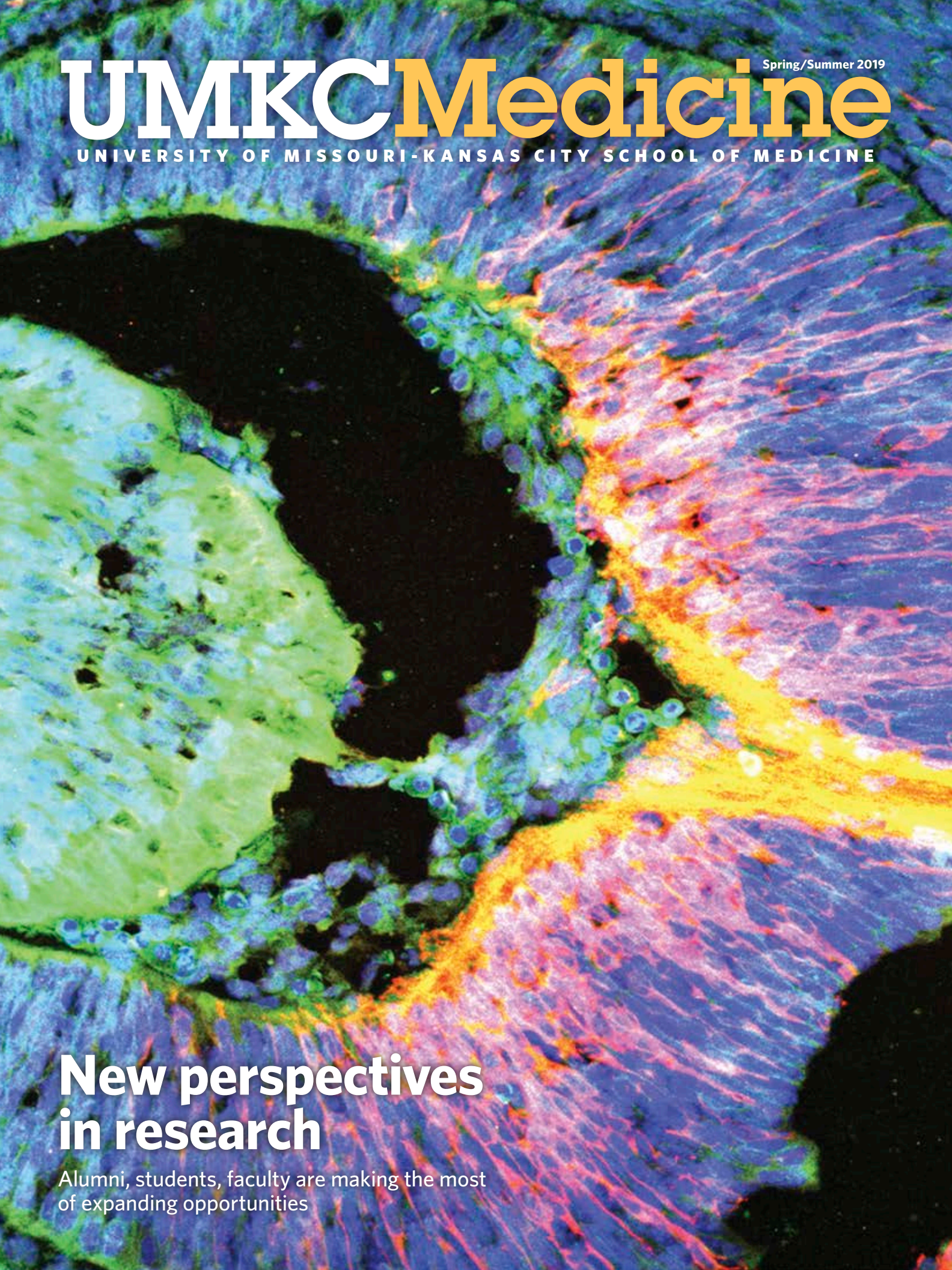
Spring/Summer 2019

UMKC Medicine

UNIVERSITY OF MISSOURI-KANSAS CITY SCHOOL OF MEDICINE



New perspectives in research

Alumni, students, faculty are making the most of expanding opportunities

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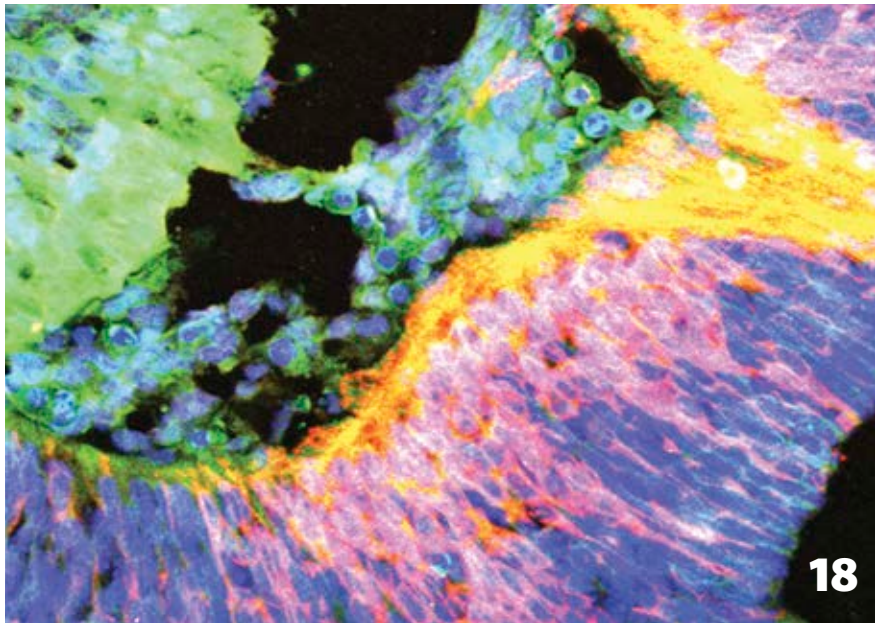

UMKC Medicine

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FROM THE DEAN

AS A PHYSICIAN, teacher and researcher, being part of the educational excellence at the UMKC School of Medicine energizes me every day. Here, I see evidence of the intense focus of our 650 students as they look forward to becoming the health care leaders of tomorrow. And for many, that focus includes research.

In awarding our full eight-year LCME accreditation in October, the agency made note of our unique and innovative culture, where the docent system, breadth of student clinical exposures and research opportunities are notable strengths.

This issue of UMKC Medicine highlights the importance of research at the School of Medicine — not only as a valuable tool for students, but for faculty and alumni, too.

This year, more than 70 percent of our students engaged in translational and biomedical research internally, and many pursued external research experiences — including three featured in this issue — through the most competitive of medical scholars programs in the country. These include Washington University, M.D. Anderson, Vanderbilt University, University of Chicago, the Maryland SPORT summer research program, the NIH STEP-UP program and the prestigious Medical Research Scholars Program, which selects just 40 students on average each year from around the country for a year-long research fellowship at the National Institutes of Health campus. In 2019, two of our students were invited to interview for this program and, for the sixth year in a row, we have one who was selected.

In past issues, we've also featured some of our leading faculty researchers, such as Dr. Peter Koulen, studying chronic diseases of the eye and brain; Dr. John Spertus, developing technology that guides physicians and patients in medical decision making; Dr. Jannette Berkley-Patton, making strides in health disparities through faith-based communities; and Dr. Gary Sutkin, using interdisciplinary approaches to make surgical procedures safer for patients. In the following pages, we highlight the next generation of faculty research leaders, their innovative work and their exciting discoveries.

Under the guidance of influential mentors during medical school, many of our alumni hone research skills and analytical tools here as medical students, expanding these talents into successful career paths. This special issue introduces three alumni who are shaping the future of health care through medical research and education.

Research at our school extends from basic science discovery to translational research resulting in new treatments and approaches to care. Our focused strengths include vision and neuroscience, health outcomes in cardiovascular disease, diabetes care, informatics, patient safety and pediatrics. It's exciting, significant and imperative work — and the School of Medicine remains committed to making it integral in the medical education of future health care leaders.

Mary Anne Jackson, M.D. '78
Interim Dean, School of Medicine

John Spertus, M.D., M.P.H., is an international leader in cardiac outcomes research.

Spertus gets Distinguished Scientist Award, his third American Heart Association honor

JOHN SPERTUS, M.D., M.P.H., professor of medicine and Daniel J. Lauer, M.D., Endowed Chair in Metabolism and Vascular Disease Research, has received the American Heart Association's Distinguished Scientist Award.

Spertus received the award — his third major recognition from the Heart Association, at the association's Scientific Sessions in Chicago. He previously received the organization's Lifetime Achievement Award in 2015 and the Council on Quality of Care and Outcomes Research Distinguished Achievement Award in 2013.

This latest award recognizes prominent scientists and clinicians who have made significant and sustained contributions to advancing the understanding, management and treatment of cardiovascular disease and stroke.

As clinical director of outcomes research at Saint Luke's Mid America Heart Institute, Spertus developed technology that guides physicians and patients in medical decision making by using models to measure and predict the risk factors of various procedures. Many experts cite two tools he created — the Seattle Angina Questionnaire and the Kansas City Cardiomyopathy Questionnaire — as the gold standards for measuring symptoms, function and quality of life in treating coronary artery disease and heart failure. Both have been translated into more than 95 languages.

"I am humbled by the honor to be recognized by the AHA for our work to improve the patient-centeredness of care," Spertus said. "While traditionally the basic sciences are prioritized, to see the work of our community to improve care and outcomes is a terrific validation of the collective efforts of my entire team and colleagues."

Spertus is the founder of two outcomes research organizations. The Cardiovascular Outcomes Research Consortium and CV Outcomes is a nonprofit corporation dedicated to advancing health care quality and outcomes research in cardiovascular disease. The Health Outcomes Sciences is an information technology company that implements precision medicine in clinical care.

He is currently leading a regional effort with BioNexus KC and the Frontiers CTSA to bring local hospitals together in collaboration to improve the value of health care in Kansas City.

School wins accreditation for another eight years

WHEN IT COMES to medical school accreditation, it doesn't get any better than this.

The UMKC School of Medicine in the fall officially received a full, eight-year accreditation from the Liaison Committee on Medical Education. That's the highest level of accreditation and the longest term granted by the committee.

A survey team visited the School of Medicine in spring 2018, reviewing 93 elements of the school and its programs.

"The comprehensive evaluation of our school by the LCME allows us to continue to improve and to focus on opportunities to enhance our curriculum and support for students," said Interim Dean Mary Anne Jackson, M.D., '78. "The full accreditation for the maximum term clearly reflects the vitality of the school and underscores the programmatic excellence achieved by our faculty, staff and students."

Jackson said she was committed to ensuring that School of Medicine culture was dedicated to maintaining a curriculum that enhances the program, advancing diversity among students, staff and faculty, and promoting a supportive and professional environment for all students.

The LCME is sponsored by the Association of American Medical Colleges and the American Medical Association as the accrediting body for academic programs throughout the country that lead to an M.D. degree.

LCME accreditation indicates that the M.D. degree program meets the appropriate national standards for educational quality and that graduates of the program are sufficiently prepared for the next stage of medical training.

Berkley-Patton, others play leadership roles in chancellor's initiatives

STUDENTS, FACULTY, STAFF and the Kansas City community gathered April 2 to celebrate the official investiture of Mauli Agrawal, Ph.D., as the ninth chancellor of the University of Missouri-Kansas City.

When he took over the job nine months ago, Agrawal said he wanted UMKC to be a community of excellence. To that end, he has been busy developing five "pillars" and initiatives to advance those goals, in line with the university's strategic plan for the next decade. School of Medicine faculty and administrators played key roles in drawing up several of those initiatives.

One pillar is transformational community and regional engagement — engagement that truly makes a difference. To help make that goal a reality, the chancellor announced the UMKC Health Equity Institute, led by Jannette Berkley-Patton, Ph.D., associate professor in the UMKC School of Medicine. The institute will work to ensure that people in the Kansas City area have equal opportunities for improved health and well-being. The institute will use UMKC research and outreach to identify, quantify and address health care gaps in area neighborhoods.

Berkley-Patton is a national leader in African American health research. One of her noted projects, Taking It to the Pews, was funded with a $3.2 million grant from the National Institute of Mental Health to assess HIV testing. She is the director of the UMKC Community Health Research Group, which supports collaborative community research, and provides doctoral and undergraduate training in community participatory research. She collaborates with networks of churches in her health research in Missouri, Kansas, Alabama and Jamaica.

The chancellor's other pillars:

- Exceptional student learning, success and experience. Cary Chelladurai, Ed.D., the School of Medicine's manager of student affairs, was among those who helped Provost Barbara Bichelmeyer develop Roo Strong, a new model for giving every student individual support.
- A thriving discovery enterprise. Mark Nichols, Ph.D., interim vice chancellor for research and interim chair of the the school's Department of Biomedical and Health Informatics, led the committee for this pillar, under which the chancellor announced UMKC IDEAS, or Institute for Data Education, Analytics and Science.
- An environment of invigorating multiculturalism, globalism, diversity and inclusion. The team developing this goal included Nathan Thomas, Ph.D., the school's associate dean for diversity and inclusion, and Alice Arredondo, Ed.D., UMKC's director of admissions and the school's assistant dean of admissions and recruitment.
- Strong and resilient people, processes and physical infrastructure.

Quoting Benjamin Disraeli, Agrawal said, "A university should be a place of light, of liberty and of learning." That vision, Agrawal said, "calls for all of us to make the commitment to be not only a place of light but also become a community of excellence."

Chancellor C. Mauli Agrawal, at his official investiture ceremony, outlined initiatives to advance his pillars of excellence.

Med school wins HEED Award for excellence in diversity, inclusion

DIVERSITY EFFORTS AT the University of Missouri-Kansas City School of Medicine were recognized several times in the 2018-19 school year, starting with a Health Professions HEED Award.

The HEED Award — for Higher Education Excellence in Diversity — came from INSIGHT Into Diversity magazine, the oldest and largest diversity-focused publication in higher education.

The School of Medicine, renowned for its innovative six-year B.A./M.D. program, is the only university program in Missouri and one of 10 medical schools in the country to be recognized. The award program is competitive each year; on average, 175 schools compete for the HEED honor annually.

"Our school is honored to receive the HEED Award," said Interim Dean Mary Anne Jackson, M.D. '78. "Diversity and inclusion is top of mind in educating future physicians and health professionals because ultimately it means delivering the best patient care."

As a recipient of the HEED Award — which in addition to medical schools can go to dental, pharmacy, osteopathic, nursing and allied health schools that demonstrate an outstanding commitment to diversity and inclusion — the UMKC School of Medicine was featured, along with 34 other recipients, in the December 2018 issue of INSIGHT.

"We want people to see the UMKC School of Medicine as a place of best practices nationally and globally, and the HEED Award signifies one way we demonstrate our success," said Nathan Thomas, associate dean of diversity and inclusion at the UMKC School of Medicine.

"Our aim is to continue to attract outstanding diverse faculty, staff, residents and students," Thomas said.

INSIGHT Into Diversity magazine said it selected the UMKC School of Medicine for several reasons:

- Its decades-long successful high-school Summer Scholars and Saturday Academy pipeline programs.
- The Students in Medicine, Academia, Research and Training (SMART) retention and graduation mentoring program.
- The "Expect Respect" committee and campaign to address mistreatment issues and to promote healthy work and learning environments.

Graduating friends learned to lead

TAYLOR CARTER, Amaka Ofodu and Eryn Wanyonyi all expected medical school to be tough, and they didn't expect to have many African-American classmates. When the Student National Medical Association reached out to them even before school started, they appreciated the support.

With the help of the association and each other, all three became leaders in the UMKC School of Medicine and in the association.

Carter said her first year of medical school was a struggle academically, socially and mentally. But through the association she met "three of my absolute best friends, including Eryn and Amaka." They helped each other through that first year, and now they all have residencies lined up after they graduate in May.

Carter was co-president of the UMKC chapter of SNMA along with Wanyonyi, and the national co-chair for academic affairs. Her general surgery residency will be at the University of North Carolina.

Eryn Wanyonyi, Amaka Ofodu and Taylor Carter helped each other succeed.

Ofodu was UMKC chapter vice president and associate director for SNMA's 10-state upper Midwest region. Her residency in medicine-pediatrics will be at the University of South Carolina.

Wanyonyi was the SNMA's national vice chairperson for health policy and legislative affairs. Her obstetrics-gynecology residency will be with the University of Central Florida Consortium in Gainesville.

"SNMA meant so much to me," said Wanyonyi. "It provided a place to serve the underrepresented communities we come from, a place to network and so much more."

$3.2 million grant supports new STAHR program for students from disadvantaged backgrounds

The STAHR grant will allow the school to build on the Summer Scholars program.

WHEN IT COMES to attending and completing a health professions degree program, students from communities facing educational and economic disadvantages typically succeed at a lower rate than students from areas with strong community engagement and academic support.

The UMKC School of Medicine, in collaboration with the School of Dentistry and the School of Pharmacy, is working to change that with the aid of a five-year, $3.2 million grant from the U.S. Health Resources and Services Administration. The grant will support a partnership program designed to improve those numbers.

The STAHR Partnership — for Students in Training in Academia, Health and Research — is a two-pronged initiative to increase the number of students from disadvantaged backgrounds entering health care programs and better prepare them for success. It will continue to build up and expand on the medical school's already successful high school Summer Scholars program.

Undergraduate and graduate students admitted to UMKC health professions programs have the opportunity to participate in the STAHR Ambassador program, a research-based mentoring model that uses defined principles, known as the Thomas Principles, to retain and graduate students.

Alice Arredondo, UMKC admissions director, also serves as assistant dean of admissions at the School of Medicine. Arredondo, a co-investigator on the grant proposal, said students will have early access to hands-on programming and mentoring.

"This grant will allow us to support students in overcoming academic, economic and social barriers, while having an impact on the diversity in our educational environment and the success of students from disadvantaged backgrounds in the UMKC health sciences," she said.

Nate Thomas, School of Medicine associate dean for diversity and inclusion and co-investigator, said he and Arredondo used best practices for admissions, retention and graduation, along with work already being done at the schools of medicine, dentistry and pharmacy, for the successful grant request. He added that the medical school's quickly growing student research program played an important role.

Academic preparation and resources are lacking for many students in the Kansas City region who are interested in health professions. The STAHR program is designed to address those needs and introduce students from underprivileged backgrounds to careers in health care that would otherwise seem out of reach.

"This partnership will allow us to help students develop academically, psychosocially, professionally and as leaders who can have a positive impact on their communities," Thomas said.

The Summer Scholars Program will be enhanced to offer different tracks for high school and current college students. The high school program will expand the medical school's Summer Scholars program that began in 1980. The grant will allow this program to extend from two to six weeks, and provide increased focus on recruiting and retaining students interested in health care fields. The new undergraduate college program will also be six weeks long and provide increased experiences in a clinical setting, supplemental instruction in the sciences, research opportunities, and reinforced skill development to support student academic progression and retention.

The year-round Ambassador Program for undergraduate and professional students will focus on student development. It will use mentoring by faculty members, residents, practitioners and upper-class college students to provides leadership and career development.

The Health Resources and Services Administration, in making the grant, praised the collaboration among schools in the UMKC Health Sciences District.

Patricia Marken, Pharm.D., F.C.C.P., pharmacy's associate dean for student affairs, and Melanie Simmer-Beck, professor and director of dentistry's Admission Enhancement Program, said their schools were excited about the enhanced interprofessional opportunities the grant will support.

Gary Sutkin, M.D., is assisted in his Innovations Laboratory by Fizza Mahmud.

Surgical Innovations Lab director gets grant to develop safer-surgery technology

GARY SUTKIN, M.D., director of the UMKC School of Medicine's Surgical Innovations Laboratory, has received a three-year, $600,000 grant from the National Institutes of Health to develop simulation technology that can be used to prevent surgical errors.

With magnetic resonance imaging and a 3-D printer, Sutkin plans to create a high-fidelity pelvic simulator and use motion analysis to identify surgical errors involved in midurethral sling surgery. The simulator will augment his lab's previous work examining surgical errors.

Sutkin, professor of surgery, serves as associate dean for women's health and is the Victor and Caroline Shutte Endowed Chair in Women's Health at the School of Medicine. He chose this particular surgery for his research because it is common in older women and includes a high-risk step. During the procedure, the surgeon must blindly guide a sharp, pointed steel trocar past vital structures, including the bladder, bowel and major blood vessels.

Performed to improve quality of life, the procedure also has the potential for catastrophic outcomes.

The project will use MRI to create a virtual model of a human pelvis of a patient with reproducible stress urinary incontinence. From that, a 3-D model will be printed, assembled and tested for fidelity to human tissue.

Five seasoned surgeons who are experts in the midurethral sling surgery and five surgeons who are novices in the procedure will perform the surgery on the model. Motion analysis will collect kinematic data of shoulder, elbow and wrist motions. The information will be combined into a 3-D model to analyze movements that lead to the most common errors: perforation of the bladder or bowel, and injury to the external iliac veins.

Sutkin's groundbreaking research has the potential to have a major impact on the prevention of surgical errors by minimizing patient distress and health care costs. Once successful, Sutkin said he plans to incorporate the technology into the School of Medicine's surgical residency program and apply the approach to reducing errors in other surgeries.

School of Medicine research professor receives NIH award for study of sepsis

THE NATIONAL INSTITUTES of Health awarded School of Medicine researcher Mingui Fu, Ph.D., associate professor of biomedical sciences, a $465,000 grant to conduct a study of sepsis-induced systemic inflammation.

Fu said that when completed, his research could significantly advance scientists' understanding of the regulatory mechanisms surrounding septic pathogenesis and identify a new therapeutic target to treat the devastating condition.

A potentially life-threatening illness, sepsis is a major health concern. It strikes nearly 700,000 people in the United States each year with a 30 percent mortality rate. A major contributor to mortality is sepsis-induced systemic inflammation followed by multi-organ injury.

Sepsis appears when infectious bacteria or other organisms enter the blood stream and cause an inflammatory immune response. There is currently no specific treatment available for sepsis.

Fu's study will look at the essential role of a particular protein known as myeloid MCPIP1 in sepsis-induced systemic inflammation and death. It will also explore whether MCPIP1 may be a target for pharmacological therapy to improve the outcome of sepsis.

Mingui Fu, Ph.D.

Expanded opportunities yield deeper knowledge, distinguished fellowships

TRAINING THE NEXT PHYSICIAN-SCIENTISTS

By GREG HACK

Grant Randall, Ben Bernard and Carlee Oakley all have distinguished themselves in external research internships or fellowships.

Keeping up with the latest research is part of being a good physician. And as the pace of medical discovery has quickened, so has the UMKC School of Medicine's commitment to ensuring that all students have research skills and opportunities, in addition to their clinical education.

Carlee Oakley, who will head off to a neurology residency at the Mayo Clinic after graduation, is one of the hundreds of students who have made that commitment pay off. She won a spot in the Frontiers translational research program and earned a master's degree in clinical research.

"As students, we are taught that the best physicians practice evidence-based medicine," Oakley said. "I hope to not only practice but to *contribute* to evidence-based medicine. My goal is to become a clinician-scientist."

To encourage and enable research-hungry students like Oakley, and to ensure that all students know how to conduct and evaluate research, the School of Medicine has taken several steps in recent years:

■ **Commitment at the top.** Interim Dean Mary Anne Jackson, M.D. '78, continues to support greatly expanded faculty research mentorship for students, a trend started by previous deans Betty Drees, M.D., and Steven Kanter, M.D. As a result, 77 percent of students in the most recent survey of graduates said they had worked on research with a faculty member, up from 59 percent just two years previous.

■ **Required research.** All third-year students now participate in an in-class research project in their Medical Neurosciences course. The curriculum change was made in the fall of 2017, so that by May 2021 all graduates will have at least one research experience.

■ **Expanded supplemental events.** Participation in research events has accelerated. At UMKC's 2019 Health Sciences Student Research Summit, the School of Medicine dominated with 67 student entries. The number of students and residents conducting and presenting research for the Vijay Babu Rayudu Quality and Patient Safety Day has doubled since the event started in 2011.

■ **More financing and support.** Funding for student research from several sources has been increased, including the school's Sarah Morrison Awards, which give research grants of up to $2,500 to about a dozen students each spring and fall. The Research Office, under Mark Hecker, Pharm.D., M.B.A., also has expanded and includes more assistance for student research and student events.

■ **Outside fellowships.** School of Medicine students such as Oakley also are landing summer or yearlong research internships and fellowships outside the School of Medicine. For six straight years, the school has placed a student in the National Institute of Health's yearlong Medical Research Scholars Program, perhaps the most prestigious student research program.

Key faculty additions also have expanded research mentorship, long anchored by Agostino Molteni, M.D., Ph.D., director of student research.

Mike Wacker, Ph.D., came to UMKC in 2007 to teach, became assistant dean for student research and now is associate dean of academic affairs. Unlike many researchers who rely mainly on residents and graduate students, he always has several medical students working in his lab and works with students to get research fellowships. Larry Dall, M.D., also was appointed assistant dean for student research. He had been a docent for many years before

Grant Randall (left) and Carlee Oakley are heading to residencies after graduation, and Ben Bernard will have a year-long NIH fellowship.

entering private practice and returned to the school in 2013 to work with students on quality and patient safety projects. In 2016, Paula Monaghan-Nichols, Ph.D., followed Dean Kanter to the School of Medicine from the University of Pittsburgh and became associate dean of research. Continuing to promote the school's research efforts also comes naturally to Jackson, the school's first alumni dean, who took over in July 2018. She brought her own distinguished research credentials and a national voice on children's infectious diseases to the dean's office.

"Research has always been vital in medicine, and it's gratifying to see the UMKC School of Medicine keep pace in providing the opportunities our students need to become the next generation of physician- scientists," Jackson said.

Here's a look at how Oakley and other award-winning student researchers have made the most of their opportunities at the School of Medicine.

A brain for brains – and hearts and kidneys

Oakley met Wacker in her Human Structure Function class and was "immediately enthralled" by his physiology teaching.

"His enthusiasm is contagious, which makes him a great teacher and mentor," said Oakley. "I started working in his cardiovascular research laboratory."

Wacker's lab often focuses on relationships between kidney disease and heart disease, and Oakley soon was working on whether TMAO – the metabolite trimethylamine-N-oxide – affects how cardiac tissue contracts.

Besides having high levels of TMAO, she said, "patients with chronic kidney disease are at increased risk for cardiovascular disease and heart failure."

Her initial experiments indicated that high TMAO did increase the force and rate of contraction in cardiac muscle tissue, and she was able to conduct

further research using human atrial appendage biopsy tissue.

"The results were consistent with the initial experiments," she said, "which confirmed TMAO directly influences human cardiac function."

During her research, Wacker and her docent, Jignesh Shah, M.D., encouraged her to apply for a fellowship through Frontiers, the University of Kansas Medical Center's program for clinical and translational science. She was accepted and took a year off for the program between her fifth and sixth years at the School of Medicine.

"The Frontiers training fellowship seemed like an incredible opportunity to focus on my research and to supplement my traditional medical education," she said. The Master of Science in Clinical Research program at KU also gave her formal training in clinical research methodology, biostatistics and epidemiology.

"I hope research is a vital part of my future practice, though I do not foresee ever giving up the clinical aspect."

Seizing opportunities

Grant Randall's interest in research was first piqued during his clinical experiences when he would "see patients with conditions that were not fully understood." Skin conditions were of particular interest, so one summer he volunteered at Camp Discovery, an American Academy of Dermatology program that provides a fun, welcoming experience for children with chronic skin conditions.

Randall added research projects to his school work, twice presenting at the UMKC Health Sciences Student Research Summit. And then he reached for — and grabbed — the brass ring: a yearlong NIH Medical Student Research Program fellowship.

> "Collaboration is crucial in research, and an aspect I enjoy. The meeting of minds!"
>
> – Carlee Oakley

Oakley also submitted her project's poster to the Association for Clinical and Translational Science, and it was judged one of the top five, out of 57.

Being recognized was gratifying, but Oakley was quick to thank and credit her mentors and collaborators at KU and the UMKC School of Medicine, including other kidney researchers and cardiac surgeons.

"Collaboration is crucial in research," Oakley said, "and an aspect I enjoy. The meeting of minds!"

Now she is looking forward to immersing herself in her neurology fellowship at Mayo.

"I am fascinated by the interface between brain and behavior," she said.

The program is highly competitive, and it's easy to see why: Only about 40 students are chosen annually to spend a year at the NIH research center. Housing is free and most expenses are covered. And it's quite a program.

It provides training in clinical protocol development and the conduct of human-subjects research, along with weekly "process of discovery lectures" covering such areas as bioethics, science policy and emerging technologies.

"Scholars participate in the full continuum of biomedical research — from bench investigations to population health," Randall said. "A mentor adviser helps guide your main project and helps you find the right principal investigator for your daily research."

Randall worked in the National Cancer Institute examining patients with rare skin and blood disorders including xeroderma pigmentosum, in which extreme sensitivity to sunlight makes a person prone to skin cancer, and trichothiodystrophy, an inherited disorder characterized by brittle hair and mental impairment.

In his study of trichothiodystrophy, Randall focused on bone, joint and blood abnormalities and was able to associate greater mortality in such patients who also displayed deficiencies of certain antibodies and white blood cells.

Randall presented the work at multiple NIH Grand Rounds, at the American Academy of Dermatology's Xeroderma Pigmentosum Resource Group and at the International Investigative Dermatology meeting. He also was the lead author when the study was published in the British Journal of Haematology.

"It was exceptional just to be in an environment where everyone was so dedicated to research," Randall said.

After graduating in May, Randall will pursue an internship year at the University of Florida in Gainesville and then a residency in dermatology.

An international experience

When it comes to research, Ben Bernard likes to keep busy. He has taken full advantage of opportunities at UMKC and in Kansas City, in addition to winning a spot in a national research program. He even created his own internship overseas. To top it all, Bernard found out in March that he is the school's sixth fellowship winner in the highly respected NIH Medical Student Research Program.

At the School of Medicine, Bernard has worked in Wacker's lab, where he researched how certain metabolites in chronic kidney disease patients affect cardiac and skeletal muscle function. And under Dall's mentorship, he researched barriers in transitions for patients from acute care to extended care, and presented those results at Quality and Patient Safety Day in 2017.

He also was part of three

ophthalmology research projects at the University of Kansas Medical Center and is working on two projects in otolaryngology, one with a mentor from Children's Mercy and another with a mentor at Saint Luke's Health System.

Bernard was accepted for a summer fellowship through the National Institute of Diabetes and Digestive and Kidney Diseases. But he turned that down to spend three months in Haifa, Israel, at the Applied Cancer Research Laboratory of the Technion-Israel Institute of Technology — a program Bernard arranged for himself.

"It was a long shot, but a local physician had a loose affiliation with the university, so I ran with it," Bernard said. "I reached out to the director of the lab, and they were interested in making this come to fruition."

Bernard was mentored by the head and neck surgeon Ziv Gil, M.D., Ph.D, the director of the Applied Cancer Research Laboratory. "He was a true example of balancing research and clinical work," Bernard said, "which I want to emulate in my career."

Bernard's research involved the interplay between the body's immune response and pancreatic cancer, which plays a significant role in tumor growth, tumor spread and drug resistance.

To Bernard, his overseas experience was enriching personally while allowing him to see how research is done in another country.

"In a part of the world not known for great relations among religions, the lab was made up of Christians, Muslims and Jews speaking English, Arabic and Hebrew, all working together to improve the health of people all over the world. It was a great experience"

Bernard believes his travels and varied research and leadership experiences will help make him a well-rounded physician and prepare him for a career that is ideally suited to academic medicine.

"The six-year program has not only provided me with a strong clinical background," he said, "but also given me a chance to explore my research passions both locally and abroad." ■

At any student research presentation, you can expect to find Agostino Molteni, M.D., Ph.D., on hand to judge entries and provide guidance.

Decades of research, mentorship continue

FOR MORE THAN two decades, the School of Medicine's student research mentorship has been anchored by Agostino Molteni, M.D., Ph.D., professor and director of student research. In his career, Molteni has mentored more than 1,000 medical students and residents, and at age 85, he doesn't appear to be slowing down.

So far in 2019, Molteni has helped screen dozens of student applicants for matching with research mentors. Five of his research teams presented abstracts in April at the Experimental Biology 2019 conference, and a sixth presented in May at the annual meeting of Hospital Medicine.

Molteni, an expert in hypertension research, accepted a request to edit a special issue of the journal Current Pharmaceutical Design. And he contributed chapters to two books, including a volume on the use of technology in medical education co-edited by Steven D. Waldman, M.D. '77, the School of Medicine's vice dean for strategic initiatives and stewardship and chair of the Department of Medical Humanities and Bioethics. Waldman and his co-editor dedicated their book "to Agostino Molteni, M.D., Ph.D., educator extraordinaire."

Molteni joined UMKC in 1996 after he and his wife, Loredana Brizio-Molteni, M.D., F.A.C.S., who had been on the School of Medicine's surgery faculty in the 1970s, moved back to the area from Chicago to be near their two sons and their families. Molteni had retired after 20 years of teaching and research at Northwestern and certainly had some laurels to rest on, including awards from the American Heart Association and the National Institutes of Health, and sharing the Lasker Foundation award in 1983.

"But I found I couldn't just stay at home; too boring," Molteni said, so he took his research experience to the School of Medicine. Since his wife's death in 2009, Molteni has dedicated himself even more to the school and its students and residents.

"I am trying to do this to help them become better physicians," Molteni said. "To always ask, 'Why?' "

ALUMNI RESEARCHERS DISCOVER REWARDING CAREERS

Leaders push boundaries to create treatments, transform lives and improve their institutions

COURTESY OF DUKE UNIVERSITY

By GREG HACK

Their research has advanced how patients around the world are screened and treated for everything from colon cancer and blocked arteries to chronic pain.

Their passion for breakthrough research – and turning that research into technologies and treatments that change lives – has led them to teaching and leadership positions at Duke, the Mayo Clinic and the University of California-San Diego, with stops along the way including Stanford, Harvard, Boston University and Washington University.

Their CVs are filled with hundreds of peer-reviewed studies, journal articles, abstracts, book chapters and lectures around the world. And after their decades of success, they still have the desire for discovery and innovation that was ignited by their years at the UMKC School of Medicine.

"They" are Arif Kamal, M.D. '05; Amy Hara, M.D. '94; and Alexander Norbash, M.D. '86, just three of the many UMKC alumni who continue to shape the future of medical research and education.

Hara thinks the innovative basis of the school itself and its six-year program has something to do with its alumni's success in research.

"A lot of people who choose UMKC tend to be innovators and explorers," she said. "Even at the age of 18 we weren't afraid of doing something different, trying a different kind of medical school. I think it is UMKC DNA to have the curiosity and inquisitiveness that go into good research."

Here's how that DNA has played out for these research leaders.

Reimagining medical research

For Arif Kamal, physician quality and outcomes officer for the Duke Cancer Institute in Durham, North Carolina, research is as much about solving a problem as it is discovery.

"Sometimes we face a problem and have no idea how to solve it," Kamal said. "We have to discover the solution, and that may require performing foundational basic science research, or conducting a big clinical drug trial. Or we may discover that we have a solution, but it hasn't been implemented because of cost or other barriers, so we have to innovate and collaborate

Arif Kamal, M.D. '05, the 2019 Take Wing Award winner, says research thinking can be applied in may ways to solve problems.

to make the solution accessible and affordable."

Kamal describes his approach on conducting health services research as being "agnostic at the outset toward what's needed to solve any particular problem."

Kamal's desire to broaden his skills and the ways he can approach a problem led him to earn a master's in health science in clinical research in 2015 and a master's in business administration in 2016. Besides his Cancer Center post at Duke, Kamal is an associate professor of medicine, business administration and population health science.

Kamal distinguished himself in palliative care, developing innovative ways to find out and provide what's really important to patients at the end of their life. His desire to research and improve palliative care stemmed from his own mother's battle with breast cancer, when he saw very personally how her care could have been better.

He started Duke's outpatient palliative care program for cancer patients seven years ago, and the Cancer Center's "total pain approach" has helped develop and administer therapies for long-term relief of distress that affects patients with a serious illness. The focus is on identifying and addressing physical and emotional drivers of distress well before the end of life, when people historically have thought of palliative care.

Now, Kamal's team is working on smartphone apps to engage patients with serious illnesses and their caregivers in their own care, day to day. One such app would monitor opioid use.

"We fundamentally believe that patients don't want to be addicted, that they want to responsibly use opioids and that clinicians want to responsibly prescribe them," Kamal said. "But there's not actually a way, for example, to monitor what people are doing at home. So, we're creating an app to record how and what they're using and how that corresponds with pain scores, to make sure they're getting the right amount, and not too much or too little."

And to put that app into people's hands takes a team.

"We're working with some commercial payers and several parts of the university, from data science to graphics and programming, to our addiction

Arif Kamal and his wife, Jennifer Maguire, M.D. '07, enjoy returning to the Kansas City area with son Elias and daughter Mariam.

and pain management experts, to palliative care and patients and caregivers, to identify what the right characteristics for the app will be."

Kamal, originally from Warrensburg, Missouri, said his appreciation for teamwork was fostered by the UMKC School of Medicine's docent system and frequent clinical exposure to the many types of medical practice.

"And I got my start in research there," he said. "My first published paper was with Dr. Agostino Molteni," in Nutrition Research in 2004.

Kamal and his wife, Jennifer Maguire, M.D. '07, have two small children, and Kamal said they enjoy returning to the Kansas City area frequently. That included a visit in April for Kamal to receive the school's premier alumni acknowledgement, the E. Grey Dimond, M.D., Take Wing Award.

The award recognizes career excellence, individual achievement and public service. And in Kamal's case, a vision for future innovations that reduce suffering and bring healing.

"I think what we're fundamentally seeing is a reimagination of what it means to be a researcher in medicine," he said. "Certainly that's the path I've taken."

Research opens doors

At UMKC, Amy Hara was thinking about going into obstetrics and gynecology. But her exposure at the school to all types of specialties and the attraction of a budding research field led her to radiology.

"In radiology, you're always problem solving and looking at all the body systems, with a lot of clinical interaction with the other physicians," said Hara, professor and chair of the Department of Radiology at the Mayo Clinic in Scottsdale, Arizona. "UMKC influenced my attraction to that because we did so much clinical work in school, and I wanted to use all that knowledge and try to tie it together."

Hara didn't do much research at UMKC, "but my docents had that research mentality, always asking that next question: Why did this happen? How can we make this better? For me it was a natural progression to combine research with clinical practice."

She landed a residency in diagnostic

radiology at Mayo in Rochester, Minnesota. An additional year for research through Mayo's clinical investigator program cemented her career path. In that year, she and her team developed CT colonography – a virtual colonoscopy.

"The idea had just been introduced to use a CT scan so people wouldn't have to get a colonoscopy to look for polyps," she said. "During my research year we had a small team – myself, a radiologist and a computer programmer. We worked together and managed to build the first program that really worked, doing this in a time efficient way so it could be used clinically."

The breakthrough came toward the end of her research year, and its promise earned her another year for research.

"Because we were the first to the scene we were able to do a lot of groundbreaking publications and test it on patients," Hara said. "We eventually patented and licensed it."

The virtual colonoscopy hasn't replaced the traditional version, but it is available and especially useful for patients who need or want to avoid anesthesia and the risks of internal injury from a scope.

"All procedures have plusses and minuses," she said. "It's good to have choices."

After her residency and a fellowship she headed to Mayo in Arizona to teach and do more research.

"My research moved through the GI tract," she said, developing CT scanning techniques for the small bowel and coordinating those with others' work at Mayo on capsule endoscopy, "the little camera that travels through your bowel."

All the advances in CT scans, however, prompted concerns about their radiation risks. "So next I did substantial work on radiation doses, and we were able to get one of the first-generation CT scanners to greatly reduce the radiation dose needed."

Now, as the head of her department, she promotes others' research, encourages diversity efforts and is on the committee steering Mayo Arizona's plan to double the size of its campus.

"Mayo has a great leadership development area, and I've benefited from that," she said. "I'm especially trying to get more women involved in leadership in medicine. The percentage of women in radiology is maybe 30 percent, and

COURTESY OF MAYO CLINIC

Amy Hara (right), M.D. '94, works with abdominal research fellows Chris Miller (left) and Dan Wilcoxon.

when you get to leadership it goes down even more."

Besides her many Mayo roles, she and her husband, Mark Kuo, M.D. '93, have two teenagers to keep them busy. So her own research is no longer a focus.

"But I'm glad I had so many opportunities," she said. "It was something to take CT colonography from nothing to something that's still in practice today."

Hara said she also was grateful for all the doors research has opened in her career.

"I'm on the board of subspecialty societies because of the research I've done. I know other leaders in radiology departments across the country. And I've traveled the world giving talks and presenting findings."

Making a wider difference

Alexander Norbash wears two hats at the University of California-San Diego as chair of its 550-person Radiology Department and associate vice chancellor for diversity.

Norbash said he takes a research approach to both jobs and sees both as paths for encouraging further discovery and innovation. He sees his mission as making each person feel valued and appreciated, and then giving them the respect, the resources and the connections to go beyond what has been possible.

"What's research? It's critical thinking, looking at preconceptions we have, exploring assumptions and realizing that everything we believe right now is going to shift or morph," Norbash said. "Too often we don't appreciate how many different ways you can do something. If you stay in your own little echo chamber or comfort zone, always with people like yourself, you're not going to innovate. It's all about creating the most connected yet diverse teams possible."

Norbash said his interest in diversity came naturally, as the son of parents who immigrated from Iran in 1958. "My classmates at UMKC also were very diverse, with different narratives, backgrounds, faiths, parents from different countries. The School of Medicine also had an amazing group of leaders and teachers."

One of them, Dr. Fong Tsai, set the direction for Norbash's career.

"I grew up in Platte City, Missouri, where my father was a surgeon and practiced general medicine," Norbash said. "I thought I would join him someday, but the last three days of my radiology rotation I accidentally met Dr. Tsai."

Tsai was the head of the Radiology Department at Truman Medical Center, and Norbash found his work fascinating and his energy and enthusiasm for it infectious. Tsai also took a personal interest in him, something Norbash said he tries to do now in every one of his personal interactions.

"He was doing these amazing angiograms that looked like roadmaps," Norbash said. "I couldn't figure out how he distinguished which blood vessels went where in the brain, but he knew. He was able to close off blood vessels and open up blood vessels as needed to treat patients."

That was 33 years ago, Norbash said, and Tsai also convinced him that interventional neuroradiology was going to be big, "that I could participate in launching a budding field and creating techniques that would be used everywhere in the world."

And that's exactly what Norbash did, making the most of residencies at the University of Pittsburgh and that city's Saint Francis Medical Center, followed by fellowships in diagnostic and interventional neuroradiology at Stanford in the early 1990s.

"We started putting stents in the carotid artery," Norbash said. "Virtually no one else was doing this, and we wrote the first English language article to talk about the clinical applicability of this technique. We gained a lot of early experience and helped a lot of people, popularizing the technique."

But Norbash said he also learned some hard lessons when the technique wasn't always properly taught or regulated as it spread, was overused by inexperienced practitioners, and complications ensued. As a result, he said, government approval was rolled back in a way that Norbash said arrested the development of the procedure.

"I was naïve to think everything would be great," Norbash said. "I

"What's research? It's critical thinking, looking at preconceptions we have, exploring assumptions and realizing that everything we believe right now is going to shift or morph."

– Alexander Norbash

learned a hard lesson, that I needed to become involved in organized radiology and be a voice on policy and payment issues and the development of new techniques."

As a result, Norbash joined and rose through the ranks of the American College of Radiology and other national radiology groups. As his influence grew, so did his body of research breakthroughs, such as using lasers to open up blocked blood vessels.

"One of the other things I helped pioneer was intercranial stenting, where you go beyond the carotid artery," he said. "Intercranial stents are now being used to treat strokes and aneurysms. I also worked with engineers and polymer chemists to formulate the initial version of Onyx, a material we use to close blood vessels such as vascular malformations in the brain."

Norbash also had opportunities to travel and teach about techniques he had helped develop.

"It's extremely fulfilling to go into a hospital's inventory area in a land far away and see products I helped develop," he said. "It's a good feeling to show physicians in Egypt or Iran or China how to use certain tools. And it's gratifying to see them establish their own stroke treatment networks, to spread improved treatment and training."

After his work at Stanford, Norbash taught at Harvard for six years before becoming a professor of radiology and assistant dean for diversity at the Boston University School of Medicine in 2004. When UC-San Diego offered him a chance to continue his diversity work and lead its Radiology Department, he moved there in 2015.

And he can't say that will be the last stop in his career.

"I love learning about something and then moving on to the next thing," he said. "Thankfully my wife has tolerated that attitude for the 31 years we've been married. She's an ENT surgeon and an inspiration to me."

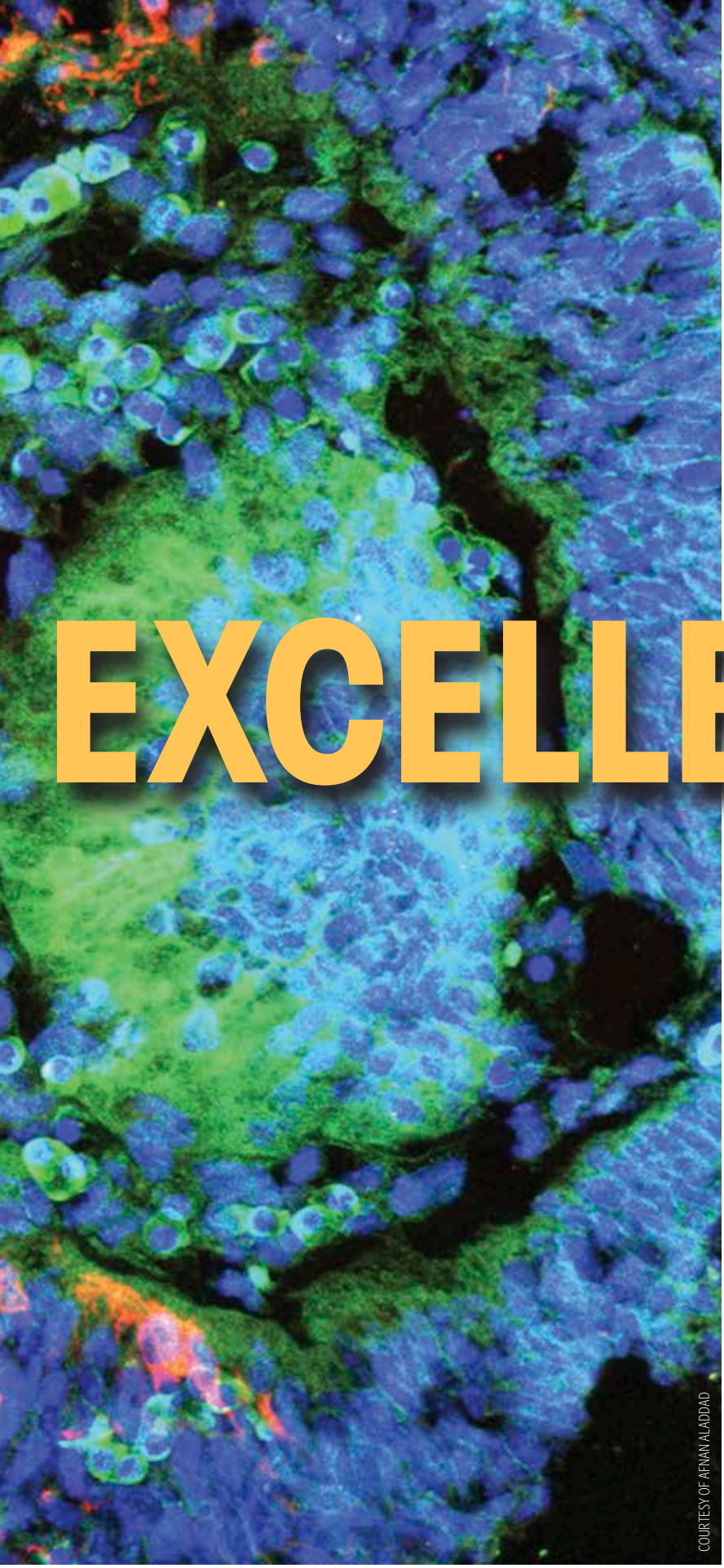
Each stop along the way, Norbash said, he has drawn on his experiences at UMKC, especially when he has had the chance to start a new program or shape a department.

"The School of Medicine's founders and early leaders were a unique community of brilliant innovators who changed the face of medical education," Norbash said. "They questioned the validity of assumptions and sought to improve the world through techniques and approaches that were unconventional. To me, that is what research is all about." ■

COURTESY OF UCSD

Alexander Norbash, M.D. '86, leads the Radiology Department at the University of California-San Diego. Over the years his career has taken his family to many locations, including (lower photo) Boston, where his sons and wife, Sepi Gilani, M.D., joined him while he was attending a medical conference.

BUILDING ON RESEARCH



COURTESY OF AFNAN ALADDAD

Retinal ganglion cells (pictured left), which die off in diseases such as glaucoma, are being developed in the laboratory of Karl Kador, Ph.D., to gain knowledge that can be applied to cell transplants and retinal regeneration.

EXCELLENCE

Faculty standouts chart new frontiers from laboratory and clinic to the classroom and hospital bedside

By KELLY EDWARDS

A new wave of faculty researchers at the School of Medicine is adding to the school's success, from bench to translational studies that directly affect patient care.

From health psychology and patient outcomes, to the use of simulation technology to enhance medical education, to ground-breaking science that could one day restore the sight of those blinded with glaucoma, these up-and-coming investigators are following in the footsteps of many of the school's internationally recognized research leaders.

Helping patients deal with a chronic disease

An aggressive approach helped Kim Smolderen, Ph.D., find her research niche. Now, as an assistant professor of biomedical and health informatics, she is fast becoming a leader in outcomes research. Her focus is the role a patient's behavior plays in dealing with peripheral vascular disease, a painful disorder caused by narrowing or blockage of blood vessels.

"I want to help patients find the strength within themselves to deal with this condition and redefine how they can give their life a new direction with this disease without making it all negative," Smolderen said.

Her journey began as a Ph.D. student at Tilburg University in the Netherlands. Smolderen learned that Johan Denollet, a world-renowned researcher of Type D personalities — D for distressed — had just received a large research grant.

Smolderen wrote Denollet and asked whether he would have a training spot open for a Ph.D. student interested in research.

"I thought, this is my chance. I'm just going to present myself and say I want to do this," she said. "He said, sure, I have a project on peripheral vascular disease and the role of personalities."

For Smolderen, it was the perfect fit.

Previously a social worker at a hospital in Belgium, she had noticed that behavior seemed to affect the overall outcomes of patients with chronic diseases. She wanted to know more. What were their motivations for or against treatment? Their psychological background? Their personal situations? All things that could be risk factors for certain outcomes.

Smolderen moved to Tilburg, the first institution in the Netherlands to offer training in health psychology, and soon began doing research with Denollet.

A year into the project, the team was designing a study registry and needed a tool to measure patients' quality of life. John Spertus, M.D., M.P.H., a renowned UMKC School of Medicine researcher in metabolic vascular disease, had created two questionnaires regarded as the gold standard for quality of life measurement in coronary artery disease.

Smolderen asked and got the green light from Spertus to translate the questionnaires into Dutch. Then the two met at an American Heart Association conference. Smolderen again found an opening. "I asked if there were any opportunities to do a research internship with his group," Smolderen said. "That started part two of my career, my chapter in the United States."

She eventually joined Spertus' research group at the Saint Luke's Mid-America Heart Institute to continue her post-doctoral training in 2012. Two years later, she came to the UMKC School of Medicine to continue her research in the Department of Biomedical and Health Informatics.

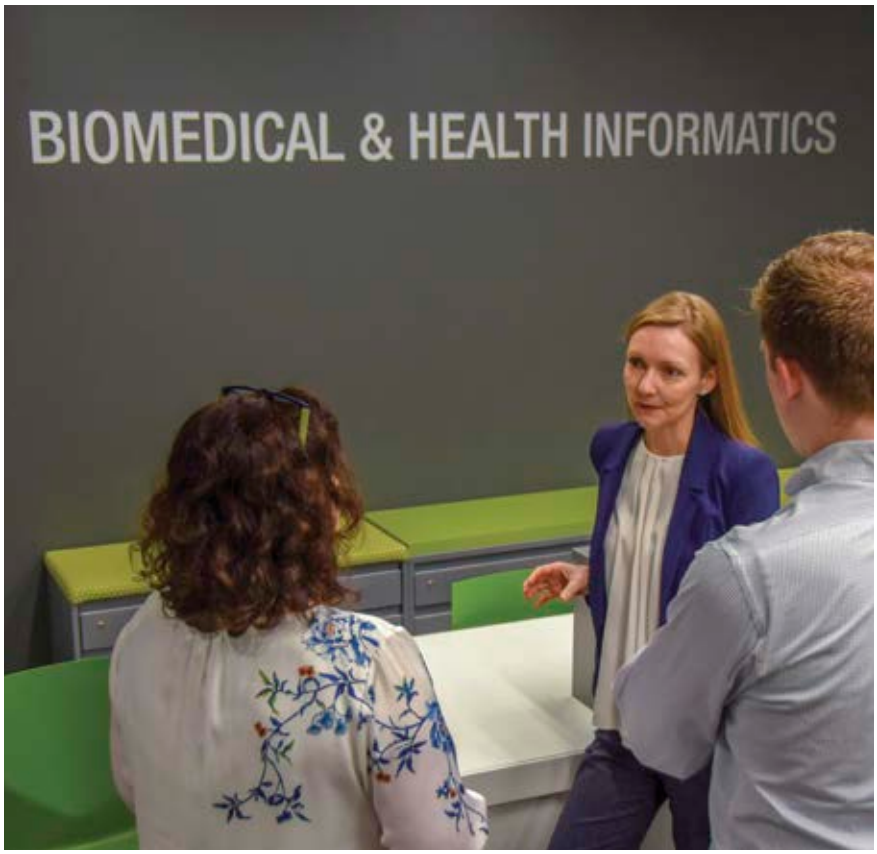
Now, Smolderen's focus is shifting to ways she can directly affect patients and their quality of life.

"I find myself going back to my root as a health psychologist, looking for the application, how to design a disease management program for populations that are at risk of certain outcomes," Smolderen said.

She completed a program for entrepreneurship in health technology at UMKC's Bloch School of Business and created her own company, Dynamo Health. The idea is to develop a program that will help patients manage their illness from a behavioral standpoint without the added burden of costly medical procedures.

The next step, she said, is to obtain funding to create a health psychology or cardiovascular-behavioral lab.

"My dream is that I can really put this field on the map," Smolderen said. "We think in dichotomies of either you have a mental illness or you have a physical illness. I hope to break those boundaries, form a bridge, and develop something that offers clinical care in that aspect."



Kim Smolderen, Ph.D., is an assistant professor in the Department of Biomedical & Health Informatics.

Bringing simulation to medical education

The School of Medicine is known for its unique medical education combining small group learning in a docent system and early clinical training. Emily Hillman, M.D. '08, assistant professor of emergency medicine, is a product of the UMKC program and a leading proponent of simulation-based health professions education. As medical director of simulation at the school's Clinical Training Facility, she uses simulation as a methodology for teaching health professions students and medical residents core medical knowledge and skills.

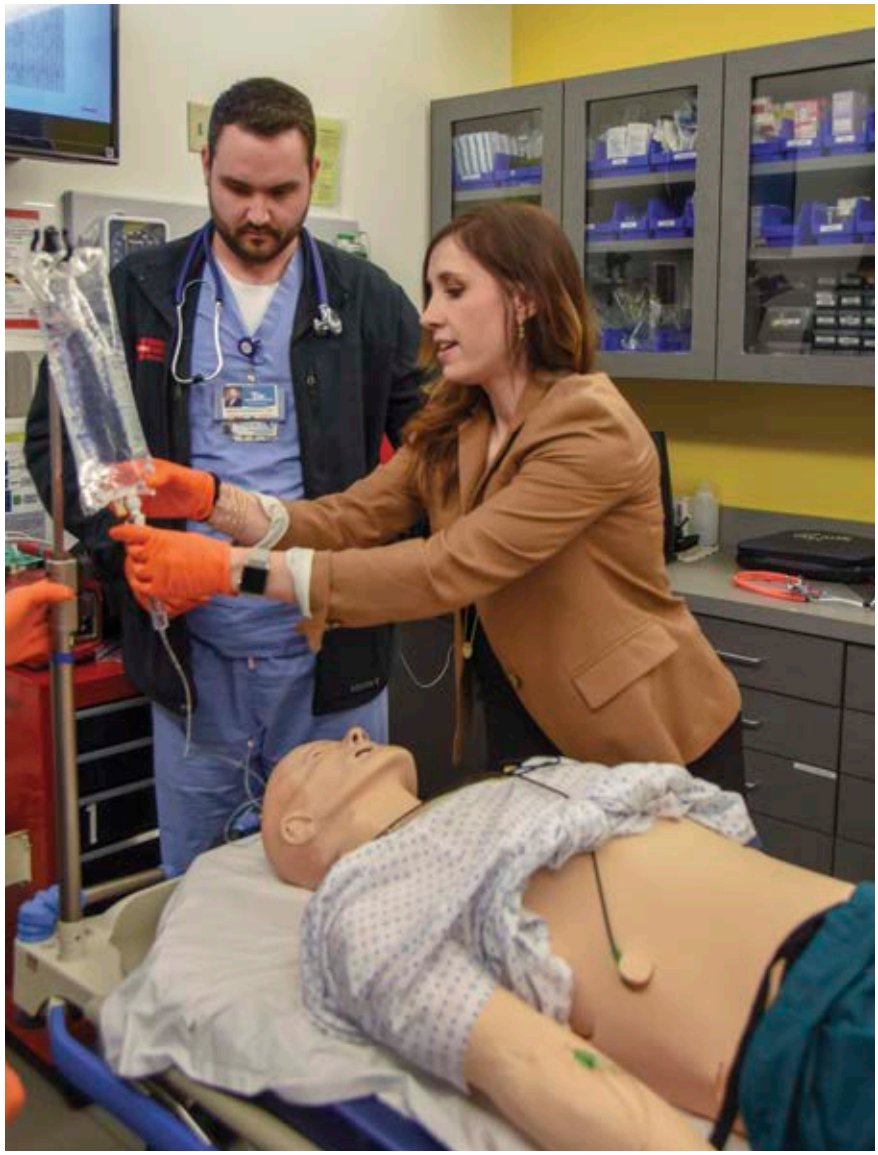
Hillman says educational scholarship in simulation goes beyond the traditional realm of research. "It also involves things such as publishing simulation scenarios that have been written and used for teaching and assessment," she said.

With her help, the School of Medicine has created and will begin to offer two simulation elective courses for students. The courses will focus on research and administration/teaching. They will also include activities such as developing simulated events to be implemented in medical education. Hillman is developing a faculty development course in teaching with simulation that she hopes will kick off in 2020.

She also serves on a steering committee for the school's quality patient safety consortium, bringing her expertise in simulation education.

The ultimate goal, Hillman says, is translational research at the highest level: to show that using simulation in teaching medicine has a positive effect on the quality and safety of patient care. Simulation research can evaluate simulation as a training mechanism to determine whether it affected patient outcomes. Alternatively, the research can use simulation as an environment or method to test something such as the effectiveness of communication.

"For example, you can study if the procedural competency of residents' central line training in the simulation lab correlates with improved patient outcomes," Hillman said.



Emily Hillman, M.D. '08, teaches residents in the Clinical Training Facility.

Hillman has also been working with Paul Ganss, program director of the school's emergency medical services program and manager of the Clinical Training Facility. The two are looking at whether the clinical skills of emergency medical technicians in training, assessed through simulation, are better or the same when clinical experiences take place in an ambulance or non-transporting unit such as a fire truck.

An emergency medicine physician at Truman Medical Center, Hillman said she realized the value of using simulation education early on. Her research focus in medical education is taking off as she nears completion of a master's program in health professions education at the School of Medicine.

"The mentorship I had through that program was really helpful," she said.

She turned to her mentors, Jennifer Quaintance, Ph.D., associate research professor and assistant dean for assessment and quality improvement, and Monica Gaddis, Ph.D., research director for biomedical and health informatics and emergency medicine, for direction on getting started in research.

"They were really instrumental with the foundation, how to design a good question, make sure it's top-quality education research, creating a good

research design that I could carry forward in the future," Hillman said.

As a beginning researcher, Hillman said, it was easier to start with studies related to her own background in emergency medicine. Now, as the school's medical director of simulation, she has begun branching out in her research efforts. She's in the early developmental stages of collaboration with UMKC's cardiology EP fellowship director, Sanjaya Gupta, M.D., to study and assess a pacemaker simulation.

"I get to work with all different specialties and all different departments," Hillman said. "That could be any graduate medical education program or undergraduate program that wants to use simulation in their training. I have studies at various stages. Now, I'm looking for mentorship from researchers who have been grant funded. That's the next stage."

Opportunity leads to ground-breaking research

A year ago, Karl Kador, Ph.D., assistant professor of biomedical sciences and ophthalmology, received his first major research grant from the National Eye Institute at the National Institutes of Health. The nearly $2 million in funding supports his innovative study of tissue engineering that could one day lead to novel treatments for patients being blinded by end-stage glaucoma.

Not so long ago, the School of Medicine researcher was on the brink of a completely different investigative career path. He had recently completed his doctoral training in chemical and biomolecular engineering at the University of Nebraska, where he worked on developing coatings to prevent blood from clotting on the surface of artificial vascular grafts.

Children's Hospital of Philadelphia offered him a research position to continue that field study. Nearly two weeks later, Bascom Palmer Eye Institute in Miami, one of the world's leading eye hospitals, offered a position working in a whole different realm of vision research.

He had 24 hours to decide.

"That was the worst night's sleep I've ever had," Kador said. "I had some friends in Philadelphia, so when I thought of Philadelphia, I thought of my friends. But when I thought of Miami, I thought of all the opportunities."

He chose opportunity and spent nearly five years working with leading eye researcher Jeff Goldberg, M.D., now chair of ophthalmology at Stanford University. At one point, Kador had an opportunity to develop his own research project.

"I tried for two and a half years to get it to work, and everything that could go wrong did go wrong," he said. "I would have liked to get that experiment done, but that's part of life."

Karl Kador, Ph.D., assistant professor

He moved on to a research position at Trinity College in Dublin, Ireland, for nearly a year and a half before returning to the United States. Now, he's leading his own research lab at the School of Medicine with funding that recently paid for a 3-D printer. Kador's lab will use the machine in tissue engineering in hopes of developing a method to create ganglion cells and transplant them to replace dying or dead ganglion cells that connect the retina to the brain.

The project is underway in a collaboration with members of his former research group in Ireland. Kador expects that could soon lead to researchers from each program spending time working and learning in the other's labs.

"We'll probably send a post-doc to Trinity College to train with them, and they'll send a researcher here to learn what we do," Kador said. "We can both learn and it's interesting because what we're doing here is not only beneficial to us in the eye field, but beneficial to them in their work with orthopedic research. So, it's a nice collaboration."

It was while working under Goldberg in Miami, Kador says, that he began writing his own research proposals. Since coming to UMKC, he has found additional mentors to help him create successful grant proposals.

In January, Kador received a second, smaller research grant from Research to Prevent Blindness to support his research collaborations with counterparts in Ireland. He said two School of Medicine faculty, Peter Koulen, Ph.D., director of the school's Vision Research Center, and Mark Nichols, Ph.D., interim chair of Biomedical and Health Informatics, have been instrumental in his grant success.

"In my proposals, they've been so helpful in reading and giving corrections and suggestions," Kador said. "Without the two of them, I wouldn't have received the first grant. They've both been in the discussion rooms and know the little things that are going to get tripped up in a grant proposal."

With the funding to support his work, Kador is now able to open the door of his research lab to younger medical students and residents interested in exploring vision research.

"This has been the first time on my own leading a lab, which has been a real learning experience," Kador said. "There are a lot of things that you know you're going to have to do, but you don't necessarily know how everything works. It's a learning experience like anything else. Luckily, I've had really good luck with the science part and all of the resources we have at the Vision Research Center are excellent. This has been a great opportunity."■

Celebrating success in medical research

GRATEFUL FOR THE opportunity to lead our alumni association, I am impressed by our members who consistently excel across all fields of medicine, from clinic and campus to operating room and laboratory. Most of all, I am inspired that we are always searching — re-searching, if you will — to find better ways to care.

I was especially pleased to see that the current issue of our alumni magazine focuses on research by our distinguished alumni, by our soon-to-be-alumni students, and by our faculty who work so hard at their own research and in teaching all students the techniques and value of research.

It's particularly encouraging to see that research requirements and opportunities are expanding for students, our future physician-scientists. All students will have a research experience, which will contribute to the already growing number of School of Medicine students who are securing top research fellowships.

As a firm believer one should have exposure to research, I also encourage students to participate in a journal club, to practice evaluating research, sharing one's evaluations and hearing others' thoughts. Whether or not research is a big part of a medical career, we all respect the importance of being able to properly evaluate research and apply it as it is relevant to our practice.

I have seen the value of research mentorship up close. I continually recall my favorite advice from Dr. John Burnett, my research mentor at the Mayo Clinic: "Just let the data speak!" And I've tried to let the data reveal its truths, in my early Mayo and National Institutes of Health fellowships, in my career as a cardiologist, and as a member of the School of Medicine faculty.

Please join me in celebrating and supporting our school's growing research profile and contributions!

Tracy L. Stevens, M.D. '90
President, National Board of Alumni and Partners

Stay connected!

UMKC Medicine publishes information submitted by alumni, news released by employers of alumni and selected news stories that mention alumni and their affiliation with UMKC. Please send updates to medmagazine@umkc.edu or complete an online form at med.umkc.edu/magazine/submit.

Class notes

MICHAEL WEAVER, M.D. '77, associate professor, was recognized by the Black Health Care Coalition of Kansas City for his efforts to narrow the equity gap in health care for African Americans. At Saint Luke's Health System, Weaver is vice president for clinical diversity and chairman of the Healthcare Equity Council. He is the School of Medicine's Minority Faculty Recruitment and Retention Committee chair and a longtime member of the school's Diversity Council.

MICHAEL W. FARRAR, M.D. '79, is wrapping up a one-year term as president of the medical staff at North Kansas City Hospital. Farrar, a cardiologist, has served the hospital for 30 years as a specialist in cardiovascular disease, echocardiography and electrocardiography.

CATHERINE Y. SPONG, M.D. '81, co-wrote an article in the April 4, 2019, New England Journal of Medicine on the challenges of prescribing for breast-feeding women, given the lack of studies including them. Spong also led a federal task force that issued a 388-page report about the gaps in health care knowledge about pregnant and nursing women.

DEE ANNA GLASER, M.D. '87, has conducted studies on the safety and effectiveness of a wipe to treat hyperhidrosis, or excessive sweating. The wipe, Abrexza, recently received FDA approval. Glaser is a professor and interim chair of dermatology at Saint Louis University School of Medicine.

SCOT EBBINGHAUS, M.D. '89, a medical oncologist, is vice president and therapeutic area head for late-stage oncology clinical development at Merck. Before joining the pharmaceutical industry, he was an associate professor at the University of Arizona and Arizona Cancer Center, where he established a kidney cancer research and treatment program.

Expanding the reach of radiology through social media

Amy Patel, M.D. '11, presented to 60,000 people at the Radiological Society of North America's Scientific Assembly and Annual Meeting.

IN JUST A few years of practice, Amy Patel, M.D. '11, has brought advanced breast imaging care to women in her native northwest Missouri, and she's using social media to strengthen mentorship of young radiologists worldwide.

Patel is medical director for Liberty Hospital's Women's Imaging Center. She also teaches and mentors radiology interns as a member of the faculty at the UMKC School of Medicine. She was called to service in health care, she said, because of the passion shown by several family members in the field. Her grandfather, a missionary surgeon in Africa, was especially inspirational because he helped her understand that it's not about the practitioner, but the people.

Today, she is using that wisdom by bringing the power of social media to bear on radiology locally, nationally and internationally.

"Social media is becoming a great equalizer for radiology and other subspecialties," said Patel. "The platforms are removing the red tape associated with accessibility to the experts and leaders in the field."

An avid Twitter user, she interacts with peers, patients and students in what she calls the "radiology twitter-verse," using the quick messaging platform as well as other social media avenues. According to Patel, radiology actually has quite a large social media presence on Twitter.

She also uses the platform to connect with some of the national leaders in the field. For example, you can frequently find Etta Pisano, the chief scientific officer for the American Radiology Association and arguably one of the leading researchers in radiology, on Twitter interacting with colleagues. That's access that would have been unheard of 10 years ago, Patel said. Colleagues are able to discuss how they would manage certain cases and discuss certain hot-button topics in the field.

According to Patel, such connections through social media greatly strengthen radiology overall and are tremendously beneficial to up-and-coming radiologists who can broaden the scope of their mentorship.

Whenever Patel receives a new "follow" on Twitter from a person who may be new to the platform, she will retweet the person's Twitter handle (Patel is @amykpatel) and tag several of her colleagues within the radiology twitter-verse. It's a way to introduce the new user to the radiology community and help amplify the person's Twitter presence with the community.

Her social media mentoring was recognized and advanced last year by the Radiological Society of North America, which chose her as one of only five radiologists to make a 5-minute presentation to 60,000 people at the society's Scientific Assembly and Annual Meeting. She also was named the first associate editor for digital media at the Journal of the American College of Radiologists.

For Patel, social media is also a great tool for patient interactions, particularly with her rural patients. The fact that anyone can access Facebook from the palm of their hand makes it a great platform for her to get educational content out to her patients.

"I'm able to educate and empower women in these rural areas," said Patel. "From one of my posts, they may feel like, 'Oh, I need to get in for my mammogram,' or 'I better get this lump checked.' I think it makes all the difference."

Patel said she saw early on a rewarding career in the diagnostic work of interpreting imaging. She also was conscious of the responsibility associated with diagnosing serious illnesses, such as breast cancer.

She was recruited to serve as medical director for Liberty Hospital's Women's Imaging Center, with a specialty in breast imaging. Patel is from another town in the region, Chillicothe, and knew first hand the needs in the area.

Now women in and around Liberty and rural northwest Missouri have access to a comprehensive breast program that didn't exist before. Patel is one of only four breast imaging specialists in all of northwest Missouri.

UMKC Alumni Awards honor heart surgeon, ophthalmologist sisters

THREE SCHOOL OF Medicine alumni were honored at this year's UMKC Alumni Association awards ceremony in March.

Every year an Alumni Achievement Award goes to a School of Medicine graduate. This year the choice was William Cooper, M.D. '92, a heart surgeon and author of the book "Heart Attack: Truth, Tragedy, Triumph."

As the head of a cardiovascular surgery program in Marietta, Georgia, Cooper has performed thousands of life-saving operations. But spreading the message and methods of preventive health habits, especially for heart disease, is also vitally important to him. His mother died when he was 14, and five of his seven siblings have died of preventable diseases.

"By writing and speaking, I have the opportunity to inform thousands, not just those who happen to need my surgical skills," Cooper said.

Cooper also has served 30 years in the Army Reserve, including tours in Iraq and Afghanistan, and earned an MBA from Emory University. He credits his father and his own curiosity for continuing to expand his knowledge.

Kathryn Ann (Strickland) Hembree, M.D. '86, received her family's Legacy Award from Provost Barbara Bichelmeyer.

William Cooper, M.D. '92, received his award from Interim Dean Mary Anne Jackson.

"I reject the notion that doctors should narrow their professional focus on medicine alone," he said. "Why not learn and grow as much as you can as long as you can?"

Cooper also credits the School of Medicine for helping him mature and find a sense of purpose, along with being prepared to be a physician.

"UMKC prepared me for how to approach and develop a solid patient-physician relationship — from the clinical evaluation, diagnosis and treatment to the interpersonal relationship and trust development," he said. "UMKC more than prepared me to be a doctor from day one of my residency. I still use those skills today."

Two other award winners this year, sisters Mary Pat (Stickland) Lange, M.D. '85, and Kathryn Ann (Strickland) Hembree, M.D. '86, also said the School of Medicine had given them excellent preparation for career success. They both went on to be ophthalmologists who have provided decades of service — Lange in Lawrence, Kansas, and Hembree in Kansas City's Northland.

The sisters, along with Hembree's daughter, Kathryn Hembree Night, won the 2019 UMKC Legacy Family Alumni Award. Night is a 2009 chemistry and philosophy graduate of the UMKC Honors College who now works in finance in New York.

Hembree said when she and another woman ophthalmologist were establishing their practice 30 years ago, "There were times that discrimination and borderline sexual harassment occurred. I think as women it took a little while for people (patients and other colleagues) to accept that we were, in fact, competent."

However, she said, "It didn't take long for our practice to take off and, happily, those days are in the past."

Alumni weekend

TRUNKS OF MEMORIES were opened April 5-6 for the Alumni Reunion Weekend. Dozens of School of Medicine graduates enjoyed a reception at the Diastole Scholars Center on Friday evening and reminisced as they toured the school Saturday morning. The weekend wrapped up with a gala reception and dinner at the new Crossroads Hotel. The milestone classes of '79, '89, '94 and '09 were well-represented. Thanks to all of our alumni who attended for the enjoyable weekend!

All names left to right as pictured. 1) Robert Ball, M.D. '89; Brian Sieck, M.D. '90. 2) Dawna McCulloch, M.D. '89; Martha Margreiter Dye, M.D. '87. 3) Members of the Class of 1994. 4) Iljana Gaffar, Calvin Cajigal, Kate Mangona and Liz Germinder, all M.D. '09, and Kenny Bennett. 5) All M.D. '94: Timothy Lee, Shilpa Thornton, Christopher Thornton, Amy Hara. 6) Patricia and Douglas Schwartz, M.D. '79. 7) Members of the Class of 2009. 8) All M.D. '79: Kathy Shaffer, Stan Shaffer, Steve Smalley. 9) All M.D. '89: Jeffrey Althoff, Teresa Tracy, Christopher Westerheide, Scott McCulloch, Jerry Castro. 10) Becky Burchett-Watson, Consuelo Carmona, John Shook, all M.D. '84, and Carmona's daughter, Malia Ashley.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Branching out

THE BRISK MORNING WIND on March 15 couldn't cool the excitement and enthusiasm at the UMKC School of Medicine. Residencies were announced for more than 90 students who are headed toward graduation in May. Family and friends cheered them on as they learned where they will write the next chapter in their medical careers. The students won assignments in 28 states and the District of Columbia, from Vermont to Hawaii and California to Florida. Some are headed to the top names in medicine, including Mayo, Stanford, Emory, Baylor, Yale and UCLA. A baker's dozen will stay at UMKC and its affiliate hospitals; 22 will be elsewhere in Missouri and Kansas. Internal medicine was the top category with two-dozen placements, followed by 14 in pediatrics or medicine-pediatrics, eight in psychiatry, seven each in family medicine and anesthesiology, and six each in emergency medicine and general surgery.

ANESTHESIOLOGY

Affan Ahmad	U. of Florida College of Medicine-Shands Hospital – Gainesville, FL
Leander Lee	Barnes-Jewish Hospital – St. Louis, MO
Caleb Kennon	U. of Kentucky Medical Center – Lexington, KY
Joseph Migliazzo	U. of Vermont Medical Center – Burlington, VT
Vidhan Srivastava	U. of Chicago Medical Center – Chicago, IL
Vivek Vallurupalli	Stanford U. Programs – Stanford, CA
Jeffrey Wiegers	Cedars-Sinai Medical Center – Los Angeles, CA

DERMATOLOGY

Ella Glaser	Jackson Memorial Hospital – Miami, FL
Sarah Pourakbar	U. of Kansas School of Medicine – Kansas City, KS
Jeena Sandhu	Cook County Health and Hospitals Systems – Chicago, IL
Vivek Singam	Medical College of Wisconsin Affiliated Hospitals – Milwaukee, WI

EMERGENCY MEDICINE

Deven Bhatia	U. of Texas Southwestern Medical School – Dallas, TX
Lauren Bulgarelli	Presence Resurrection Medical Center – Chicago, IL
Christopher Favier	University Hospitals – Columbia, MO
Shree Govindarajan	Yale-New Haven Hospital – New Haven, CT
Nicholas Keeven	Advocate Health Care – Chicago, IL
Luke He	Creighton Univeristy Affiliated Hospitals-Maricopa – Phoenix, AZ

FAMILY MEDICINE

Seenu Abraham	UMKC – Kansas City, MO
Avosuashi Akande	Hennepin County Medical Center – Minneapolis, MN
Matthew Decker	Mayo Clinic School of Graduate Medical Education – Rochester, MN
Alice Hwang	U. of Iowa Hospitals and Clinics – Iowa City, IA
Megan Noronha	Presence St. Joseph Hospital – Chicago, IL
Taylor Reiman	UMKC – Kansas City, MO
Shelby Steinbecker	Cox Health – Springfield, MO

GENERAL SURGERY

Taylor Carter	U. of North Carolina Hospitals – Chapel Hill, NC
Hunter Faris	Navy Medical Center – San Diego, CA
Megan Ivy	HCA Gulf Coast Education Consortium – Houston, TX
Bhavana Jasti	UMKC – Kansas City, MO
Amber Leila Sarvestani	UMKC – Kansas City, MO
Mesgana Yimer	Bassett Medical Center – Cooperstown, NY

INTERNAL MEDICINE

Naman Agrawal	Rush U. Medical Center – Chicago, IL
Muhammed Alikhan	Case Western/U. Hospiitals Cleveland Medical Center – Cleveland, OH
Sarah Alshami	UMKC – Kansas City, MO
Joseph Bennett	U. of Kansas School of Medicine – Kansas City, KS
Maliha Bhatti	St. Louis U. School of Medicine – St. Louis, MO
Urooge Boda	Research Medical Center – Overland Park, MO
Kent Buxton	St. Louis U. School of Medicine – St. Louis, MO
Timothy Chow	U. of South Florida Morsani College of Medicine – Tampa, FL

Jonah Graves	Barnes-Jewish Hospital – St. Louis, MO
Usman Hasnie	U. of Alabama Medical Center – Birmingham, AL
Adil Hassan	U. of Iowa Hospitals and Clinics – Iowa City, IA
Cindy Jiang	U. of Michigan Hospitals – Ann Arbor, MI
Rohma Khan	University Hospitals – Columbia, MO
Christian Lamb	San Antonio Military Medical Center – San Antonio, TX
Adam Lloyd	Eisenhower Army Medical Center – Augusta, GA
John Logan	U. of Kansas School of Medicine – Kansas City, KS
Niraj Madhani	U. of Texas Southwestern Medical School – Dallas, TX
Raksha Madhavan	Yale-New Haven Hospital – New Haven, CT
Imran Nizamuddin	Northwestern Memorial Hospital/VA Medical Center – Chicago, IL
Katie Payne	U. of Tennessee College of Medicine – Memphis, TN
Srinivasa Potla	Case Western/Metropolitan Health Medical Center – Cleveland, OH
Ami Purohit	Rush U. Medical Center – Chicago, IL
Charles Sherrod IV	Rhode Island Hospital/Brown U. – Providence, RI
Rebecca Staloch	UMKC – Kansas City, MO

MEDICINE-PEDIATRICS

Caitlin Armstrong	UMKC – Kansas City, MO
Roshani Desai	Indiana U. School of Medicine – Indianapolis, IN
Julia Esswein	U. of Tennessee College of Medicine – Memphis, TN
Uzoamaka Ofodu	Greenville Health System/U. of South Carolina – Greenville, SC

NEUROLOGY

Carlee Oakley	Mayo Clinic School of Graduate Medical Education – Rochester, MN
Margaret Finn	U. of Kansas School of Medicine – Kansas City, KS

OBSTETRICS-GYNECOLOGY

Pratika Goparaju	U. of Kentucky Medical Center – Lexington, KY
Kale Turner	Ohio State U. Medical Center – Columbus, OH
Eryn Wanyonyi	UCF COM/GME Consortium – Gainesville, FL

ORTHOPAEDIC SURGERY

Daniel Margolis	UMKC – Kansas City, MO
Tim Nordloff	UMKC – Kansas City, MO

ORTHOPAEDICS RESEARCH

Nyaluma Wagala	UPMC Medical Education – Pittsburgh, PA

PEDIATRICS

Asma Akhtar	MedStar Georgetown U. Hospital – Washington, DC
Sabat Ameen	St. Louis Children's Hospital – St. Louis, MO
Saba Bajwa	St. Louis U. School of Medicine – St. Louis, MO
Sree Balusu	St. Louis U. School of Medicine – St. Louis, MO
Marjorie Farrington	Children's Hospital-Northeast Ohio Medical – Akron, OH
Megan Lilley	Palmetto Health Richland – Columbia, SC
Hafsa Lodhi	St. Louis Children's Hospital – St. Louis, MO
Dominic Nardi	St. Louis Children's Hosp – St. Louis, MO
B.J. Osterberger	Navy Medical Center – San Diego, CA
Grace Rector	Children's Mercy Hospital – Kansas City, MO

PHYSICAL MEDICINE & REHABILITATION

Ajay Patel	New York Presbyterian Hospital-Columbia & Cornell – New York, NY

PLASTIC SURGERY

Nikitha Potturi	Carilion Clinic-Virginia Tech Carilion School of Medicine – Roanoke, VA

PRELIMINARY MEDICINE

D.J. Kemp	UMKC – Kansas City, MO
Leander Lee	UMKC – Kansas City, MO
Laura Meidl	UMKC – Kansas City, MO
Ajay Patel	Loyola U. Medical Center – Maywood, IL
Sarah Pourakbar	UMKC – Kansas City, MO
Grant Randall	U. of Florida College of Medicine-Shands Hospital – Gainesville, FL
Jeena Sandhu	Harbor-UCLA Med Center – Torrance, CA

PRELIMINARY SURGERY

Jessica Wise	Baylor College of Medicine – Houston, TX

PSYCHIATRY

Malia Addison	Barnes-Jewish Hospital – St. Louis, MO
Isioma Amayo	Walter Reed Medical Center – Bethesda, Maryland
Sunna Khan	St. Louis U. School of Medicine – St. Louis, MO
Haley Mayenkar	Emory U. School of Medicine – Atlanta, GA
Ravali Poreddy	University Hospitals – Columbia, MO
Sham Singh	Harbor-UCLA Med Center – Torrance, CA
Jason Tucker	UMKC/Center for Behavioral Medicine – Kansas City, MO
Waqar Zuberi	UCF College of Medicine/GME Consortium – Kissimmee, FL

RADIOLOGY-DIAGNOSTIC

D.J. Kemp	U. of New Mexico School of Medicine – Albuquerque, NM

TRANSITIONAL YEAR

Vivek Singam	Weiss Memorial Hospital – Chicago, IL
Shannon Demehri	Navy Medical Center – San Diego, CA
Ella Glaser	Mercy Hospital – St. Louis, MO
Danielle Terrill	Tripler Army Medical Center – Honolulu, HI

UROLOGY

Garth Sherman	University Hospitals – Columbia, MO

Dr. Reaner Shannon (left) and her sponsored lecturer, Altha J. Stewart, M.D.

Lecturers address big challenges in society

THE SCHOOL OF Medicine's commitment to presenting diverse, expert voices continues, thanks in part to benefactors such as the Shannon and Sirridge families.

In February, the annual Dr. Reaner and Mr. Henry Shannon Lecture in Minority Health sponsored Altha J. Stewart, M.D., president of the American Psychiatric Association. Stewart spoke of the social determinants of health and health disparities as they relate to children such as childhood trauma, exposure to violence in the community and other adverse childhood experiences.

Traumatic childhood events, she said, often drive them as adolescents into the juvenile justice or child welfare systems.

In March, Brian Carter, M.D., an expert in neonatal intensive care outcomes, medical bioethics and pediatric palliative care, presented the 25th William T. Sirridge, M.D., Medical Humanities Lecture. Carter joined the School of Medicine and Children's Mercy in 2012 as a professor of pediatrics and bioethics.

He shared his observations of how physicians can help parents deal with the reality of a young child facing life-altering challenges. "If all I'm doing is providing more information and not tending to where they are in the process, they'll be stuck," Carter said. "We need to recognize where they are."

In memoriam

JAMES LANE, M.D. '84, an endocrinologist and leader in diabetes care, died Sept. 4, 2018, of cancer in Oklahoma City at age 58. Lane in 2011 became director of adult clinical programs at the University of Oklahoma Health Sciences Center's Harold Hamm Diabetes Center. Before that, he was the first director of the Nebraska Medical Center's Diabetes Center and on the faculty of the University of Nebraska Medical Center.

LYNN DEMARCO, M.D., longtime faculty member and docent, died Feb. 15, 2019, in Leawood, Kansas at age 85. Dr. DeMarco joined the School of Medicine and the internal medicine staff at Truman Medical Center in 1977. He was a docent for 10 years and continued as a professor of medicine.

SHUI QING YE, M.D., Ph.D., faculty member and renowned researcher, died Oct. 24, 2018, at age 64 after a long illness. He was a professor in the School of Medicine's Department of Pediatrics and professor and chair of the Department of Biomedical and Health Informatics. He was an expert in genomic and translational bioinformatics, partnering with other scientists locally and worldwide to pinpoint new diagnostic biomarkers and therapeutic targets for diseases.

Nutter family endowed professorship goes to Drees

A NEW ENDOWED chair, the Mr. James B. Nutter, Mrs. Annabel Nutter, and Dr. Harry Jonas M.D. Professorship, has been awarded to Betty M. Drees, M.D., F.A.C.P., F.A.C.E., professor and former dean.

The wheels were set in motion for the professorship five years ago with a $750,000 gift from James B. Nutter Sr., the founder of a Kansas City mortgage company, and his wife, Annabel Nutter, to establish a professorship in diabetes and endocrine studies. The professorship also bears the name of their longtime friend, Dr. Harry Jonas, the school's second dean.

Nutter, who suffered diabetes and died in 2017, at the time of the gift said, "This is really a gift to our grandchildren and to people yet unborn, that it might help this great medical school find ways to prevent the onset of diabetes and to improve the quality of life for generations to come."

Drees' current work promotes diabetes disease prevention and the connection between clinical medicine and community resources. She also is program director for the school's fellowship in endocrinology, diabetes and metabolism.

Interim Dean Mary Anne Jackson, M.D. '78, said Drees was "one of the preeminent endocrinologists in the country, whose career mission has been to improve the care of individuals with diabetes and other endocrine disorders." She also praised her "passionate and unwavering commitment to the school and Kansas City" and said she had "both the skill set and mindset to move forward the research platform in endocrine studies."

Drees was dean of the school for 13 years. She also is president of the Stowers Institute for Medical Research's graduate program.

Emanuel "Mike" Vlastos (left), M.D., associate professor of obstetrics and gynecology, guided Akash Jani through a fetal surgery rotation with him at Children's Mercy.

Learning breakthrough medicine at the side of an expert surgeon

THE SCHOOL OF Medicine's innovative approach to medical education goes beyond its six-year program, docent system and emphasis on early and frequent clinical experience. Just ask Akash Jani, a Chicago native in the six-year B.A./M.D. program.

He landed an unusual rotation in fetal medicine and surgery, just by asking.

Jani had heard about the life-changing, in-utero surgeries being performed by Emanuel "Mike" Vlastos, M.D., associate professor of obstetrics and gynecology. The surgeries have, for example, been able to lessen the defects for babies who have spina bifida (when the spinal cord isn't covered with skin and bone) before they are born.

When Vlastos came to Kansas City from St. Louis in 2017, he brought open-fetal surgery to Children's Mercy, where he is director of fetal therapy. And when Jani asked to work with him, he was happy to say yes.

"He has broken trails for the next student to tread," Vlastos said. "It has been a pleasure and a challenge. Let this continue!"

He also praised Jani's appetite for learning. "Step up to the Tree of Knowledge and take a bite! So it is with Akash," Vlastos said.

Jani's experience with Vlastos deepened his interest in obstetrics and gynecology, where he will seek a residency after graduation next year.

"A lot of his work and surgeries were once thought to be crazy ideas with impossible outcomes, yet here he is doing them every week," Jani said. "This idea is also evident in his teaching; he does not let me get away with saying that something is not possible."

Jani said Vlastos also was a master at explaining often complicated procedures, both to students and patients. "He taught me that making sure you can communicate and teach is one of the most crucial jobs of being a physician."

Jani said Vlastos' humility and caring also inspired him to be a better physician when he earns his medical degree.

"Dr. Vlastos' performs some of the most difficult, intricate surgeries in the country," Jani said, "and saves families, mothers and babies who were never supposed to make it."

A dean's legacy: good memories

RICHARDSON K. NOBACK, M.D., was the inaugural dean of the School of Medicine. He brought hospital and academic experience to the job, having been on the faculty at Cornell, SUNY Upstate and the University of Kentucky, and associate dean at the University of Missouri-Columbia School of Medicine. Noback also presided at the school's first graduations, met with government officials such as U.S. Sen. Thomas Eagleton (upper right) and addressed luncheons and more formal meetings. At this year's Alumni Reunion, Noback reminisced and caught up with dozens of past graduates, including Tracy Stevens, M.D. '90, the current alumni president. Noback, 95, remains a repository of the school's history and memories, and a reminder of its founding spirit of adventure and innovation.

UMKC
School of Medicine

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Made in the shade

This year, renovations and cleanup around the School of Medicine included new chairs and umbrella tables for the building's south courtyard. When spring warmth arrived in April, so did groups of students to enjoy the weather and the new amenities.

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