# **MU Medicine**

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University of Missouri School of Medicine

Winter 2020

# BATTLING BURNOUT

MU HELPS DOCTORS THRIVE IN A DEMANDING PROFESSION

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E STEPHEN STEPHEN, MD ASSOCIATE PROPESSOR

### LETTER FROM THE DEAN



Since last spring, I've worked with our faculty and other MU Health Care and campus leaders to develop an academic health system strategic plan. I want to particularly recognize the leadership of MU Health Care CEO Jonathan Curtright and university Provost and Executive Vice Chancellor for Academic Affairs Latha Ramchand.

The success of the health system and the university are intertwined, which is why we need to coordinate on one strategic plan. The health system, which makes up about a third of the budget of the University of Missouri,

must continue to grow to create efficiencies and support the academic mission. The School of Medicine plays a key role in the academic mission of the university, earning the research grants and publishing the high-impact articles that will ensure MU maintains its status as a successful member of the American Association of Universities.

The objectives of the strategic plan are: Make a distinct impact, grow our ability to serve and align MU's capabilities in health. We are determining where we have the greatest opportunity to make an impact based upon our research strengths and population served. We are focusing on options to increase our clinical scale, services and overall efficiency. And we are considering ways to align, collaborate and effectively work with university colleagues.

In January and February, we will finalize the specifics of the plan and determine the implementation timeline and accountability measures.

Collaboration is the theme of many of our new endeavors, some of which you can read about in this magazine. The NextGen Precision Health Institute, which is being built next door, will bring together the best scientific minds from various schools and colleges on all four University of Missouri campuses. It will be a center for biomedical research — particularly in the fields of neurosciences, cancer and vascular disease — that will translate into better health for Missourians. The \$220 million NextGen is the largest investment the UM system has made to advance research and innovation.

Another example is the Midwest Biomedical Accelerator Consortium (MBArC), a new program centered at MU that is funded by a National Institutes of Health grant. It will foster collaborations between investigators from all of the University of Missouri campuses and establish a robust research and educational link between MU and the University of Kansas Medical Center in Kansas City and its partnering universities. The consortium will extend into six midwestern states and reach up to 16 universities, which will work together to transform biomedical innovations into small businesses whose products improve patient care.

We also must continue to collaborate in the areas of patient care and education. Each of us is a member of one or more teams that care for our patients and ensure their safety. Teaching our medical and graduate students, as well as training our residents and fellows, requires effective collaboration based on trust, communication and mutual effort.

Patient care, education and research are all parts of our mission. Those faculty, staff, residents and students who contribute to one or more of these aspects of our mission should all be recognized and appreciated.

I hope you enjoy reading about the latest accomplishments of our faculty, students and alumni who make us proud to be a part of the MU School of Medicine.

#### Steven Zweig, MD '79, MSPH '84

Interim Dean Professor of Family and Community Medicine University of Missouri School of Medicine

### MU Medicine

#### **MISSION STATEMENT**

The University of Missouri School of Medicine's mission is to improve the health of all people, especially Missourians, through exemplary education, research and patient-centered care.

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#### ON THE COVER:

Steve Keithahn, MD, reached a professional crossroads a dozen years ago, when he stepped away from his practice and considered leaving medicine altogether. Now, as the chief wellness officer for MU Health Care and the School of Medicine, he is trying to help MU clinicians find ways to avoid burnout.

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### NextGen III. PRECISION HEALTH Institute

Towering above the skyline on the University of Missouri campus, two cranes assist workers who are building the NextGen Precision Health Institute. The facility near MU Health Care's University Hospital will be the centerpiece of a wider effort that will impact the entire state.

Last summer, the University of Missouri system launched the NextGen Precision Health Initiative to harness the brainpower and resources of the system's four universities and health system. The initiative prioritizes vascular, neurology and oncology research that addresses the leading causes of death to Missourians. The NextGen Institute will serve as an anchor to the initiative, providing a world-class facility and a network of interdisciplinary scholarship and research from throughout the flagship university.

The goals are to accelerate medical breakthroughs for patients in Missouri and beyond, increase collaboration between University of Missouri scholars and industry partners, attract research funding, generate jobs and train a new generation of researchers and clinicians.

"Great scholars deserve great spaces," MU Chancellor Alexander N. Cartwright said. "That's exactly what the NextGen Precision Health Institute will be — and yet it's also so much more than a building. To us, this effort represents our commitment as one of America's leading research universities to health care innovations that will transform communities across Missouri and beyond."

The new structure will be a hub of activity on the Columbia campus. As William Fay, MD, watches the five-story, 265,000-square-foot building sprouting from a giant hole in the ground, he is excited about how the institute could help increase the university's research capabilities when it opens in 2021.

"That's going to be a critical factor for our recruitment and

### WILL RAISE UNIVERSITY SYSTEM'S RESEARCH POWER

"This is really more than a building — it's an initiative. It's more than our campus or our medical center. It's our entire UM system, an extensive network of integrated scientists and other team members that are pushing forward our agenda in precision health."

 William Fay, MD, MU School of Medicine's senior associate dean for research

retention of excellent faculty members," said Fay, the School of Medicine's senior associate dean for research. "Facilities matter. They inspire us."

Researchers and patients will benefit from a powerful new 7-Tesla MRI scanner made possible through a new partnership with Siemens Healthineers. The building will also include 32 wet labs, 12 integrated informatics spaces and a lab for tissue engineering and device fabrication.

"The environment will inspire us to work collaboratively," Fay said. "The whole way that building is laid out will foster interactions and context collisions. I think it's going to be huge in our recruitment. We're overdue for that.

"But this is really more than a building — it's an initiative. It's more than our campus or our medical center. It's our entire UM system, an extensive network of integrated scientists and other team members that are pushing forward our agenda in precision health."



The University of Missouri team that will oversee the Midwest Biomedical Accelerator Consortium is Jaya Ghosh, PhD; Cynthia Haydon; Sheila Grant, PhD; Jinglu Tan, PhD; William Fay, MD; Bill Turpin, PhD; and Shelley Hilton.

### NIH GRANT WILL HELP SCIENTISTS MARKET THEIR DISCOVERIES

Medical researchers at the University of Missouri will soon have another resource to get their discoveries to market. The National Institutes of Health awarded MU a four-year, \$4 million REACH award to fund the new Midwest Biomedical Accelerator Consortium (MBArC).

"The NIH realized that a lot of great ideas are created at universities, but to impact patients' lives and either prevent or reduce disease, they require commercialization," said William Fay, MD, senior associate dean for research at the MU School of Medicine. "The NIH decided to invest monies in centers that will assist scientists who have laboratory discoveries, such as a potential drug or prototype device, with excellent potential to become a commercial product."

REACH stands for Research, Evaluation and Commercialization Hubs. The NIH chose five new hubs in 2019, including the one based at MU. Fay will oversee MBArC, along with Sheila Grant, PhD, the MU College of Engineering associate dean of research, and Bill Turpin, PhD, MU's interim associate vice chancellor for economic development. MBArC consists of 16 universities in six Midwestern states, including the University of Kansas Medical Center in Kansas City.

Researchers from any of the universities can submit grant proposals, which will be evaluated by an external advisory board. Each year, the board will pick five scientific teams that each will receive a \$100,000 award from the NIH and a matching \$100,000 award from its university. The teams also will receive training from Jaya Ghosh, PhD, the program director of MU's Coulter Biomedical Accelerator, to help them market their discoveries.

"We anticipate that MU's REACH hub will lead to the development of important new drugs and technologies to prevent, diagnose and treat high-burden diseases afflicting the U.S. population," Fay said.

### MU RESEARCHER TESTS COMPOUND THAT HELPS T CELLS DETECT CANCER



Diana Gil Pagés, PhD, received a \$3.7 million grant from the National Institutes of Health to study a type of immunotherapy that increases the sensitivity of the body's immune system to fight metastatic melanoma.

"There's a cancer research mystery we are trying to solve: why some immunotherapies work for some people but not for others," Gil Pagés said. "We hope to answer that question to better predict whether a particular immunotherapy

DIANA GIL PAGÉS, PhD

treatment will work in a patient."

Gil Pagés — who holds a dual appointment as an associate professor of surgery at the MU School of Medicine and bioengineering at the MU College of Agriculture, Food and Natural Resources — was recruited to Missouri through a campus-wide collaboration that included the Department of Surgery, the Molecular Microbiology and Immunology Department and the College of Engineering. She hopes to further immunotherapy understanding and effectiveness by teaching the immune system how to recognize and attack cancer cells. She hypothesizes that by injecting a compound called a "fab fragment" that targets the immune system's T cells, those cells will become more sensitive to potential threats. It's a technique similar to equipping a home with an advanced security system to better detect an intruder.

"We're going to push the limits of the T cells to help them recognize tumor cells, when normally they are trained to ignore them," Gil Pagés said.

The study will examine the effectiveness and side effects of the immunotherapy in different groups of mice. The goal is to study how the immunotherapy-boosting technique works on its own and in combination with other types of immunotherapies on each group of mice.

"The immune experience is different in each human, so we are trying to introduce that variable in our mice," Gil Pagés said. "We're doing experiments when mice are genetically diverse and also immune diverse, so we can compare that to our simplified model where the mice have identical genes and no history of disease. The questions are going to be: Is the treatment still efficient, and is it safe?"

This grant is part of the NIH "Cancer Moonshot Initiative," which aims to make a decade's worth of cancer research progress in five

years. The grant runs through August 2024.

TO LEARN MORE about new discoveries by University of Missouri scientists, visit medicine.missouri.edu/research.

### COULTER AWARDS REWARD COLLABORATION

The Coulter Biomedical Accelerator Program awarded four grants totaling \$260,000 to help University of Missouri researchers market their medical discoveries. The grants were announced at an awards ceremony on Nov. 5, 2019.

MU is one of only 15 academic institutions in the country offering a Coulter Program, which brings engineers and clinicians together to develop medical solutions.

"The University of Missouri is home to leading experts in all fields of engineering, medicine and business," said Mark McIntosh, PhD, MU vice chancellor for research and economic development. "The Coulter Biomedical Accelerator Program brings this expertise together with the goal of delivering practical solutions to pressing medical problems affecting our state, nation and the world."

#### AWARD-WINNING TEAMS

**2**,

John Pardalos, MD, associate professor of clinical child health, and Roger Fales, PhD, associate professor of mechanical and aerospace engineering, are developing the Smart Monitor for the NICU. This software will use signals in existing bedside monitoring equipment to reliably determine and predict adverse events common to NICU patients. The software will alert nurses to issues such as insufficient oxygen in the blood and predict events so precautions can be taken to help babies avoid or quickly recover from adverse episodes.



**Carolyn Crumley, DNP, RN**, adjunct assistant professor of nursing, and **Xueju "Sophie" Wang, PhD**, assistant professor of mechanical and aerospace engineering, are working on the Smart Bandage for diabetic patients. It's a tiny sensor system incorporated into dressings used to treat diabetic foot ulcers. It monitors the pressure being placed on the wound area and provides real-time feedback to patients and clinicians. The device could help diabetic patients avoid putting too much weight on the affected foot while it heals.



**Teresa Lever, PhD**, associate professor of otolaryngology, and **Kiruba Krishnaswamy, PhD**, assistant professor of food science and bioengineering, are creating the Golden Gullet. It is a contrast agent made of gold nanoparticles for use in X-ray swallow tests with dysphagic patients.



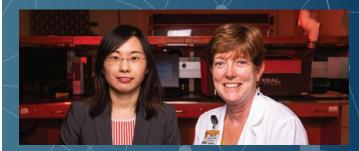
Sandeep Gautam, MD, assistant professor of medicine, Zheng Yan, PhD, assistant professor of mechanical and aerospace engineering, and Jian Lin, PhD, assistant professor of mechanical and aerospace engineering, are developing the Tiger Patch. It is an adhesive-free heart monitor patch that allows patients to be accurately tested for arrhythmia for seven days or longer without causing skin irritation.

**LEARN** more about the Coulter Program at **medicine.missouri.edu/coulter**.





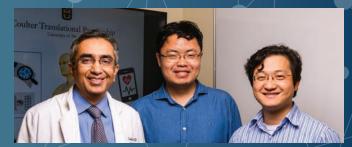
Roger Fales, PhD, and John Pardalos, MD '90, RES '97, are developing the Smart Monitor for the NICU, software that detects and predicts common problems that afflict premature and low-birth-weight infants.



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Teresa Lever, PhD, and Kiruba Krishnaswamy, PhD, received a Coulter award for the Golden Gullet, a contrast agent to use in X-ray swallow tests with dysphagic patients,



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### STUDY HIGHLIGHTS MU'S SUCCESS ON USMLE TESTS

Researchers from the University of Hawaii singled out the MU School of Medicine as an overachiever in a study published in the journal BMC Medical Education. The study determined which schools posted United States Medical Licensing Examination (USMLE) scores that deviated from expectations based on factors such as

the grade-point averages and Medical College



MICHAEL HOSOKAWA, EdD

Admissions Test (MCAT) scores of entering students.

"This study uncovers several medical schools which outperform or underperform trend line expectations for USMLE, irrespective of entering student qualifications. One outlier institution, the University of Missouri-Columbia, was found to significantly outperform in both Step 1 and 2," the study concluded.

"Such performance may be explained by curriculum and administrative differences. Having identified institutions that outperform expectations, the next sequence of investigations should aim to pinpoint the nuances within the 'patient-based learning' curriculum that helped enhance medical education at the University of Missouri-Columbia. If these variables can be determined and disseminated, institutions globally will be able to produce physicians with greater clinical knowledge and skills, thereby improving patient care."

Missouri adopted the patient-based learning (PBL) curriculum for its first- and second-year medical students in 1993. Rather than learning basic science in lectures, PBL students work in teams of eight to help each other learn from real clinical cases.

After the Hawaii study was released, Michael Hosokawa, EdD, the MU School of Medicine's senior associate dean of education and faculty development, started receiving congratulatory emails. Hosokawa led the team that implemented PBL after former Dean Lester Bryant decided Missouri needed to change its curriculum.

"I'm proud and I'm pleased that the University of Missouri can be looked at this way," Hosokawa said. "There are hundreds of our faculty who can take pride in it."

Medical students take the UMSLE Step 1 test after their second year and the Step 2 test after their third year. Residency directors consider the scores when selecting medical school graduates for their programs. Hosokawa emphasized, though, that board scores are just one measure of success for a student and a school.



The MU School of Medicine was singled out for outperforming expectations on the USMLE Step 1 and 2 tests in a recent study. MU's patient-based learning curriculum is a possible factor in the students' success.

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 Michael Hosokawa, EdD, MU School of Medicine's senior associate dean of education and faculty development

"One of the most meaningful measurements to me is about 98% of our students match in a residency, and usually those are their first or second choices," Hosokawa said. "Residencies not only look at those test scores, but they interview the student. They're looking at the students as more than a score, and they're selecting our students."



**LEARN** about the School of Medicine's progressive education program at **medicine.missouri.edu/education**.

## FACULTY SPOTLIGHT

#### **NEW APPOINTMENTS**



**KRISTIN HAHN-COVER, MD**, has been named chair of the Department of Medicine. She replaces Edward Yeh, MD, who will return full-time to research and mentoring of junior faculty members in research. He will continue to lead the Center for Precision Medicine. Hahn-Cover has served as MU Health Care's chief quality officer since 2013. As Hahn-Cover

focuses her efforts as chair of the Department of Medicine, she will transition from her role as chief quality officer. She will continue to practice as a hospitalist.

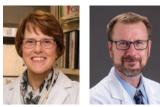


#### LEILA KHEIRANDISH-GOZAL, MD,

professor of pediatrics and director of the Child Health Research Institute, has been appointed as the Children's Miracle Network Professor in Child Health. Kheirandish-Gozal is one of the most accomplished pediatric sleep medicine experts in the world, consistently ranking among the top five specialists.



**PAM MULHOLLAND** has been named the chief administrative officer for the MU School of Medicine. Mulholland will continue in her role as the chief ambulatory services officer at MU Health Care and will jointly report to the dean of the medical school and the CEO of MU Health Care.



#### CHARLOTTE PHILLIPS, PHD, and DANNY SCHUST,

MD, have been appointed as co-directors of the Tom and Anne Smith MD-PhD program. This program provides students

comprehensive training to prepare dual-degree physician-scientists for a career in academic medicine. MD-PhD students pursue a seven- to eight-year course of study that integrates the traditional four years of medical school with a focused three- to four-year research track to earn their doctorate in a scientific discipline.



#### LAINE YOUNG-WALKER, MD '97, has

been named chair of the Department of Psychiatry and clinical service chief for all psychiatric services at MU Health Care. She continues as associate dean for student programs at the MU School of Medicine. Young-Walker joined the Department of Psychiatry faculty in 2009. Since then, she

has helped create and direct numerous child psychiatry and early intervention outreach programs. Her research efforts are supported by more than \$13 million in national and regional funding. Young-Walker replaces John Lauriello, MD, who accepted a position as chair of the Department of Psychiatry and Human Behavior at Sidney Kimmel Medical College in Philadelphia.

### ACCOLADES



**BALKOZAR ADAM, MD**, professor of clinical psychiatry, recently received two awards from the American Academy of Child and Adolescent Psychiatry. She earned the Catcher in the Rye Award for leadership in child and adolescent psychiatry, including her work creating an educational film for refugee families documenting the impact of trauma on mental health. She also

received the Jeanne Spurlock, MD, Lecture and Award on Diversity and Culture for advancing diversity and culture in children's mental health and contributing to the recruitment of people from all cultures into child and adolescent psychiatry. Adam presented "Culture, Compassion and Competency: When Culture is More Than a Backdrop," at AACAP's annual meeting.



JOHN JARSTAD, MD, associate professor of clinical ophthalmology, led a team that included resident eye surgeon Van Nguyen, MD, and recent alumnus Carli Wittgrove, MD, that won Best Paper of Session and earned the Best of The Best research award at the 2019 American Society of Cataract and Refractive Surgery annual meeting. The team's paper reported its

findings on the lack of necessity of non-steroidal anti-inflammatory drops to prevent cystoid macular edema if eye pressure is adjusted immediately after cataract surgery in the operating room. The paper beat out more than 900 other entries.



#### RICHELLE KOOPMAN, MD,

the Jack M. and Winifred S. Colwill Endowed Professor of Family and Community Medicine, and **DAVID MEHR, MD, RES '79**, professor emeritus of Family and Com-

munity Medicine, were honored at the North American Primary Care Research Group's annual meeting in November in Toronto. Koopman received the President's Award for her work as chair of the NAPCRG Communications Committee. Mehr received the Distinguished Mentor Award.



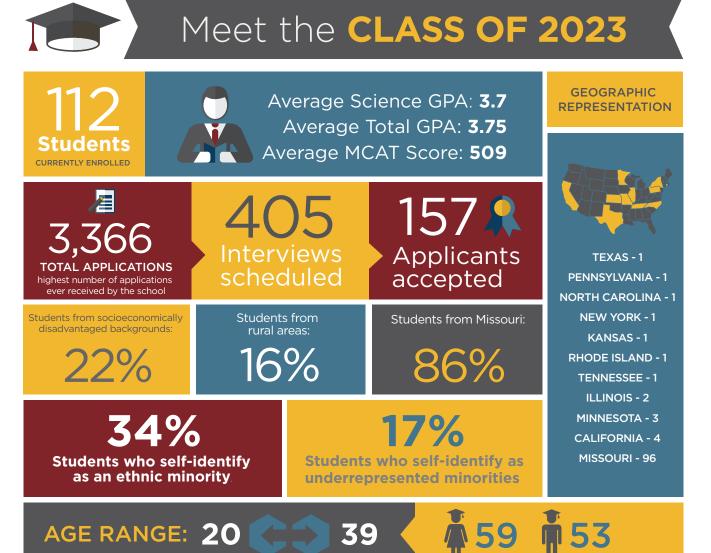
**N. SCOTT LITOFSKY, MD**, was elected to the Society of Neurological Surgeons, a group limited to 200 active members. The society — which includes neurosurgical department chairs, residency program directors and other senior educational leaders — is committed to the design of curriculum and implementation of

neurosurgical residency and fellowship education in North America.



**ADNAN GURESHI, MD**, professor of clinical neurology, delivered the inaugural presentation at the World Intracranial Hemorrhage Conference in May in Granada, Spain. Qureshi's presentation was titled "The Changing Epidemiological Pattern of ICH in the 21st Century."







# BATTLING BURNOUT

MU takes steps to keep clinicians healthy and happy

Stephen Keithahn, MD, reached his crossroads about a dozen years ago. He was working long hours in a two-person internal medicine and pediatrics practice. At home, he and his physician wife had recently welcomed their fourth child. And he couldn't always find time to practice what he preached to his patients about maintaining a healthy lifestyle.

It added up to a case of burnout.

"I was struggling to find the joy in medicine," Keithahn said. "Something had to change. I was in my 40s, and that was a time when I really did a lot of soul-searching. I thought, 'If you're going to change careers, now is the time to do it.' I thought about going to law school or business school and reinventing myself."

He sold his practice and started working part-time as an emergency medicine physician. He devoted more time to his family and himself. He became a triathlete and lost nearly 40 pounds.

Keithahn ultimately decided to get back into medicine full-time, but he did it on his own terms in an academic health system at the University of Missouri.

"My wife always said that I was happiest when I was a chief resident, a sort of junior faculty after residency," Keithahn said. "A faculty position opened up here in internal medicine and pediatrics. I took that nine years ago, and it's the happiest I've been.

"I love working here. My clinic is highly functional, allowing

me to be productive and provide outstanding care for my patients. Our learners are fun to teach, and the university community has been awesome."

Keithahn hopes the solution that worked for him — the combination of a better work environment and self-care - can be applied to other MU clinicians.

In September 2018, Keithahn was appointed as the first chief wellness officer of MU Health Care and the School of Medicine. He is in charge of the new Office of Clinician Well-Being, which is tasked with improving the personal and professional wellness of the university's physicians, physician assistants and nurse practitioners.

He has spent the last year learning more about the scope of the burnout problem and finding strategies to help.

### **DEFINING BURNOUT**



Physician burnout is defined as a work-related condition marked by emotional exhaustion, depersonalization and reduced feelings of personal accomplishment. About 50% of physicians nationwide report

feeling burned out, and doctors have the highest suicide rate of any profession.

"It is difficult for a lot of clinicians to admit there is a problem and reach out for help," said Craig Rooney, PhD, the program



director and counseling psychologist of MU Health Care's Office of Clinician Well-Being. "Historically, there was a fear it could impact their licenses and impact their livelihoods. Also, they're used to being in the role of caregiver, not care receiver. More broadly, there are stigmas around mental health that society had that permeated the profession, as well."

Heavy workloads, inordinate time spent on documentation, loss of autonomy and work-home conflicts contribute to physician burnout. A study published in the Annals of Internal Medicine in 2016 found physicians in ambulatory care clinics spent nearly two hours on clerical tasks for every one hour spent with patients.

"If you look at how we do our documentation in the U.S. versus the rest of the world, our documentation serves more of a billing function," Keithahn said. "My note used to be a patient care document and a legal document. It still has that tripartite role, but the billing aspect has become an increasingly predominant component. Physicians go into medicine to take care of patients, not to take care of a medical record.

"Everyone feels overloaded. Sicker patients, tougher social situations, the opioid crisis — we have a lot of complicated patients with a lot of needs, and we have less time to spend with them."

The burnout fallout goes beyond its effect on doctors' wellness and their ability to treat patients. It contributes to doctors changing jobs or leaving the profession, which can affect the bottom line for health systems. Keithahn said it costs at least \$250,000 to replace one doctor at MU Health Care. An average of 57 physicians leave each year, and although Keithahn doesn't have data to directly tie the 9% turnover rate to physician burnout, he suspects it may be a contributing factor.

"We cannot fully achieve our clinical, teaching and research missions without a healthy, high-functioning and stable clinician workforce," Keithahn said.

Keithahn focuses on high-impact, low-cost strategies to improve clinician well-being. He divides the interventions into three categories: culture of wellness, practice efficiency and personal resilience.

To improve the culture, MU's Office of Clinician Well-Being will conduct the American Medical Association's burnout survey annually and then work with department and division leaders to address concerns raised in the results.

"We are planning to do systematic measurement with statistically valid tools so we can see how we're doing," Rooney said. "Individuals will have confidentiality, but we will be asking for demographic data to see if there are certain departments or divisions that are struggling more than others or see by gender if there are issues we need to look at."

The most obvious way to improve efficiency is to minimize the time clinicians spend documenting patients with the electronic health record (EHR). Federal mandates require clinicians to do much of the documentation rather than delegating the job to other staff members.

MU Health Care recently adopted a time-saving tool by

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#### Craig Rooney, PhD, program director and counseling psychologist, MU Health Care Office of Clinician Well-Being

installing a tap-and-go log-in system. Rather than entering a user name and password for each EHR update, clinicians, nurses and staff can just tap their ID badge on the screen to log in. Keithahn said that can save clinicians as much as 17 minutes per day.

Five years ago, family medicine physicians Margaret Day, MD, and Jeffery Belden, MD, took it upon themselves to improve their department's efficiency. They created a monthly "happy hour" — no alcohol involved — in which family medicine physicians gather with their laptops and share EHR tips and shortcuts.

Day said a great time-saving idea sprang from one of the happy hours. She worked with the Tiger Institute for Health Innovation to create one page within the EHR portal where family medicine physicians could click on common orders for medications, lab tests and imaging rather than navigating through multiple pages to make all the orders.

"One burnout driver is a perceived lack of control," Day said. "When you feel you have optimized your use of a difficult-to-use tool, that can bring back some sense of control over your work life. The social support aspect was something we didn't set out to do with our happy hours, but it definitely played out that way. The same group of people kept returning. It provided an avenue for social support in addition to helping with efficiency and work-life imbalance."

The last piece of the puzzle is personal resilience. Keithahn advocates for clinicians to take care of themselves with proper sleep, nutrition and exercise, but the Office of Clinician Well-Being's contribution to resilience is to offer mental health support. Rooney will counsel clinicians who need help and connect them with psychiatrists or other support services if needed.

"We're all trying to be cautious to not blame the clinician for the burnout," Rooney said. "I was at a conference and somebody said, 'If there is a canary in a coal mine that's not doing well, you don't just tell it to put on a gas mask.' Sometimes with the safety net stuff or mindfulness or self-care, we want to be careful that we're not giving the message that it's your fault or here's another thing to do better at.

"Medicine is a broad field and a very noble field. Our clinicians are doing really important work. They are the talent that makes the whole thing go. It's a real honor for me to work with them and try to make their lives better."



### **MENTAL HEALTH** IS A GROUP EFFORT FOR MEDICAL STUDENTS

During Aaron Warning's first two years at the MU School of Medicine, the United States Medical Licensing Examination Step 1 test was a monster that approached a little closer each day. He knew the direction of his career could depend on the results of that eight-hour, multiplechoice test. A low score could cost him a chance to match with a residency program in a competitive specialty.

The night before the big exam, Warning wasn't sure he could go through with it.

"My state of affairs wasn't good," he said. "I couldn't sleep. At 3 a.m., I considered cancelling the exam because I thought, 'Am I really going to go on no sleep?' I looked into it, but it was going to cost me \$600 to cancel."

Warning finally sank into a fitful hour of sleep before driving to Jefferson City for the test. He didn't score as well on the real thing as he had on practice tests, but he was relieved that his results were good enough to keep his preferred specialty options open. Still, he wondered if there was something he could do to help others avoid the anxiety he and many of his classmates feel.

LEARN more about our commitment to student health and wellness at medicine.missouri.edu/wellness.



"Your whole life, you have been the student who can say, 'What is there to learn? OK, I'll learn all of it.' Then you excel," said Warning, who is now in his third year of medical school. "Then you get here, and there's so much information. There's no chance of mastering it. You're in this position where you're not getting enough sleep and wondering if everybody else is going through the same thing.

"Most people don't talk about it, so students often don't know they're not alone. It builds up to an environment where folks feel they are constant failures because they aren't achieving at a level they've typically expected of themselves."

Any medical student who feels overwhelmed is far from alone. A 2016 analysis of 167 previous studies found that 27.2% of medical students worldwide felt symptoms of depression. The statistics are troubling after graduation, as well. About 50% of physicians nationwide report feeling burned out, as defined by emotional exhaustion, depersonalization and reduced feelings of personal accomplishment.

MU Health Care and the School of Medicine took a step toward addressing physician mental health last year with the creation of the Office of Clinician Well-Being, led by chief wellness officer Stephen Keithahn, MD. Five years ago,



"Most people don't talk about it, so students often don't know they're not alone. It builds up to an environment where folks feel they are constant failures because they aren't achieving at a level they've typically expected of themselves."

- Aaron Warning, medical student

the School of Medicine created a position in the Office of Medical Education (OME) called faculty liaison for student coaching. Stephanie Bagby-Stone, MD '00, RES '04, a psychiatrist, fills that role. She helps students cope with the demands of medical school.

Bagby-Stone works with an elected student wellness committee that advocates for changes that can make medical school less stressful. With input from Bagby-Stone and the student wellness committee, the School of Medicine has developed a series of interventions dedicated to improving student mental health and helping students who are struggling.

When first-year medical students arrive at MU, they go through wellness orientation to prepare for the rigors to come. Early in each school year, Bagby-Stone meets for 15 minutes individually with each M1 and M2 student for wellness check-ins to see how they are doing and to remind them she can arrange for counseling or other support if they need it. She said most of the students' concerns stem from the same source.

"It's the time demands," Bagby-Stone said. "It's the amount of information that needs to be learned in a short amount of time. It's also how to cope with perfectionism, a common issue physicians struggle with. Being a perfectionist helps us get into medical school, but once we get here, it's figuring out how to find balance."

The School of Medicine teaches skills for dealing with high-anxiety situations in sessions at the Shelden Clinical Simulation Center. Students practice interviewing skills, physical exams, breaking bad news to patients and helping victims of trauma and domestic abuse. Students can attend lunchtime talks on nutrition and fitness, stress management and mindfulness.

"We recently had a session with a focus on death, dying and dissection," Bagby-Stone said. "We were talking about their first anatomy experiences and also talking about death. We try to create the culture that allows students to talk about their emotions and reactions to their experiences."



▲ Second-year medical student Brittany Carson participates in a discussion about the best approaches to interview a young patient with behavior problems.

A buddy program pairs students with a mentor in the class above them. And first- and second-year students who fail an exam can be connected with a student or physician who went through the same thing and can reassure them that all is not lost.

"Most medical students are aware that we are in an extraordinary position of privilege when you consider the spectrum of possible human lives," said Warning, who is a member of the student wellness committee. "The goal of our efforts is to ensure that medical students who came into medical school so inspired to improve their patients' lives still have enough humanity on the other side of training to more fully fulfill that aspiration."

The most elusive solution for student mental health is finding enough time to have a balanced personal and academic life. Mary Murphy, a third-year student and a member of the wellness committee, said medical school feels like a 24/7 job. She said third- and fourth-year students are reluctant to miss a clinical rotation, even to attend a wedding or funeral, because they fear a bad evaluation.

"A lot of things we've talked about in our curriculum group is how do we express to faculty the things students need without feeling like students aren't up to par. The faculty has been super receptive to that," she said. "One thing we've talked about and hopefully we can work toward is giving students a half-day off during the week so they can do things during business hours, so they can go to the post office, go to the doctor, get their car fixed.

"We have a lot of growing to do in wellness, but I also think we're lucky to have an OME that's receptive to the things we're saying. It's never a yes or no — it's, 'How are we going to do it?' "

Luke Stephens, MD, visits with a patient at MU Health Care's family medicine clinic in Ashland. Stephens developed an interest in practicing in a small town while he was a student at the MU School of Medicine participating in the Rural Track Pipeline Program.

### **GROWING DOCTORS WITH RURAL ROOTS**

With help from two grants totaling \$5 million, MU expands efforts to address state's physician shortage.

Before college, Luke Stephens, MD '08, had never lived in a town of more than 600 people. His interests still reflect his rural upbringing in Stoutland, Missouri. He enjoys hunting, fishing and tinkering with the modified stock car he occasionally races on dirt and asphalt tracks.

That background can come in handy when Stephens sees patients at MU Health Care's family medicine clinic in Ashland.

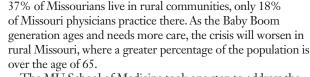
"When I'm talking to patients and trying to explain what's going on with their blood pressure, I can compare it to the hydraulics in their tractor," Stephens said. "Having that background helps quite a bit with patients to help them understand. When patients understand, they do so much better."

Stephens warmed to the idea of practicing in a small town while he was a student at the MU School of Medicine participating in the Rural Track Pipeline Program. Even after getting a taste of city life while completing a sports medicine fellowship in Chicago, he eagerly agreed to come back to mid-Missouri to lead the Ashland clinic when it opened in 2017. He was there for the clinic's ribbon-cutting — "first time I ever got to use the gigantic novelty shears" — and has tried to build a connection with the town's people. He even volunteers as the team doctor for the Southern Boone High School football team.

"I have a strong desire to work with people from a rural background," Stephens said. "My practice mostly is that."

That bond between a doctor and community is important but increasingly rare in small towns across Missouri. While

**LEARN MORE** about MU's Rural Track Pipeline Program at **medicine.missouri.edu/rural**.



The MU School of Medicine took one step to address the physician shortage with its class expansion project, which included the founding of the Springfield Clinical Campus in 2016. That allowed MU to increase its class sizes from 96 to as many as 128.

Another key initiative is the Rural Track Pipeline Program, which is designed to find and train students to practice medicine in small towns. It recruits students from rural areas through the Bryant Scholars Pre-Admissions Program and gives students clinical experience in rural health care settings during medical school.

The program, which began 25 years ago, received a boost in September when the Health Resources and Services Administration (HRSA) awarded two grants totaling almost \$5 million to the MU School of Medicine. The money will be used to expand the Rural Track Pipeline Program and to fund a new family medicine residency at Bothwell Regional Health Center in Sedalia.

Kathleen Quinn, PhD, associate dean for rural health, said the larger of the two grants — \$4.2 million over four years will support three goals.

- 1. Develop and implement new curricula to teach the broad skills needed for primary care and rural practice.
- 2. Develop and implement interprofessional curricula in which medical students can learn about rural team-based care alongside pharmacy, nursing and health professions students.
- 3. Increase the capacity of faculty who train medical students to practice medicine in a rural setting.



"Being able to care for the people you care about is what it comes down to. I'm working with entire families cradle to grave. On the one hand, I'll be the hospice physician for the family matriarch that is passing of cancer, and the next week, I'll see the newest great-grandchild in clinic."

- KENDAL GENO, MD '13 Family Medicine, Brookfield



"I enjoy the patient population in small towns. I find the people to be down-to-earth, grateful and easy to get along with. I find it easier to connect to patients in this setting. The patient/ physician relationship feels stronger in small towns, and everything seems more personal."

- COLE SCHERDER, MD '10 Family Medicine, Bowling Green

> "The Rural Track program allowing me to work and practice with providers in rural areas bolstered my confidence that highquality medicine can be practiced in even the smallest towns."

- SCOTT KIRKLEY, MD '04 Internal Medicine, Farmington

> WHERE THEY PRACTICE More than 240 MU School of Medicine graduates who participated in the Rural Track Pipeline Program work in the state.

> > **GRADUATES PER COUNTY** • • • • 1-5 6-20 21+

"Because we've had the Rural Track Pipeline Program for so many years, this grant is really about enhancing and expanding our efforts," Quinn said.

The second grant, worth \$750,000, directly addresses one contributing factor to the state's physician shortage — not enough residency slots. As of 2018, Missouri had 725 residency slots for about 1,000 graduates of the state's medical schools. The grant will fund the development of a new MU family medicine residency. Two medical school graduates will be selected each year for the residency. They will spend their first year training in Columbia and the next two years in Sedalia.

"Residents are most likely to practice in the state where they do their training," said Erika Ringdahl, MD, director of the MU School of Medicine's family medicine residency program. "Right now, we have fewer residency slots than medical students graduating in Missouri, so we're exporting medical students to other states and potentially losing them. By increasing the number of residency slots, especially in primary care, we hope to retain those physicians who trained in our state and hopefully get them into areas of the most need."

Stephens is an example of both the Rural Track Pipeline's effectiveness and the importance of keeping graduates close to home for residency. He was pre-admitted to the School of Medicine as a Bryant Scholar. He decided he wanted to practice primary care in a rural setting after spending a

summer getting clinical experience with Barton Warren, MD, in Richland, Missouri. Stephens completed his family medicine residency at MU and took his first job as a physician at MU Health Care's family medicine clinic in Fulton. Even after his fellowship in Chicago, he felt the pull of Missouri.

Stephens said he would like to buy 20 or 30 acres of farm land and enjoy country living with his wife, Amanda Stephens, MD '10, an OB/GYN at MU Health Care, and their children. Many of his patients, who hail mostly from Ashland and nearby small towns such as Hartsburg and Holts Summit, can relate to that sentiment.

"There's that natural skepticism when patients come in, but once you start talking about your similar backgrounds, I think I bond pretty well with the road construction workers and equipment operators," Stephens said. "They see me for more than just the white coat or the stethoscope.

"When I have those interactions, I really start to develop a relationship. That's when I start to learn more about them, and they open up to me and I can get to the root of it. A lot of it is not just what's going on medically but what's going on in their lives. That's when medicine is really powerful."

### SCHOLARSHIP HELPS STUDENT LEARN FROM NEW EXPERIENCES



EDUCATION

▲ Stephanie Allred received the Class of 1988 Scholarship to help pay for her second year of medical school.

As an avowed foodie who began working in her father's restaurant at age 12, Stephanie Allred has applied the "try it, you'll like it" approach to her medical education. The Kansas City native wanted to get some hands-on experience working with an OB/GYN last summer, so she signed up for the Rural Track Pipeline's Summer Community Program and headed to Sikeston.

She had a great experience in the southeast Missouri town learning from preceptor Jennifer Nickell, MD '99.

"As a city girl, I had never thought about being able to live and enjoy rural Missouri so much," said Allred, a second-year medical

LEARN MORE about the ways you can financially support the School of Medicine at medicine.missouri.edu/giving/ways-to-give.



"As a city girl, I had never thought about being able to live and enjoy rural Missouri so much. I really liked the community, and the preceptor I was with was an amazing doc."

#### - Stephanie Allred, medical student

student. "I really liked the community, and the preceptor I was with was an amazing doc. She taught me a lot about medicine but also let me mine her whole personal life for information about what it's like to be an OB in a small practice and how it affects her family life. She helped me start thinking about how a career in OB might look in my future."

The respect was mutual.

"Stephanie was very enthusiastic, which is contagious in our work environment," Nickell said. "Teaching students who are soaking in every moment really helps me to remember why I went into medicine and helps me focus on the positive impact we as physicians have in our community. Stephanie will make a great physician."

Allred began thinking about becoming a doctor in high school. She majored in biochemistry at the University of Oklahoma and dabbled in other areas, with a triple minor in French, women's and gender studies and African studies. During her junior year, she spent a semester in Uganda as a volunteer in a medical clinic.

"After that, I was really sure that medicine was what I wanted to do," Allred said. "That gave me more confidence that I could do it."

At the MU School of Medicine, she has continued to try and like new experiences. She is a co-chair of the gender-affirming clinic at the MedZou Community Health Clinic, which provides free health care to uninsured patients. Allred, who is passionate about helping others, received some help on her medical journey when she was awarded the Class of 1988 Scholarship for this school year.

"On an emotional note, it meant so much that it came from a class of physicians," she said. "I'm learning more and more that the only way to succeed in medicine is to have a really strong support system and mentors who help you get there."

### TAKING CARE OF YOUR OWN

CoxHealth Scholarship gives Davis another pillar of community support



▲ Savannah Davis, a fourth-year student at the MU School of Medicine's Springfield Clinical Campus, has received the CoxHealth Scholarship three times. Davis grew up in southwest Missouri and says the scholarship is an example of the great support she's received from the communities in the area.

Southwest Missouri is more than just the place where Savannah Davis is from. The people there have supported her when she needed them most.

When a chaotic home life led to Davis being placed in foster care at age 16, a single mom in the town of Goodman took her in. A nurse practitioner there became a mentor and helped her realize that she could be healed and become a healer herself.

"I realized how far medicine can go — not just in the clinic, but you can also play an important role in a single child's life," said Davis, a fourth-year medical student who is completing her training at the MU School of Medicine's Springfield Clinical Campus. "Having that personal experience really solidified my decision to pursue a career in medicine." "By partnering with the University of Missouri and committing to the students attending the Springfield Clinical Campus, we are able to fulfill part of our mission and advance medical education in our region."

#### Frank Romero, MD chief medical officer for CoxHealth

Davis plans to be a pediatrician. She received help along the way from the CoxHealth Scholarship. CoxHealth is one of the private partners that makes the Springfield Clinical Campus possible, and each year it presents \$4,000 scholarships to select MU medical students training in Springfield.

"Education is part of the foundation of our mission," said Frank Romero, MD, chief medical officer for CoxHealth. "By partnering with the University of Missouri and committing to the students attending the Springfield Clinical Campus, we are able to fulfill part of our mission and advance medical education in our region. We hope that we have supplied the best possible education and experience to those students that have chosen to spend two years of their medical education in Springfield. The scholarships recognize some of these exceptional students and their contributions to the MU Springfield Clinical Campus."

Davis has received the scholarship three times. Jeffrey Ruggeri, Joseph Zimmer, Maren Heller and Allison Hall are the other scholarship winners this year.

"Receiving a scholarship multiple times from the community where I grew up just shows how much community support I have," Davis said.

Davis is ingrained in Springfield and the surrounding area. When she's not busy with clinical rotations, she enjoys taking Penny, her schnoodle — a schnauzer-poodle mix — to dog parks and stopping by one of the city's dog-friendly brew pubs afterward. Davis is planning a future with her boyfriend, who is serving in the Army, so she's not sure where their careers will take them, but she has a favorite destination in mind.

"I really hope we end up somewhere back in the Midwest, preferably a place where I can work with rural communities," Davis said. "If we ended up in Springfield, Missouri, I would not be unhappy at all. I love the area."



# **Okorodudu** follows the lead of his mentor in inspiring black students to pursue medicine

One day, when Dale Okorodudu, MD '10, was an undergraduate student at the University of Missouri, he stopped by the office of Ellis Ingram, MD. A fixture at the MU School of Medicine for four decades as an associate professor of pathology and anatomical sciences, Ingram took a particular interest in encouraging black students to become doctors.

"He took me on a whole tour of the med school," Okorodudu recalled. "At the very end of the tour, he took me to the dean's office. Dr. Ingram said, 'This is Dale Okorodudu, and he's going to be a med student one day.' That pretty much sealed the deal for me."

Okorodudu was one of two black men in his entering class of 96 medical students. While his peers always made him feel welcome — he was the president of his M1 class — Okorodudu saw the value in making medical schools more diverse. He volunteered with Ingram's CALEB Science Club, a program that uses pre-med students, medical students and doctors to mentor kids.

Okorodudu now is an assistant professor of internal medicine at University of Texas Southwestern Medical Center and practices pulmonary medicine at the Dallas VA Medical Center. Encouraging young black students to follow his lead has become a second job.

Growing up near Houston, Okorodudu dreamed of playing professional basketball. When he topped out at 5-foot-9, he

To learn more about Dale Okorodudu's efforts to improve diversity in medicine, visit **www.blackmeninwhitecoats.org**.



▲ Dale Okorodudu, MD '10, third from left, is joined by MU medical students Abdoulie Njai, Adebayo Bello, Alinna Sam and Mahilet Assefa, Mizzou MedPrep coordinator Andrea Simmons and Ellis Ingram, MD, after Okorodudu delivered the Ellis Ingram Diversity Lecture Series presentation at the School of Medicine. Okorodudu founded Black Men in White Coats, an organization devoted to improving diversity in medicine.

realized the NBA wasn't his destiny. He said society teaches black youths to see sports or music as the only paths to success.

To change minds, he started Black Men in White Coats, an organization that holds youth summits and creates documentary videos and podcasts that expose kids to doctors and medical students who look like them. He's written three books: "How to Raise a Doctor: Wisdom from Parents Who Did It," "Pre Med Mondays: 52 Letters of Mentorship to a Future Doctor" and "Doc 2 Doc: Tony and Jace Learn About the Heart." The latter is the first book in his children's series.

Okorodudu returned to Columbia for Physicians Alumni Weekend in October and, appropriately enough, delivered the Ellis Ingram Diversity Lecture Series presentation to fellow graduates of the MU School of Medicine.

"The biggest thing is mentorship," Okorodudu said. "We have to realize if we just mentor one of these young people, we could change a life. And we shouldn't get into this thing where we think only black men can mentor black men. That's not true. Anybody can mentor anybody. Some of my greatest mentors at Mizzou were David Fleming and Robert Churchill. These people were phenomenal mentors, and they weren't black men."



### **ALUMNI NEWS**

### RECONNECTING WITH THEIR ROOTS



▲ Interim Dean Steven Zweig, MD '79, greets Michael Bukstein, MD '70, and Max Heeb, MD BS Med '51, at the Physicians Alumni Weekend banquet at the Country Club of Missouri.

The 62nd annual Physicians Alumni Weekend was held Oct. 11-12, 2019. The weekend included a day of lectures at the School of Medicine, a Friday night banquet at the Country Club of Missouri, lunch on Saturday afternoon and MU's homecoming football game against Mississippi on Saturday night.

Betsy Garrett, MD '79, presented the Ted Groshong, MD, Alumni Lecture. Interim Dean Steven Zweig, MD '79, delivered the State of the Medical School address. Dale Okorodudu, MD '10, gave the Ellis Ingram Diversity Lecture Series lecture. Russell P. Hall III, MD '75, delivered the Milton D. Overholser Memorial Lecture.



Anyone wishing to donate to the Ted Groshong, MD, Alumni Lectureship fund should contact the MU School of Medicine's advancement office at (573) 882-6100 or visit medicine.missouri.edu/ alumni/physicians-alumni-weekend.

STAY CONNECTED with the School of Medicine's alumni activities by visiting medicine.missouri.edu/alumni.





Class of 69: Graduates of the Class of 1969 gathered for their 50th year reunion. The group included, front row, Tim Taft, Ralph Mennemeyer, DeDe Doerhoff, Alan Doerhoff and ElRay Jenkins; and, back row, Robert Durst, Michael Luzecky, George Comfort, Michael Clarke, Milt English and Bob Frazier. William Crist, former dean of the School of Medicine, attended but is not pictured.



Class of 79: Graduates of the Class of 1979 who attended included Tom Harrison, Carl Migliazzo, Randall Smith, Greg Hummel, Harry Ruth, Tom Tinsman, Nancy Baker, Robert Shaw, Betsy Garrett, Jeff Copeland, Cathy Crabtree, Rocky Eibert, Michael LeFevre, Kent Tegeler, Tom Hafer, Karl Hasik, James Schell and Steven Zweig.



Class of 99: Graduates of the Class of 1999 who attended included Paul Mills, Ann Marie Sun, Michael Potts, Janelle Potts, Rebecca Dillingham, Michelle Colen, Jennie Austin, Nicolle Gunter, Troy Scheidt, Roshni Rao, Patricia Bell, Joseph Sirintrapun, Robyn Stengel Fanderclai and Cynthia Hayes. Nicole McCartan attended but is not pictured.

# Class Notes



ROBERT WILLIX, MD '69, released his sixth book, "The Rejuvenation Solution: The Seven-Day Plan That Jump-Starts Ageless Health." Willix is the CEO of Enlightened Living Medicine and chief medical officer and director of Emergency Medicine at Hippocrates Health Institute in Palm Beach, Florida.



#### KARL WOLF, MD '70, family medicine, and TERRY CROASDALE, MD '84, internal medicine, are partners at Manteca Medical in Manteca. California.



JAMES DILLEY, MD '79, retired from the University of California San Francisco. He continues to work part-time as codirector of the Public Psychiatry Fellowship at Zuckerberg San Francisco General Hospital, where he served as chief of service for 11 years. He also continues with the Alliance Health Project, a program he co-founded 35 years ago, that focuses on HIV mental health.

JOEL PERLMUTTER, MD '79, conducts research on Parkinson's disease and related disorders and directs the Movement Disorders Clinic in the Department of Neurology at Washington University, where he has worked for 39 years.

### 280s

FRED HAUSHEER, MD '82, serves as the global chief medical officer for WuXi AppTec, providing medical, scientific and commercial development strategy, regulatory compliance, risk management and oversight for preclinical translational medicine and global clinical development operations. He lives in Austin, Texas, and Shanghai, China.

### '90s

THE CLASS OF 1999, led by CYNTHIA HAYES, MD, raised \$25,000 in less than four months to name a Student Seminar Room in the MU School of Medicine's Patient Centered Care Learning Center in memory of their classmate and friend CHRIS BOSCHE, MD. Bosche aided in the rescue and recovery efforts at Ground Zero on Sept. 11, 2001, and later developed a synovial sarcoma of the lung, a rare cancer that has been associated with 9/11 responders. All donations will be added to the Patient-Based Learning Scholarship Fund.

### 200s

KARA BRAUDIS, MD '09,

played a lead singing role in the Larry D. Clark Summer Repertory Theatre production of the musical "Ragtime" at MU. Braudis is an assistant professor of clinical dermatology and director of dermatopathology at the MU School of Medicine.



DALE OKORODUDU, MD '10, was honored on Nov. 2, 2019, by the Clear Creek Education Foundation with the 2019 Distinguished Alumni Award. He is a 2002 graduate of Clear Creek High School in League City, Texas. Okorodudu was also recently recognized with the UT Southwestern 2019 Rising Star Award, an honor recognizing exceptional early career clinical faculty whose actions and activities consistently exemplify enthusiasm, commitment, professionalism and leadership.

ADAM GRUMKE, MD '16, is a general pediatrician with Summit Pediatrics in Lee's Summit, Missouri.

### JOINING ALUMNI ASSOCIATION HELPS COUPLE FIND CONNECTIONS

#### **GEMA AND JIM SIMMONS**

graduated from the MU School of Medicine in 1998. Soon after settling in Omaha, Nebraska, where she is an OB/GYN for Associates in Women's Health and he is a family medicine physician at University of Nebraska Medical Center, they joined the Mizzou Alumni Association and became active



in their local "Tigers of the Corn" chapter.

"Joining the alumni chapter gave us a network of individuals that quickly became friends in a community that was new to us," Gema said. "As graduates of Mizzou, both undergraduate and medical, we feel the need to not just be consumers of MU, but contributors to the future that Mizzou has to offer others."

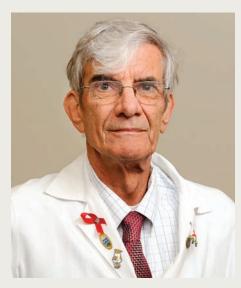
The Simmonses have been Missouri football season ticket holders since 2006 and regularly return for Physicians Alumni Weekend.

"We had a great time at our 20th reunion last year," Gema said. "A couple of our classmates actually became football season ticket holders this year, so we now get to see them more often."

To learn more about the benefits of joining the MAA, visit medicine.missouri.edu/alumni/membership.

### **In Memoriam**

### **'WE'VE REALLY LOST A GIANT HERE'**



Bill Salzer, MD, was beloved by students and patients for his knowledge, humor and passion for medicine.

#### written years before.

When Rockett spent time with Salzer, he found the hype about Salzer's intelligence was accurate, but his true gift was translating the complicated science in his head into plain-spoken stories anyone could understand.

"He had this very characteristic way of talking that used a lot of layman terms instead of medical jargon, which was very helpful as a learner new to medicine," said Rockett, who is now a fourth-year medical student. "For example, when going over an EKG, he would say something along the lines of, 'Take a look at dem wiggly-jiggly bits right der. You see where dis part goes down first before coming up? Dat's a Q wave and means he had a heart attack at some point."

Salzer died of cancer on Sept. 28, 2019, at the age of 68.

"I don't think people realize what we've lost," said Michael Hosokawa, EdD, the senior associate dean of education and faculty development. "We've really lost a giant here."

Salzer joined the MU School of Medicine in 1992. He came from the Wake Forest School of Medicine, which used a patientbased learning curriculum, and he helped Hosokawa and MU's curriculum design committee switch from a lecture-based system to PBL in 1993.

Hosokawa said he and Salzer developed a genially combative friendship.

"He was a nonconformist," Hosokawa said. "He had little or no patience with rules and policies. To my knowledge, he never got his course outline to us in time to publish it ahead of time. It was always published in parts when he got around to it. But he was one of the most likable people I knew. There were times he was a thorn in my side, but I had tremendous respect for him."

John Rockett was nervous before meeting Bill Salzer, MD, a professor of clinical medicine and the director of the Division of Infectious Diseases at the MU School of Medicine. The stories Rockett heard from other students portrayed Salzer as an "omnipotent being," a brilliant man who could recite almost verbatim the key passages of journal articles

In 2018, Salzer won the Jane Hickman Teaching Award, the highest honor MU bestows in medical education. In July 2019, the Infectious Diseases Society of America honored Salzer with its Clinical Teacher Award, which recognizes people who have dedicated their lives to teaching fellows, residents and medical students about infectious diseases. Salzer focused much of his career on the treatment of HIV-positive and AIDS patients, establishing one of the earliest HIV clinics in America, which continues to this day. He served on the Regional AIDS Interfaith Network board and was the regional medical director of the Ryan White HIV/AIDS Program.

"Students and faculty held him in reverence for his intelligence, knowledge, work ethic, quick wit and ability to tell the unvarnished truth as he saw it," said Stephen Halenda, PhD, associate professor of medical pharmacology and physiology and the faculty director of pre-clerkship curriculum. "A tireless worker to the end, he never gave up, even when those who loved him encouraged him to get some rest. Bill's memory will live on as an inspiration for medical educators."

Salzer is survived by his wife, Sue, his daughter, Lily, and three stepchildren, John France, Max France and Hallie France. His memory lives on with a generation of former students. In 2011, students created a Facebook group called the Bill Salzer Historical Society as a forum to share their favorite stories about him. It has more than 700 members.

"He loved to watch sports, hated rules, red tape, discussions about money and was extraordinarily irreverent regarding most things in life, with the exception of his great calling medicine," said Stevan Whitt, MD '94, associate professor of clinical medicine and MU Health Care's chief medical officer. "He had a virtual cult of followers, which I do not think he knew about, and he will be missed by hundreds of his former students, trainees, colleagues and friends like me."

Rockett said it was hard for him to explain how important Salzer was to him, but what he felt when he walked away from their first day together has stuck with him.

"I was left thinking, 'I don't know who that guy was or how he was able to remember all that stuff in such detail, but, man, his patients love him and he was a great teacher and the residents liked him a lot,' "Rockett said. "I hope that I can be just like him when I'm a doctor."

**TO HONOR DR. SALZER**, a campaign has been launched to raise f<u>unds for a PBL</u>

classroom in his name. To donate, visit **mizzougivedirect.missouri.edu** and click on the School of Medicine tab.

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### In Memoriam

### '40s

**DONALD STALLARD SR., MD BS MED '45**, of St. Joseph, Missouri, died on April 10, 2019, at the age of 96. Stallard was an Army veteran of World War II and the Korean War and received the Korean Service Medal and Combat Medical Badge. Stallard practiced internal medicine for more than 35 years and served as the president of the Buchanan County Medical Society.

**JOHN MIDDLETON, MD BS MED '49**, of Louisiana, Missouri, died on July 21, 2019, at the age of 93. Middleton served in the Army in Italy during World War II. He co-founded the Pike County Medical Group, where he practiced medicine for more than 30 years, and served on the Pike County Hospital board. After retiring, he served as a cruise ship physician traveling around South America and Hawaii.

**CHARLES BAHN, MD BS MED '49**, of McCordsville, Indiana, died on Apil 23, 2019, at the age of 92. Bahn served in the Air Force in Okinawa, Japan. He was a gastroenterologist in Cape Girardeau, Missouri, for 30 years. In the 1970s, he pioneered a fiberoptic colonoscopy procedure and laid the groundwork for the Cape Girardeau Doctors Park medical campus.

'50s

**DALE SPARKS, MD BS MED '53, RES '61**, of Canyon Lake, California, died on Aug. 15, 2019, at the age of 90. Sparks was a chief medical officer in the Navy, serving in Korea. He was board-certified in internal medicine, allergy, immunology and pulmonology and worked closely with the World Health Organization in developing disease control containment methods. Sparks served as the chief of staff at Riverside General Hospital, was professor of medicine at Loma Linda University and past president of the American Medical Association Western Division and the Academy of Allergy and Immunology.

**FRANK TULL, MD BS MED '53**, of Creve Couer, Missouri, died on Aug. 3, 2019, at the age of 90. Tull served as a Navy flight surgeon at the El Toro Marine Base in California. He was an orthopaedic surgeon in private practice in Sikeston, Missouri, and Muskogee, Oklahoma.

**ARNOLD FUNCKES, PHD '53, MD '58**, of Tucson, Arizona, died on Aug. 11, 2019, at the age of 92. A veteran of World War II, Funckes specialized in pathology for more than 60 years, teaching at the University of Arizona College of Medicine and working at the VA Hospital and Davis-Monthan Air Force Base. He oversaw the labs at Benson Community Hospital and Northern Cochise Community Hospital before fully retiring at the age of 91.



**GARTH RUSSELL, MD RES '60, RES '66**, of Palm Beach Gardens, Florida, died on July 29, 2019, at the age of 89. Russell served in the Army in World War II. Russell was an orthopaedic surgeon who co-founded the Columbia Orthopaedic Group in 1965. He was a frequent national medical expert consultant in cases involving legal dispute.

**ROBERT STOCKWOOD, MD '60**, of Sedalia, Missouri, died on July 10, 2019, at the age of 84. Stockwood served in the Army as a senior flight surgeon for seven years, attaining the rank of major. He was a practicing OB/GYN physician for more than 40 years and served as chief of staff at Bothwell Regional Health Center.

**ROBERT LITTLEJOHN, MD '61**, of Lees Summit, Missouri, died on Sept. 25, 2019, at the age of 84. Littlejohn, an orthopaedic surgeon, is the namesake of the Littlejohn Family Keynote Lecture given annually at MU's Comparative Orthopaedics Day. Littlejohn and his wife, Marilyn, received the 2013 Making a Difference Award in recognition of their support, encouragement and inspiration provided to the MU Department of Orthopaedic Surgery and the Thompson Laboratory for Regenerative Orthopaedics.

**JOHN ESTHER, MD '61, RES '67**, of Joplin, Missouri, and Garfield, Arkansas, died on July 6, 2019, at the age of 87. Esther was a captain in the Marine Corps and Marine Corps Reserves. He was a pathologist and partner/president of Ferguson Laboratories in Joplin. Esther served as chief of staff for St. John's Hospital and was an officer of the Jasper County Medical Society.

**RICHARD WALLACE, MD '62**, of Reno, Nevada, died on Jan. 7, 2019, at the age of 82. Wallace served in the Army in Vietnam. He was a psychiatrist licensed to practice in several western states.

**DONALD LINDBERG, MD RES '63**, of Germantown, Maryland, died on Aug. 17, 2019, at the age of 85. Lindberg was a pathologist and a pioneer in medical informatics. He was professor of medicine at MU for 24 years and held faculty appointments at the University of Maryland and the University of Virginia. For 31 years, Lindberg served as the director of the National Library of Medicine within the National Institutes of Health, where he played an integral role in the establishment of the National Center for Biotechnology Information and oversaw the digitization of Index Medicus into PubMed. Lindberg was also the founding president of the American Medical Informatics Association, the founding director of the White House High Performance Computing and Communications Program and the national coordinator for the G7 Global Healthcare Applications Project. **ROBERT BROWNING, MD '63**, of Poway, California, died on July 8, 2019, at the age of 81. Browning served 27 years in the Navy and five years in the Marine Corps. Among his many assignments, he was the chief of pediatrics and executive officer of the Naval Hospital in Port Hueneme, California, and assistant chief of pediatrics at the Naval Hospital in Philadelphia.

**ROBERT WALKER, MD '65**, of Spokane, Washington, died on July 17, 2019, at the age of 82. Walker served in the Army in Vietnam and at Fort Dix in New Jersey. He was an OB/GYN physician and cofounded Northwest OB/GYN.

**TIM KUBERSKI, MD '69**, of Phoenix, Arizona, died on Aug. 9, 2019, at the age of 78. Kuberski was a physician, researcher and consultant in infectious diseases, with an interest in tropical medicine, HIV/AIDS and Valley Fever. In addition to his many years in practice and research in Hawaii, the South Pacific and Phoenix, he served as the acting chief of infectious diseases at Maricopa Medical Center and served as a drug study investigator at the Southwest Center for HIV and AIDS. He received the 2007 Clinician of the Year award from the Infectious Diseases Society of America.

270s

**HAROLD KANAGAWA, MD RES '71**, of Nixa, Missouri, died on April 9, 2019, at the age of 79. Kanagawa was a captain at Bergstrom Air Force Base in Austin, Texas. He joined Internal Medicine Inc. in 1971 and brought progressive medical advances to Jefferson City, Missouri, including creating an echocardiology department and heart catheterization laboratory at St. Mary's Hospital. Kanagawa served as medical director of the Heart Center, chief of staff at St. Mary's Hospital, medical director of St. Mary's Intensive Care Unit and president of the Cole County Medical Society.

**RICHARD ALDER, MD '72, RES '77**, of Providence, Utah, died on July 11, 2019, at the age of 74. Alder was a general surgeon for 33 years, serving McKay-Dee and St. Benedict's hospitals in Utah.

**THOMAS DODD, MD '76**, of Poplar Bluff, Missouri, died on Aug. 7, 2019, at the age of 71. Dodd was a major and medical officer in the Air Force, receiving the Air Force Commendation Medal for meritorious service. He practiced family medicine at Kneibert Clinic, Doctors Regional Medical Center and Beverly Health and Rehabilitation in Popular Bluff.

**WILLIAM MEYERS, MD '77**, of Marietta, Georgia, died on June 7, 2019, at the age of 67. Meyers was a pediatric gastroenterologist at Baylor Scott & White Hospital in Temple, Texas, and an associate professor at Texas A&M School of Medicine before relocating to Atlanta, where he practiced at Children's Gastroenterology Group and the Children's Center for Digestive Health Care. He was nationally recognized for his published research on gastroesophageal reflux in children and for his clinical expertise in celiac disease, abdominal migraines and cyclical vomiting syndrome. **VENUMBAKA REDDY, MD RES '78**, of Las Vegas died on Sept. 21, 2019, at the age of 73. Reddy practiced internal medicine El Dorado, Kansas, for 30 years, serving as chief of staff at Susan B. Allen Memorial Hospital.

### '80s

**JONATHAN ABELE, MD '84, RES '87**, of Dallas died on Sept. 6, 2019, at the age of 67. Abele specialized in internal medicine, practicing in Boonville, Missouri, and Dubuque, Iowa, before retiring in 2016. Abele elected to participate in the UT Southwestern Medical Center's Willed Body Program for medical education and research.

**MELANIE MCCLEAVE, MD '88**, of Anchorage, Alaska, died on Dec. 29, 2018, at the age of 56. McCleave specialized in obstetrics and gynecology.

### '90s

**DANNIE GIPE JR., MD '97**, of New York died on June 20, 2019, at the age of 49. Gipe was senior director of Clinical Sciences, Cardiovascular and Metabolism for Regeneron Pharmaceuticals and was instrumental in bringing cholesterol-lowering Praulent to market.

**KEVIN GOEWERT, MD '98**, of Houma, Louisiana, died on July 3, 2019, at the age of 47. Goewert was an emergency physician at Terrebonne General Medical Center.

### FACULTY

**DAVID LAFRENZ, PhD**, of Columbia died on Sept. 15, 2019, at the age of 72. Lafrenz was a research microbiologist at Truman VA Hospital and served as the director of Flow Cytometry and associate director of the Cell and Immunobiology Core at MU.

### CALLING ALL ALUMNI

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# 63rd Annual MEDICAL ALUMNI AWARDS

FRIDAY, APRIL 17, 2020 Columbia, Missouri

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