," said Schultz, who ultimately won her over with chocolate milk and ice chips.

Her surgery went well, and Schultz and McQuerry built a bond as she recovered.

"I'm sure I spent more time in her room than I did with most patients and more time than most doctors did with her," Schultz said. "I remember I had my chair right by her bedside, and I think I spent three nights there with my finger on her radial pulse to make sure things were OK. That was the 1950s version of post-op monitoring."

Schultz kept in touch with Sandy's family after she was released from the hospital. Later that summer, Schultz and his parents visited Sandy in Kansas City, and her family returned the favor by visiting the Schultzes in their hometown of New Franklin.

After graduation, Schultz went to Florida for surgical residency and, following a two-year stint in the Navy, he began a long career as a general and trauma surgeon. McQuerry went on to earn a master's degree in social work from MU and to raise five children with her husband in Kansas City. For a few decades after her surgery, the families stayed in contact through occasional phone calls, letters and Christmas greetings, but they gradually fell out of touch.

Last winter, Schultz was reminded of McQuerry when he saw an item in the MIZZOU alumni magazine that mentioned the first open-heart surgery at University Hospital. Schultz rummaged through a box of keepsakes in his home in Fort Lauderdale, Florida, and found a 1981 letter from Sandy's family that included a phone number. It seemed like a long shot that McQuerry would still have the same number, but he dialed the digits anyway.

In Kansas City, McQuerry's phone rang.

"I saw on my caller ID it said 'Richard Schultz,' and I thought, 'I know that name,'" McQuerry said.

They caught up on the highlights of each other's lives. McQuerry's mother had kept all the letters and photos from Schultz, and McQuerry subsequently went through them and shared them with Schultz, which brought back fond memories of his days as a medical student and the young patient who won him over.

Among the letters was one Schultz penned to McQuerry's parents in August 1959 that summed up why he never forgot that little girl with the curly hair.

"Believe me, that Friday morning and the following three days and nights were just as long for me as they were for you," Schultz wrote. "But I must truthfully say that when Sandy twice rolled over on Saturday and reached up and put her arm around my neck, that was the best 'thank you' I could ever receive."

ALUMS, update your classmates on your professional and personal news by filling out the form at **medicine.missouri.edu/alumni-news**

Winners of 2020 and 2022 University of Missouri Medical Alumni Awards included, front row, Alan Barker, Laura Hesemann, Lynn Cornelius, Richelle Koopman, Christian Rojas-Moreno and Kari Martin; back row, George Hubbell, Steven Edwards, C. Mark Costley, Jerry Kruse, Adam Wheeler and Jacob Thomas.

MU HONORS ALUMNI

After a pandemic-related hiatus, the University of Missouri Medical Alumni Awards ceremony was held on April 22, 2022, at the Country Club of Missouri in Columbia. The ceremony honored winners of the 2022 and 2020 awards.

2022

HONORARY MEDICAL ALUMNI AWARD

Steven Edwards, MD, is the president and chief executive officer of CoxHealth, a private not-for-profit health care system that operates six hospitals, more than 85 clinics and a provider-based insurance company.

OUTSTANDING YOUNG PHYSICIAN AWARD

Laura Hesemann, MD '07, is the associate chief medical officer at MU Health Care with responsibility for children's services, women's health services and the medical staff. Clinically, she practices adult and pediatric nephrology.

Christian Rojas-Moreno, MD '11, is an associate professor of medicine, the director of the Division of Infectious Diseases and the program director of the Infectious Diseases Fellowship at the MU School of Medicine.

Jacob K. Thomas, MD '07, is an ophthalmologist at the Mattax Neu Prater Eye Center in Springfield, Missouri, who specializes in LASIK, corneal transplantation and cataract surgery.

DISTINGUISHED SERVICE AWARD

C. Mark Costley, MD '81, retired after a long career as a family medicine physician, medical director for CoxHealth and dean of the MU School of Medicine's Springfield Clinical Campus.

CITATION OF MERIT

Lynn A. Cornelius, MD '84, is the Winfred A. and Emma R. Showman Professor and Chief of Dermatology at the Washington University School of Medicine in St. Louis.

2020

HONORARY MEDICAL ALUMNI AWARD

Richelle Koopman, MD, is the Jack M. and Winifred S. Colwill Professor and Vice Chair for Research and Faculty Affairs for the Department of Family and Community Medicine. Her work focuses on improving care for chronic conditions through patient and physician use of electronic clinical decision support tools.

OUTSTANDING YOUNG PHYSICIAN AWARD

Kari L. Martin, MD '07, is an associate professor in the Departments of Dermatology and Child Health at the MU School of Medicine. She is nationally known for her work in allergic contact dermatitis.

Dale O. Okorodudu, MD '10, is an assistant professor of internal medicine in the Division of Pulmonary and Critical Care at the University of Texas Southwestern Medical Center in Dallas. Okorodudu is the founder of DiverseMedicine Inc. and Black Men in White Coats.

Joshua M. Pevnick, MD '02, is an associate professor of medicine in the Division of General Internal Medicine and the Division of Informatics at Cedars-Sinai Medical Center in Los Angeles. Pevnick's research focuses on medication management and using health information technology to improve health care for older adults.

Adam D. Wheeler, MD '05, is a pediatrician and co-founder of Big Tree Medical, a direct primary care practice in mid-Missouri that also provides virtual primary care to patients in 43 states who would otherwise have little access to care.

DISTINGUISHED SERVICE AWARD

Michelle E. Guy, MD '00, is professor of medicine at the University of California, San Francisco. Guy is an internist, primary care clinician and obesity medicine specialist, and she leads faculty development programs to create an inclusive learning environment for students and trainees.

George P. Hubbell, MD '87, is an OB-GYN who helped found a free community health clinic in Camdenton, Missouri, where he regularly volunteers.

Jerry Kruse, MD '79, is the dean and provost of the Southern Illinois University School of Medicine and the chief executive officer of SIU Medicine. Kruse is also a tenured professor of family and community medicine.

CITATION OF MERIT AWARD

Alan F. Barker, MD '70, is a professor of medicine, pulmonary and critical care at Oregon Health and Science University. He has conducted clinical research into rare lung diseases, including alpha-1 antitrypsin deficiency and bronchiectasis.

To nominate someone for an MU Medical Alumni Award, visit **medicine.missouri.edu/alumni-award**

In Memoriam

'40s

LEWIS WESSELIUS, MD BS MED '47, of Fresno, California, died on March 22, 2022, at the age of 97. Wesselius served in the Navy and Army and practiced as a psychiatrist in Topeka, Kansas, and Fresno.

'50s

ROBERT EASTERDAY, MD BS MED '51, of Leawood, Kansas, died on Oct. 12, 2021, at the age of 93. Easterday had a 20-year career in the Navy, and while stationed at Bethesda Naval Hospital in Maryland, he served as the personal physician to President-Elect Richard Nixon from his election to inauguration. Easterday later became chief of medicine at Great Lakes Naval Hospital and then medical director of the Bendix/Allied Signal Corporation.

PHILLIP B. FOREMAN, MD BS MED '53, of Hannibal, Missouri, died on Jan. 10, 2022, at the age of 95. Foreman served in the Navy and spent 46 years as a surgeon in Hannibal.

KENNETH I. RANNEY JR., MD BS MED '53, of Plymouth, Indiana, died on Nov. 17, 2021, at the age of 92. Ranney served in Army and practiced as an OB-GYN for 31 years in the Detroit area.

HAROLD STRATTON, MD BS MED '53, of Broken Arrow, Oklahoma, died on July 15, 2021, at the age of 90. Stratton served in the Air Force as a flight surgeon before beginning his career as an anesthesiologist in Tulsa, Oklahoma.

FREDDIE HAYES, MD '58, of Fresno, California, died on Oct. 16, 2021, at the age of 93. Hayes was a trailblazer as the first African American to graduate from the MU School of Medicine. Hayes grew up in Boone County, Missouri, and graduated from Douglass High School in 1946 and Lincoln University in 1951. After serving in the Marines in the Korean War, he returned to Missouri for medical school. After graduation, he completed his family medicine residency in Sacramento, California, and then began a four-decade career as a family medicine physician in Fresno.

'60s

GEORGE BAKER, MD '60, of Snowmass Village, Colorado, died on July 30, 2021, at the age of 84. Baker was a neonatologist in Iowa City, Iowa, and medical director of the Mead Johnson Pediatric Nutrition Institute in Evansville, Indiana, before retiring to Colorado.

BERNARD MELIA JR., MD '60, of Overland Park, Kansas, died on Aug. 12, 2021, at the age of 87. Melia served in the Army before practicing as a dermatologist in the Kansas City area.

RALPH KLOPPER, MD '61, of Atlanta, died on Nov. 10, 2021, at the age of 86. Klopper spent many years in private practice as a psychiatrist and served as an assistant professor of psychiatry at Emory University in Atlanta.

TED P. SMITH, MD '61, of Rolla, Missouri, died on Aug. 6, 2021, at the age of 86. Smith served in the Army and practiced for four years in Bowling Green, Missouri, before returning to his hometown of Rolla and practicing for 35 years.

LOUIS LOWRY, MD '62, of Landsdale, Pennsylvania, died on Dec. 26, 2021, at the age of 84. Lowry served in the Navy then practiced as an ear, nose and throat surgeon and ultimately became the chair of the Department of Otolaryngology at Thomas Jefferson University in Philadelphia.

GEORGE HUGGINS, MD '63, of Tucson, Arizona, died on Dec. 30, 2021, at the age of 84. Huggins served in the Navy and practiced as an OB-GYN in several locations, always with an emphasis on helping the underserved. He also served as chair of the Department of Gynecology and Obstetrics at the Johns Hopkins School of Medicine.

DENNIS HITE, MD '64, of Lebanon, Missouri, died on Aug. 21, 2021, at the age of 82. Hite practiced medicine in Lebanon from 1966 through 2020.

ROBERT SKIPTON, MD '64, of Scottsdale, Arizona, died on Dec. 6, 2021, at the age of 85. Skipton served as a Green Beret in the Army and practiced medicine in St. Joseph, Missouri, and Scottsdale.

JAMES BARTRUFF, MD '65, of Sarasota, Florida, died on Aug. 23, 2021, at the age of 82. Bartruff served in the Navy before practicing for 45 years as a dermatologist in Florida.

L.M. MAGRUDER, MD '66, of Nevada, Missouri, died on Oct. 9, 2021, at the age of 81. Magruder served in the Air Force and practiced family medicine first in Chadron, Nebraska, and then for 30 years in Nevada.

WILLIAM V. MILLER, MD '66, of St. Louis, died on Nov. 9, 2021, at the age of 81. Miller was an expert on blood transfusion safety and availability as well as transplantation of tissues and organs. He served in several administrative roles with blood centers.

PAUL W. BECKER, MD '67, of Tucson, Arizona, died on Aug. 29, 2021, at the age of 80. Becker served in the Air Force and then practiced dermatology in Sun City, Arizona, and Spokane, Washington.

LOREN HENLEY, MD '67, of Kalispell, Montana, died on Oct. 4, 2021, at the age of 85. Henley served in the Army for more than 20 years and retired as a lieutenant colonel and practiced as a pathologist in the Chicago area before retiring to Montana.

GILBERT DALE, MD '68, of Fresno, California, died on July 8, 2021, at the age of 77. Dale practiced urology in Fresno for decades.

WILLIAM D. SOPER, MD '68, of Liberty, Missouri, died on Nov. 21, 2021, at the age of 79. Soper practiced family medicine in Liberty.

ABRAHAM M. PHILLIPS, MD '69, of Chesterfield, Missouri, died on Sept. 16, 2021, at the age of 78. Phillips served in the Army for more than 30 years, rising to the rank of colonel. He practiced pediatrics in the St. Louis area with a special focus on juvenile diabetes.

'70s

R. PAUL FAIRMAN, MD '72, of New Wilmington, Pennsylvania, died on Feb. 21, 2021, at the age of 74. Fairman spent most of his career as a pulmonologist at Virginia Commonwealth University Hospital.

SUE JEFFRIES MARSHALL, MD '72, of Dittmer, Missouri, died on Oct. 14, 2021, at the age of 77. Marshall joined the faculty at the Saint Louis University School of Medicine and practiced pulmonary and critical care medicine.

ROBERT C. GOSE, MD '74, of Lawton, Oklahoma, died on March 16, 2021, at the age of 74. Gose practiced as a urologist for 30 years in Lawton.

JOHN ALEXANDER SMITH, MD '74, of Birmingham, Alabama, died on Sept. 19, 2021, at the age of 74. Smith had a long career at the University of Alabama Birmingham School of Medicine as a professor of pathology, director of the Division of Laboratory Medicine and assistant chief of staff.

CHARLES R.B. BECKMANN, MD '75, of Glen Mills, Pennsylvania, died on Nov. 29, 2021, at the age of 74. Beckmann practiced as an OB-GYN in the Philadelphia area.

CHARLES NESTER, MD '76, of St. Louis, died on Sept. 11, 2021, at the age of 73. Nester practiced family medicine in St. Louis.

'80s

GARY NADOLSKI, MD '83, of Naples, Florida, died on Nov. 14, 2021, at the age of 66. Nadolski practiced family medicine and surgery.

JEFFREY LUERDING, MD '84, of Riverside, Missouri, died on Jan. 28, 2022, at the age of 65. Luerding practiced family medicine in the Kansas City area.

KEVIN G. MODER, MD '87, of Rochester, Minnesota, died on April 1, 2022, at the age of 61. Moder spent nearly 35 years as a rheumatologist at the Mayo Clinic.

'90s

MARK ROSS SMITH, MD '97, of Springfield, Missouri, died on Aug. 5, 2021, at the age of 52. Smith practiced emergency medicine and family medicine in the Springfield area.

'10s

AARON LEPPIN, MD '11, of Rochester, Minnesota, died on Nov. 3, 2021, at the age of 36. Leppin was diagnosed with leukemia 10 days after graduating from the School of Medicine, and his health prevented him from completing his residency training at the Mayo Clinic. He served as an assistant professor of health services research with an interest in new patient-centered models of care.

CALLING ALL ALUMNI

SEND IN YOUR NEWS. MU School of Medicine grads are amazing, and we love hearing from our alumni. Send in your professional and personal news for Class Notes in the next MU Medicine magazine. Whether it's a new job or promotion, publication or award, a wedding or a baby, we want to hear from you.

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