

A PUBLICATION OF THE UC DAVIS SCHOOL OF MEDICINE

UC DAVIS HEALTH

Spring 2023

New Institute for

PSYCHEDELICS

& Neurotherapeutics

page 22

Among America's best grad schools *page 3* 50 years of world-class burn care *page 26*

New clinical services, partnerships, tech & advances *page 12-21*

Reimagining health care



I'm deeply excited about the future of health care, as UC Davis Health is absolutely focused on what we want to accomplish, which is to deliver equitable health care for every single person — whether they are our patients or not.

The possibilities are limitless — if we get it right. Earlier this year, I spoke at a TEDxFolsom conference about reimagining health care, and why it matters so much to patients, communities, and health professionals

everywhere. You can watch it online at [ucdavis.health/tedx](https://www.ucdavis.health/tedx).

In that talk, I mentioned health care is increasingly becoming more personalized through artificial (“augmented”) intelligence, an “inside out” approach (tailored at the patient’s cellular or genetic level), and being “always on,” that is, integrated into peoples’ daily life by the Internet of Things. Patients today expect a partner to help them with their health, when and how it’s most convenient for them. This includes virtual care, at-home prescription delivery, remote monitoring, digital diagnostics and decision support, and self-service applications.

After all, if I can use my phone to custom order dinner and it arrives at my door in half an hour, why can’t medical care be this convenient too? We’ll realize enormous benefits once we can achieve this — integrating the vast data across multiple siloed systems to improve efficiencies and the care experience for both patients and providers. We know that:

- More than two-thirds of patients want their care teams to ask about their own collected data and include this in decision-making while evaluating the patient’s health.
- Hospital-at-home programs have proven effective in reducing complications, while cutting the cost of care by 30 percent or more.
- Automation can reduce health care operational costs by up to 30 percent.

While health care is the most change-adverse industry in the country, technological change happens, no matter how hard you fight it or how little you want it.

UC Davis Health’s amazing work these past couple of years in the digital transformation along with our strides in patient and employee equity, hospital sustainability, employee engagement programs, regional partnerships, nation-leading growth and building has resulted in personal recognition more indicative of the work of thousands than of one. Reflecting this, I was honored and humbled to be named among the “100 Most Influential People” in health care by *Modern Healthcare*, and “CEO of the Year” by Press Ganey. Press Ganey works with more than 41,000 health care facilities in its mission to improve the overall safety, quality, and experience of care.

It’s no small wonder that UC Davis has joined an exclusive group of fewer than 20 public universities in the nation surpassing \$1 billion in research funding. On top of this, *U.S. News & World Report* annually ranks UC Davis Medical Center as Sacramento’s No. 1 hospital, and the publication ranks us among nine adult specialties and five pediatric specialties nationally. We serve more than 1.5 million patients annually as the only academic medical center between San Francisco and Portland, Oregon, and the Pacific Ocean and Salt Lake City, Utah. Over our past 152 years, from our origins as a county hospital at Stockton Boulevard and X Street to our world-class health system, people have come to understand that UC Davis Health’s relationships and partnerships are firmly grounded in trust.

As Stephen M.R. Covey once said, “Trust is the new currency of our interdependent, collaborative world.”

Trust is earned each day, every day, and there is still much work to be done to build the trust it will take to successfully reimagine health care. As you’ll see in this fascinating issue, UC Davis Health has many groundbreaking innovations underway to move this forward, including our new psychedelics and neurotherapeutics institute, ways we’re further increasing medical school diversity, an expanded robotic neurosurgery program, and our WellCent initiative to advance digital medicine. Please enjoy the good news!

Yours in health,

A handwritten signature in black ink that reads "David Lubarsky".

David Lubarsky, M.D., M.B.A., F.A.S.A.

Vice Chancellor of Human Health Sciences

Chief Executive Officer, UC Davis Health

Trailblazing research and cultivating a diverse physician workforce to improve lives



This spring marks several notable successes for our remarkable UC Davis School of Medicine community. We continue to be a national role model in training talented, diverse physician leaders and trailblazing new research frontiers.

This year, the Blue Ridge Institute for Medical Research again placed our school among the nation's leading medical schools for National Institutes of Health (NIH) funding – with more than \$200 million

in NIH grants in 2022. *U.S. News & World Report* also ranked our school among the top 50 medical schools for research.

Leveraging our strength in transdisciplinary research, this year the School of Medicine and College of Letters and Science collaborated to help launch the UC Davis Institute for Psychedelics and Neurotherapeutics. The institute seeks to advance basic knowledge about the mechanisms of psychedelics and translate it into safe and effective treatments for diseases such as depression, post-traumatic stress disorder, addiction, Alzheimer's disease, and Parkinson's disease.

In March, all 106 of our fourth-year medical students who participated in the national Match Day program were matched to prestigious residency programs across specialties. The vast majority, 82%, will stay in California after graduating in May, and 23% will remain at UC Davis Health.

Most of these fourth-year students, 58%, will go into primary care programs. We are proud that these talented future primary care providers are optimally prepared to meet their patients' needs, especially those in rural and other underserved communities.

This spring, the School of Medicine again ranked in the top 10 in the country for diversity, primary care and family medicine, and was 15th in psychiatry.

Our school also received national recognition from the Association of American Medical Colleges and news outlets for our leadership in achieving one of the most diverse medical schools in the country.

Key to our success are our many collaborative pre-med pathway programs. This includes our newest program, Avenue M, which creates a pathway from community college to medical school in order to address the shortage of primary care physicians in California's medically underserved areas. This is one of seven of our innovative pathway programs helping us to develop a physician workforce in California that better reflects the state's population, and will contribute to improving the lives of diverse communities statewide.

We believe strongly in putting our school's values into action. An excellent example of this was our February School of Medicine Habitat for Humanity of Greater Sacramento 2023 Build for Unity event. It was yet another meaningful way for students, trainees, faculty, and staff from across our school

We continue to be a national role model in training talented, diverse physician leaders and trailblazing new research frontiers.

to make a positive impact in the Sacramento region.

Thank you for supporting our school community as we collectively reach new heights in our education, research, clinical care, and community partnership missions.

Sincerely,

A handwritten signature in black ink, appearing to read 'Susan Murin', written in a cursive style.

Susan Murin, M.D., M.Sc., M.B.A.

Interim Dean, UC Davis School of Medicine

Professor, Pulmonary Critical Care and Sleep Medicine

SPRING 2023
VOL 19 / NO 1

*A publication for alumni,
donors, faculty and friends
of UC Davis Health*

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NOTEWORTHY: CLINICAL UPDATES

Select updates about new centers,
services, partnerships, technology,
and milestones.

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PSYCHEDELICS AND NEUROTHERAPUTICS

A new institute aims to help translate
psychedelics into safe treatments for
depression, Alzheimer's, and more.

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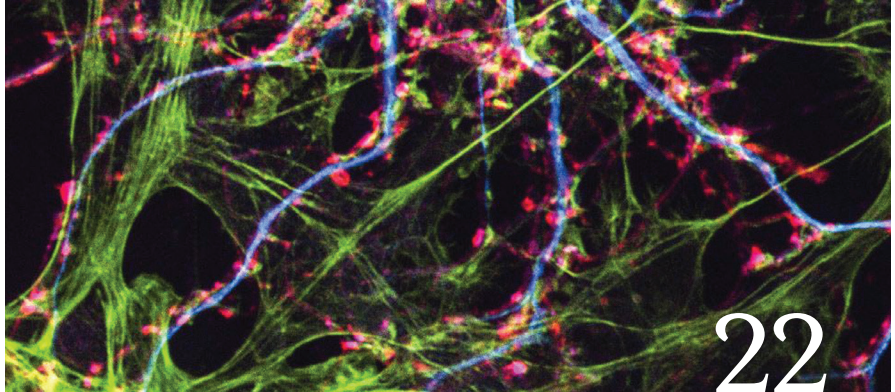
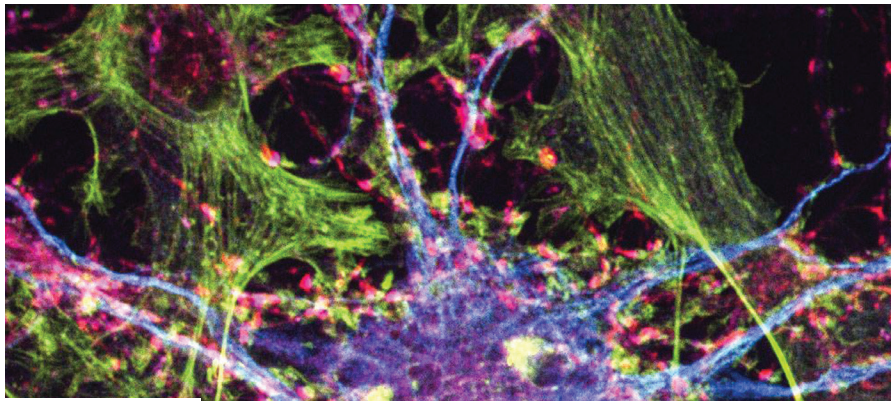
SILVER LINING

How a deadly jet crash 50 years ago
spurred today's world-class burn care
at UC Davis Medical Center.

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PIONEERING A PROFESSION

Much has changed since UC Davis'
first class of Family Nurse Practitioners
graduated in 1973.



On the cover: A false-colored image shows how neurons treated with LSD sprout more branches and spines. (Image credit: Calvin and Joanne Ly)

departments

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AMONG THE COUNTRY'S BEST IN HEALTH CARE EDUCATION

The UC Davis School of Medicine continues its upward trajectory into national prominence, as shown in the latest academic rankings released by *U.S. News & World Report*.

The 2023–2024 *U.S. News* Best Graduate Schools released in May placed two of the School of Medicine's medical education programs in the top 10 for all schools: family medicine as fifth (up from seventh last year) and primary care as sixth (up from eighth last year). The publication also ranked psychiatry as the 15th best program nationwide.

UC Davis was also ranked the third most diverse medical school in the country, as it was last year. And it ranked 50th in research (tie), up one spot from the year before. The public health graduate program was ranked 22, tied with five other schools.

The Betty Irene Moore School of Nursing at UC Davis has also seen great strides in its national standing, especially considering it opened to students just 13 years ago.

U.S. News ranked the school's master's-degree programs in nursing as 23rd for the third year, tied with three other schools. The rankings include the Master's Entry Program in Nursing and the master's degree family nurse practitioner (F.N.P.) program.

In addition, for the first time the Master of Health Services — Physician Assistant Studies Degree Program (P.A.) moved up to 40th in the nation, tied with five other programs. The program came in at No. 74 the last time P.A. programs were ranked in 2019.

"UC Davis School of Medicine and Betty Irene Moore School of Nursing continue to distinguish themselves as national leaders in training the next generation of health care providers and research innovators," said David Lubarsky, M.D., M.B.A., F.A.S.A., CEO of UC Davis Health and vice chancellor of human health sciences. "Their commitment to excellence and providing leading-edge health care with compassion is central to our mission at UC Davis Health."



Record School of Medicine research funding helps university top **\$1 BILLION**

The UC Davis School of Medicine logged a record-high total of \$396 million in external research funding for fiscal year 2021–22, an increase of \$29 million over the previous year. That helped UC Davis as a whole to reach a major milestone by attracting \$1.07 billion in external

research funding in fiscal year 2021–22, up \$102.9 million from the previous record set last year. UC Davis now joins an exclusive group of fewer than 20 public universities in the nation surpassing \$1 billion in research funding.

In its 2022 ranking, the Blue Ridge Institute for Medical Research placed the School of Medicine among the nation's leading medical schools for National Institutes of Health (NIH) funding. It ranked the school 32nd nationally — one spot higher than last year — with nine departments ranking in the top 20 nationally in their respective fields (see left). This comes as the school breaks its previous record for NIH research funding, with more than \$200 million in grants.

"Yet again, the UC Davis School of Medicine's extraordinary research

\$1.07 billion
UC Davis external research funding

\$396 million
School of Medicine external research funding

\$201 million
School of Medicine NIH funding

teams have achieved record-high NIH funding and increased our school's national ranking," said Susan Murin, M.D., M.Sc., M.B.A., the school's interim dean. "We are grateful to our pioneering researchers across all disciplines who are discovering pathways to new treatments and cures and helping us deliver tomorrow's health care today."

School of Medicine departments in Top 20 for NIH funding:

- Cell Biology and Human Anatomy, 17th
- Dermatology, 14th
- Neurology, 11th
- Pharmacology, 20th
- Physical Medicine and Rehabilitation, 16th
- Physiology and Membrane Biology, 14th
- Psychiatry and Behavioral Sciences, 15th
- Public Health Sciences, 6th
- Urology Surgery, 10th

Galante named Interim Chief Medical Officer Elect



With the upcoming retirement of **J. Douglas Kirk, M.D., F.A.C.E.P., F.A.C.C.**, as Chief Medical Officer for UC Davis Health and UC Davis Medical Center, **Joseph Galante, M.D., M.B.A., F.A.C.S.**, has been named Interim Chief Medical Officer Elect to help ensure smooth transitions of patient care and quality outcomes. Galante assumed the elect role in February, will become Interim Chief Medical Officer this summer after Kirk's retirement, and will serve in that role until at least the end of 2023.

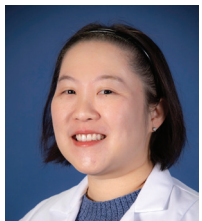
Last year Kirk announced he would retire in 2023 after more than 35 years with UC Davis. As Chief Medical Officer, he is UC Davis Health's senior officer for patient safety and quality, serving as a liaison among the hospital, School of Medicine and self-governed medical staff. He leads the Division of Clinical Affairs, which includes 11 departments, including Quality and Safety, Clinical Informatics, and Medical and Regulatory Affairs, with oversight of the licensure and accreditation of the hospital and clinics.

Kirk began post-graduate training at UC Davis in 1988 and joined the faculty in the Emergency Department in 1991, later becoming a professor, Vice Chair of Clinical Operations, and founder and Medical Director of the Chest Pain Evaluation Unit. He served as both Chief of Staff and Associate Chief Medical Officer at UC Davis Medical Center before becoming Chief Medical Officer in 2013.

Galante, who serves as Associate Chief Medical Officer for Surgical and Procedural Area, has more than 20 years with UC Davis Health, and was a member of the U.S. Navy Reserve who served with distinction in the U.S., Western Pacific, and Afghanistan. He completed both his surgical residency and critical care fellowship at UC Davis, and will continue to serve as Medical Director for Trauma.



Say vice chair of ambulatory operations at UC Davis Children's Hospital



UC Davis pediatric gastroenterologist **Daphne Say, M.D.**, has been appointed to the new position of vice chair of ambulatory operations at UC Davis Children's Hospital, where she will serve as a physician-administrator to lead pediatric ambulatory care. Her job duties include engaging

in administrative oversight of physician provider issues at the UC Davis Glassrock Clinic, pediatric subspecialty clinics, Sacramento Native American Health Center and Sacramento County Health Center. The role was created after **JoAnne Natale, M.D., Ph.D.**, was appointed to the new role of associate chief medical officer of children's services, a physician-administrator position for pediatric inpatient care.

Cancer center's new chief translational officer



A new chief translational officer and associate director for translational research is overseeing interdisciplinary efforts at the UC Davis Comprehensive Cancer Center that translate lab discoveries into new therapies. **Nicholas Mitsiades, M.D., Ph.D.**, professor with the Department of

Internal Medicine, was also named the Albert Holmes Rowe Chair of Genetics III, Endowed Chair. Mitsiades is a physician scientist and clinically trained medical oncologist and endocrinologist specializing in prostate cancer. He focuses on providing state-of-the-art care to socioeconomically disadvantaged patients and equitable access to molecular testing and biomarker-driven targeted therapies and clinical trials.

Nation's first vice chair for geriatric emergency medicine



Katren Tyler, M.D., has been named vice chair for Geriatric Emergency Medicine and Wellness in the UC Davis Department of Emergency Medicine, making her the first to be named to this role in the nation. Tyler developed a geriatric emergency

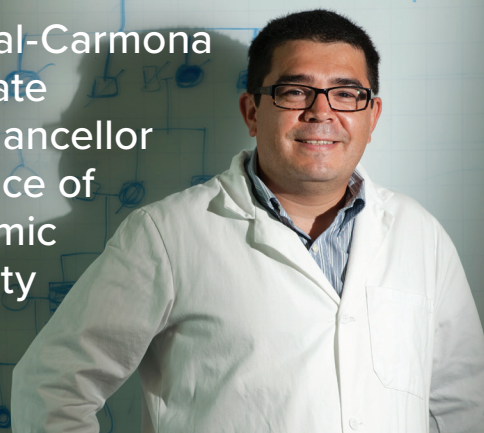
medicine fellowship five years ago — the fourth in the U.S. and only on the West Coast — and has served as physician lead in development and accreditation of the UC Davis Age-Friendly Emergency Department. Under her leadership, last year it was awarded Level 1 Geriatric Emergency Department Accreditation by the American College of Emergency Physicians (ACEP), joining 21 other U.S. EDs with highest-level gold status.

Hacein-Bey chief of neuroradiology



Lotfi Hacein-Bey, M.D., an internationally renowned diagnostic and interventional neuroradiologist recognized for expertise in stroke and cerebrovascular disease, is the new chief of the Division of Neuroradiology in the UC Davis Department of Radiology. Hacein-Bey is a fellow of the American Society of Functional Neuroradiology, has authored more than 100 peer-reviewed publications, and serves on the editorial boards of the *Journal of Neuroradiology*, *Diagnostic and Interventional Imaging*, *The Scientific World Journal*, and *Journal of Reports in Medical Imaging*. He previously held faculty postings at Columbia University, the Medical College of Wisconsin, and Loyola University.

Carvajal-Carmona associate vice chancellor for Office of Academic Diversity



The UC Davis Office for Diversity, Equity and Inclusion (DEI) has announced the appointment of **Luis Carvajal-Carmona, Ph.D.**, as associate vice chancellor for the Office of Academic Diversity. Carvajal-Carmona is associate director for the Inclusivity, Diversity, Equity and Accessibility office and founding director of the Latinos United for Cancer Health Advancement initiative and of the Center for Advancing Cancer Health Equity at the UC Davis Comprehensive Cancer Center. He also co-directs the Community Engagement Program at the UC Davis Clinical and Translational Science Center (CTSC).

Mendoza-Ladd new medical director of endoscopy

Antonio Mendoza-Ladd, M.D., A.G.A.F., F.A.C.G., F.A.S.G.E., is UC Davis Health's new medical director of endoscopy in the Division of Gastroenterology and Hepatology, where he will lead a new center focused on interventional endoscopy. The center will operate out of a new leading-edge endoscopy suite that opened last year at UC Davis Medical Center. Mendoza-Ladd has pioneered interventional endoscopy throughout his career, including performing groundbreaking gastric and endoscopic surgical procedures. He joins UC Davis Health from the University of New Mexico, where he developed a third space endoscopy program and served as medical director of endoscopy.



More leadership updates:

New associate director for cancer center Office of Community Outreach and Engagement [PAGE 15](#)

New chief of transplant surgery [PAGE 16](#)

Lubarsky one of 100 Most Influential People in Healthcare



UC Davis Health CEO **David Lubarsky, M.D., M.B.A., F.A.S.A.**, was recognized by *Modern Healthcare* in December as one of the 100 Most Influential People in Healthcare for 2022. The recognition is one of the industry's highest honors, spotlighting leaders creating the greatest impact in the health care landscape. Lubarsky, also vice chancellor of human health sciences, ranked No. 51; honorees were chosen by senior editors and industry peers.

Since his arrival in 2018, Lubarsky has recommitted UC Davis Health to expanding care for the underserved and caring for Medi-Cal patients, people experiencing homelessness, and others with few resources, while creating a sustainable financial model with a focus on patient-centered care and innovative digital health.

“It is true that such distinctions are always much more representative of team efforts than they are of any one person’s work.”

—DAVID LUBARSKY

“It is true that such distinctions are always much more representative of team efforts than they are of any one person’s work,” Lubarsky said of the award. “Our teams throughout UC Davis Health are game-changers, and they are innovating in ways that will enhance the future of health care in our region for patients and communities for decades to come.”

Lubarsky espouses an organizational philosophy that UC Davis Health will always “complete, not

compete” with other Sacramento-area organizations to improve access and care throughout the region; his recent research publications include a *New England Journal of Medicine* article on how UC Davis Health is positioning itself as a collaborative partner.

Lubarsky has also been recognized by the *Sacramento Business Journal* as a “Most Admired CEO” in 2021 and named one of America’s “100 Academic Medical Center CEOs to Know” by *Becker’s Hospital Review*.

Lubarsky CEO of the Year by Press Ganey

David Lubarsky, M.D., M.B.A., F.A.S.A.,

CEO of UC Davis Health and vice chancellor of human health sciences, has been recognized by Press Ganey as CEO of the Year. The organization’s news release noted that Lubarsky was honored for his overwhelming success since arriving at UC Davis in 2018: “He has increased revenues by more than 50% and established new initiatives to expand health care to the underserved while still maintaining financial stability. He has also led the way in technology and connectivity by creating a digital platform and virtual hospital, which has helped UC Davis adapt to industry evolution, while reinforcing empathy, inclusivity and a patient-centric ethic.”

The company also described Lubarsky as “one of the leading innovators in the country in integrating his academic medical center with the rest of his community and in re-structuring his C-Suite to reflect the importance of human experience, digital health, and equity for all.”

Five on list of world's top female scientists

Research.com's 2022 ranking of the Top 1000 Female Scientists in the World includes five UC Davis Health faculty members, with four from the UC Davis MIND Institute:



Jacqueline N. Crawley, Ph.D., is an internationally recognized leader in behavioral neuroscience, mouse behavioral genetics, and translational neuropharmacology, working to understand genetic causes of autism spectrum disorders and discover effective medical therapeutics for core diagnostic symptoms.



Randi Jenssen Hagerman, M.D., F.A.A.P., medical director of the MIND Institute, researches targeted treatment trials in Fragile X Syndrome (FXS), Rett Syndrome, Fragile X-associated Tremor/Ataxia Syndrome (FXTAS), and autism. She is credited with the discovery of FXTAS in the early 2000s.



Sally J. Rogers, Ph.D., is known for her research in developing and testing intervention strategies focused on use of the Early Start Denver Model, a well-studied developmental-behavioral intervention for very young autistic children in use around the world.



Irva Hertz-Picciotto, M.P.H., Ph.D., chief of the Division of Environmental and Occupational Health, has led a pioneering program of research on environmental factors that influence risk or severity of autism and other neurodevelopmental disorders.



Nancy E. Lane, M.D., distinguished professor of medicine and rheumatology, is an internationally recognized scientist in osteoporosis and osteoarthritis. Her translational research team has been instrumental in defining bone fragility, and she has performed many seminal trials of novel osteoarthritis treatment agents.

Two named fellows of the National Academy of Inventors

Nancy E. Lane, M.D., and **Justin Siegel, Ph.D.**, have been named Fellows of the National Academy of Inventors (NAI), the highest professional distinction awarded to academic inventors. Lane, a National Academy of Medicine member, has made major contributions to the fields of musculoskeletal diseases of aging. She discovered a compound, Llp2a-alendronate, with potential to improve bone degeneration, and holds three osteoporosis patents licensed to Rabome, Inc. Siegel is a leader in computational enzyme engineering and discovery, focusing on discovering catalysts that improve health and environmental outcomes. He holds more than 100 global patents and co-founded eight startups in the last decade, such as PVP Biologics, which developed an enzyme to digest gluten.

TOP TEN CLINICAL RESEARCH ACHIEVEMENT AWARD



Physical Medicine and Rehabilitation Chair **Craig McDonald, M.D.**, and his team have been honored with a 2023 Top Ten Clinical Research Achievement Award by the Clinical Research Forum. The award honors groundbreaking achievements in clinical research from across the U.S., with a panel selecting recipients from studies published in peer-reviewed journals in 2022. The award recognizes McDonald's work developing a stem cell therapy to treat the most severe patients with Duchenne muscular dystrophy, a rare genetic disorder that causes physical impairment and premature death. McDonald is the national principal investigator leading HOPE-2, a multicenter double-blind randomized trial; his award-winning paper on it was published in *The Lancet*.

NEUROENGINEER WINS 2022 NIH DIRECTOR'S NEW INNOVATOR AWARD



Neuroscientist **Sergey Stavisky, Ph.D.**, joins the ranks of other exceptional New Innovators as part of the NIH Common Fund's High-Risk, High-Reward Research program, awarded to exceptionally creative early career investigators who propose innovative, high-impact projects. Stavisky co-directs the UC Davis Neuroprosthetics Lab with David Brandman, M.D., Ph.D., and is working with a team to develop technology to restore abilities — like communication and movement — affected by neurological injury and disease such as ALS or stroke. They're developing electronic medical devices known as brain-computer interfaces (BCIs), placed in the brain to measure activity with the aim of helping to restore speech.

Fancher tapped for federal primary care panel



Tonya Fancher, M.D., M.P.H., has been appointed by the U.S. Health and Human Services secretary to a three-year term on the Advisory Committee on Training in Primary Care Medicine and Dentistry. The committee consists of up to 17 members appointed by Secretary of Health and Human Services Xavier Becerra, and provides recommendations on training in primary care medicine; Fancher represents a slot for general internal medicine. Fancher is the School of Medicine's associate dean for Workforce Innovation and Education Quality Improvement and oversees initiatives designed to diversify California's physician workforce, especially in underserved locations.

Kales joins Lancet Commission on dementia prevention



Helen C. Kales, M.D., chair of the Department of Psychiatry and Behavioral Sciences, is one of 26 international experts named to the Lancet Commission on dementia prevention, intervention and care. The commission has released two influential reports highlighting the growing body of scientific evidence that identifies modifiable risk factors for the disease. This is the third time Kales, a geriatric psychiatrist and an expert in caring for people with dementia, has been named to the prestigious commission. The cohort for the new report features researchers and physicians from Brazil, Japan, China, India, France, Uganda, Australia, Canada, Norway, Finland, the U.S. and U.K.

Diaz attends White House Hunger, Nutrition and Health Conference



UC Davis Health Executive Chef **Santana Diaz** was invited to participate in the White House Hunger, Nutrition, and Health Conference last fall in Washington D.C. Led by Members of Congress from across the political spectrum, the gathering of public and private leaders seeks a coordinated strategy to end U.S. hunger, improve nutrition and physical activity, and close disparities. The previous conference in 1969 helped galvanize creation of programs such as school lunches, WIC, and changes to food labeling. Diaz leads UC Davis Health's "Food as Medicine" vision and use of healthy, locally grown foods in patient meals and health campus cafes.

Marchant to Care Everywhere Governing Council

Michael B. Marchant, director of System Integration & Health Information Exchange, Innovation Technology at UC Davis Health, has been named to a three-year term on the Epic Care Everywhere Governing Council. The group of 15 voting members from across the nation provides oversight for the Care Everywhere network of health care providers that share electronic health records, part of the Epic health care software suite. As a council member, some of Marchant's goals include helping Epic navigate the 21st Century Cures exchange requirements, impacting Epic's involvement in industry HIE as a Qualified HIN (QHIN), and making improvements in future health information exchange.

Hospital, clinic recognized as age-friendly providers

UC Davis Medical Center has been awarded an Age-Friendly Health Systems Committed to Care Excellence designation from the Institute for Healthcare Improvement (IHI), and UC Davis Health's outpatient Healthy Aging Clinic separate recognition as an Age-Friendly Health System. The designations are an initiative of the IHI and the John A. Hartford Foundation, in partnership with the American Hospital Association (AHA) and Catholic Health Association of the United States (CHA). UC Davis Health's emergency department has earned Age-Friendly Health Systems Committed to Care Excellence as well,



plus Geriatric Emergency Department Accreditation from the American College of Emergency Physicians (ACEP); the medical center has earned membership in Nurses Improving Care for Healthsystem Elders (NICHE) at the Senior Friendly level. All contribute to UC Davis Health's Healthy Aging Initiative to create the healthiest, highest-functioning older adult population in Northern California.

A 2022 Health Care Climate Champion



UC Davis Health has been recognized as a 2022 Climate Champion by Health Care Without Harm, acknowledging the health system's commitment to reducing its carbon footprint. By taking part in the Health Care Climate Challenge, UC Davis Health has committed to cutting greenhouse gas emissions and preparing for extreme weather impacts and shifting disease burden. It was one of 55 health systems internationally and 19 in the U.S. recognized this year. UC Davis Health received a gold award for climate leadership and silver awards for renewable energy and climate resilience.

AMONG NEWSWEEK'S BEST HOSPITALS

UC Davis Medical Center appears on *Newsweek's* listing of the World's Best Hospitals 2023. The publication ranks over 2,300 hospitals in 28 countries, and all top 250 global hospitals. UC Davis was ranked #30 among U.S. hospitals.

RE-VERIFIED AS LEVEL I TRAUMA CENTER

UC Davis Medical Center was re-verified last year as a level I trauma center and a level I pediatric trauma center by the American College of Surgeons (ACS). As California's only level I trauma center north of San Francisco, UC Davis Medical Center is one of only three in the state with level I verification for both adult and pediatric trauma. Level I centers provide the highest level of surgical care to trauma patients, with a full range of specialists and equipment available 24 hours a day. UC Davis provides level I trauma care for a region covering six million people in 33 counties, across 65,000 square miles, and admits more than 4,000 trauma patients annually.

SCHOOL OF MEDICINE NATIONAL AWARD FOR DIVERSITY, INCLUSION



The UC Davis School of Medicine was named among the nation's top institutions in higher education for its commitment to diversity and inclusion. Last fall *INSIGHT Into Diversity* announced the school was one of 63 higher education institutions to receive the 2022 Health Professions Higher Education Excellence in Diversity (HEED) Award, which acknowledges multiple U.S. health schools – including medical, pharmacy, nursing, veterinary, allied health, and more – that demonstrate outstanding commitment to diversity and inclusion. Honorees were highlighted in the December issue. The Betty Irene Moore School of Nursing at UC Davis received the award in 2021.

America's Greatest Workplaces for Diversity, Women

UC Davis Health appears in *Newsweek's* America's Greatest Workplaces for Diversity 2023, a list of 1,000 companies that employees say respect and value different kinds of people. Scoring included a review of publicly available data, interviews with HR professionals, and an anonymous online survey of a diverse pool of employees at companies with 1,000+ workers. UC Davis Health also appears among *Newsweek's* America's Greatest Workplaces for Women 2023, a list of 600 large American companies that, according to a survey of more 37,000 female employees and other research, ranked highest on criteria like compensation and benefits, work-life balance and proactive management of a diverse workforce.



Notable quotes

“I think fungi are really the coming superbugs. I think they’re really the ones that are going to be problematic over the next decade. And Valley fever is going to be a key part of that. They are really here to stay. This battle is sort of just beginning.”

Infectious disease specialist **George Thompson, M.D.**, an expert on invasive fungal diseases, in *NBC News* coverage of Valley fever’s spread due to climate change.

“Vaccine uptake, overall, is still insufficient. It’s important to not let our guard down and believe the problem no longer exists.”

Infectious disease specialist **Natascha Tuznik, D.O.**, in a March *WebMD* special report on the future of COVID-19.

“Class struggles have a huge overlap with race.”

Mark Henderson, M.D., associate dean for admissions and vice chair for education for the UC Davis School of Medicine, in a March *STAT News* feature about the school’s approach to becoming one of the nation’s most diverse.

“We are part of a culture that celebrates violence as a means of problem-solving in a country that has made firearms more available than any industrialized country ever. We have no right to be surprised when these things (public mass violence) happen.”

Emergency medicine physician **Garen Wintemute, M.D., M.P.H.**, director of the UC Davis Violence Prevention Research Program, in January *New York Times* coverage after shootings in Monterey Park and Half Moon Bay.

“We believe that a workforce that is more reflective of our community provides better care. It’s on us to create that bridge back to the community.”

Tonya Fancher, M.D., M.P.H., associate dean for workforce innovation and community engagement at UC Davis School of Medicine, in a February *AAMC* feature about Avenue M. The UC Davis program supports community college students on a path to medical school.

“Traditional SSRIs will promote the growth of those cortical neurons, but they do so very, very slowly. It takes weeks to months for those neurons to grow back. That just so happens to be the exact same time frame that symptoms start to be addressed.”

David Olson, Ph.D., director of UC Davis’ new Institute for Psychedelics and Neurotherapeutics, in a February *Politico* article on the potential of psychedelics as better treatments for neuropsychiatric diseases.



A summary of recent findings
in clinical, translational and
basic-science research at UC Davis

Body of Knowledge



A UC Davis Comprehensive Cancer Center study found that close to half of cancer deaths between 2017–2019 (93,764 Californians) were associated with tobacco use – almost double what was previously estimated in a study of 2014 data. The new *JAMA Network Open* study researched people with one of 12 tobacco-related cancers – from lung and mouth to bladder and stomach – from 2014–2019 using data from the UC Davis-managed California Cancer Registry.



A UC Davis Health study published in *Science Advances* shows female and male hearts respond differently to the stress hormone noradrenaline. Male and female mouse hearts responded uniformly at first after exposure, but some areas of the female heart returned to normal more quickly than the male, producing differences in electrical activity. The study may have implications for human heart disorders like arrhythmias and heart failure, and how different sexes respond to medications.



New research published in *Science* has generated the first comprehensive genetic map of sarcomas and identified several new important genes that, when inherited, can cause the cancer. The first-of-its-kind study involved investigators from major sarcoma centers around the world, including UC Davis Comprehensive Cancer Center. The Australian-led research revealed 1 in 14 individuals with sarcoma carry a clinically important gene that explains why the cancer arose. In addition, researchers identified a previously unrecognized genetic pathway specific to sarcomas.

A new study led by UC Davis MIND Institute researchers confirms that brain development in people with autism differs from those with typical neurodevelopment. According to the study published in *PNAS*, these differences are linked to genes involved in inflammation, immunity response and neural transmissions; they begin in childhood and evolve across the lifespan. Understanding how the brain in a person with autism changes throughout life can provide opportunities for early intervention.



Asking patients to take a short survey on a tablet before appointments may help mental health providers identify young people at risk of psychosis, according to a UC Davis Health study. Published in *JAMA Psychiatry*, it found that when patients took a 21-question pre-visit survey, more than twice as many were identified at risk of psychosis compared to non-surveyed. However, screening did not reduce time between first psychotic symptoms and treatment.



New UC Davis Health research confirms that pediatric critical care telemedicine consults with clinicians in rural and community emergency departments result in significantly fewer interfacility transfers. Authors said the study, published in *JAMA Network Open*, is the first randomized clinical trial assessing the impact of telemedicine consults on transfer rates compared to the current standard of care, telephone consultations.

State-of-the-art eye care facility opens doors

The Ernest E. Tschannen Eye Institute significantly increases capacity for patient care and clinical trials

In December UC Davis Health welcomed patients to its new, state-of-the-art Ernest E. Tschannen Eye Institute Building, an innovative facility dedicated to advancing world-class eye care and offering hope for sight restoration.

The four-story, 78,500-square-foot building is an addition to the existing Ambulatory Care Center, and includes dedicated space for the UC Davis Eye



The Ernest E. Tschannen Eye Institute Building on the UC Davis Health Sacramento campus.

patients, with 64 examination rooms, 24 imaging rooms, state-of-the-art equipment to assess eye health, and a special pediatric ophthalmology suite. It also houses the Eye Center's vision researchers, who have received prestigious grants from the National Eye Institute; the facility will increase the center's capacity for clinical trials by an estimated 50 percent.

Current trials offered by the center include stem cell treatment for vision loss, low-energy laser trabeculoplasty therapy for glaucoma, micropulse laser treatment for diabetic macular edema, and others. The Center of Ocular Regenerative Therapies is researching gene and transplant therapies for inherited retinal diseases that, until now, have had no effective treatment.

The project began with an \$18.5 million gift from Tschannen, whose sight was restored by an Eye Center

ophthalmologist. Additional construction funding came from UC Davis Medical Center and other donors.

In 2000, Tschannen began losing his sight to glaucoma, which can result in vision loss and blindness when untreated. In 2011, his ophthalmologist referred him to the UC Davis Eye Center, where he underwent surgery by ophthalmologist Michele C. Lim, M.D., to improve his vision and manage his glaucoma.

In his remarks at a fall dedication, Tschannen said he hoped the facility would help people have better health and better lives for generations to come. He also gave special recognition to Lim, the medical director of the Eye Center, and thanked everyone for what they had done for him.

Tschannen's lifetime giving totals exceed \$38.5 million, making him UC Davis Health's largest individual donor. His funds have supported research on the optic nerve and glaucoma.



Gary S. May, Ernest E. Tschannen and Mark J. Mannis at the dedication of the new building last fall.

Center clinic and operations. It also houses the Division of Pain Medicine.

The new facility will significantly increase the clinic's capacity to see

"This is a great moment in the history of UC Davis Health and a giant step forward for our deserving patients and for the physicians who care for them. We are thankful for the generous donation from our friend, Mr. Tschannen, and all our other supporters."

Mark J. Mannis, M.D., F.A.C.S., chair of the UC Davis Department of Ophthalmology and Vision Science

"The tremendous generosity of Ernest E. Tschannen, along with the many donors who joined him, made this new building a reality. Our faculty are able to carry out their transformational work and make a global impact, all while training the next generation of ophthalmologists and serving the public."

UC Davis Chancellor Gary S. May

"UC Davis is able to achieve breakthroughs in eye health because we are a unique academic medical center with an interdisciplinary approach to helping people live better, healthier, more fulfilling lives. The Ernest E. Tschannen Eye Institute Building is a perfect embodiment of our mission at UC Davis Health."

David Lubarsky, M.D., M.B.A., F.A.S.A., UC Davis Health CEO and Vice Chancellor of Human Health Sciences

Boosting specialty care access for Medi-Cal patients

New Specialty Connect partnership with WellSpace Health brings additional care to Oak Park Community Health Center

Patients insured by Medi-Cal will have greater access to specialty care in Sacramento, thanks to a partnership between UC Davis Health and WellSpace Health, the area's largest Federally Qualified Health Center (FQHC). It's the latest in a series of efforts by UC Davis Health to provide high-quality care to people who most need it and can least afford it.

The new program, called Specialty Connect, embeds UC Davis Health providers into WellSpace Health's Oak Park Community Health Center, where they'll provide care to historically underserved populations.

The program launched in January 2023 with a UC Davis Health rheumatologist, and planning is underway to bring additional specialty services in high demand by Medi-Cal patients such as pulmonology, gastroenterology, and pediatric subspecialties.

"UC Davis Health is proud to be part of this vital partnership with WellSpace Health aimed at overcoming health equity obstacles for underserved patients," said David Lubarsky, M.D., M.B.A., F.A.S.A., UC Davis Health CEO and vice chancellor of human health sciences. "We've listened to patients, and we've learned they'd rather access their health care conveniently, in locations closer to home."

"Today we stand at the threshold of building the best specialty network ever offered to people covered by Medi-Cal in the Sacramento region," added WellSpace Health CEO Jonathan Porteus, Ph.D., at a launch event in January. "When we align our mission with our partners, there is no limit to what we can do for those we serve."

Concerted effort to improve access

Medi-Cal beneficiaries usually have many choices for primary care doctors throughout California, but struggle to find specialty care physicians due to low reimbursement rates.

UC Davis Health, however, has made a concerted effort in recent years to improve this access. About a third of all patients at UC Davis Health facilities are Medi-Cal beneficiaries.

In addition, the health system offers its specialists to Medi-Cal patients at the medical center campus and clinics around the community. It also assigns providers to work in several FQHCs where tens of thousands of Sacramento's Medi-Cal patients already receive care closer to home or to public transit.

UC Davis Health providers at the county's health center come from internal medicine, family and community medicine, pediatrics and behavioral health departments, and the Betty Irene Moore School of Nursing. The School of Medicine also has training programs there for students and residents. Specialty care provided to Medi-Cal patients at the Sacramento County Primary Care Center includes women's health, rheumatology, cardiology, nephrology, sports medicine, behavioral health, and developmental behavioral pediatrics.



"Today we stand at the threshold of building the best specialty network ever offered to people covered by Medi-Cal in the Sacramento region."

JONATHAN PORTEUS,
CEO OF WELLSPACE HEALTH

Program serves seven FQHCs

The UC Davis Health and WellSpace Health partnership is supported by Sacramento's Medi-Cal managed care health plans: Anthem Blue Cross, Molina Healthcare and Health Net; as well as participating Independent Physician Associations, including Nivano Physicians, Hill Physicians and Imperial Health. This means any Medi-Cal patient belonging to the plans, as well as patients of any of seven FQHCs, may be referred to Specialty Connect.

In addition to WellSpace, the other six centers are Elica Health, Health and Life Organization (HALO), One Community Health, Peach Tree Health, the Sacramento County Primary Care Clinic, and the Sacramento Native American Health Center.

Expanding care in fast-growing Folsom

UC Davis Health is planning to expand its facilities and services in fast-growing Folsom.

New UC Davis Health facilities, and a proposed new community, help represent the university's commitment to healthy aging.

UC Davis Health is planning a large-scale expansion of health services in Folsom, with new medical facilities and high-tech housing.

The health system has purchased a 34.5-acre parcel at the intersection of East Bidwell Street and Highway 50 in Folsom Ranch. Initial plans call for an outpatient medical office building and, in the future, a micro-hospital, an ambulatory surgery center and a hotel. The new location is part of UC Davis Health's approach of providing high-quality patient-centered care close to people's homes.

Folsom is growing at a rate of nearly 3% annually, and among that increase is people over the age of 65. In fact, El Dorado County, adjacent to the Folsom Ranch development, saw the largest increase of adults 65 and over.

Meeting the needs of a growing population

In addition to the new patient care facilities, UC Davis Health is partnering with AKT Development Corporation and Angelo K. Tsakopoulos to develop a first-in-the-world "Community for Health and Independence" in the region. The university-planned community will allow older people, and persons with disabilities, to live independently in technology-enabled homes designed with health care in mind.

In 1998, Tsakopoulos supported the creation of the UC Davis MIND Institute.

"While we are thrilled about our medical facility expansion in Folsom, we know that the key to healthy aging for people starts in their homes," said UC Davis Health CEO David Lubarsky, M.D., M.B.A., F.A.S.A. "We believe a

reimagined community that leverages technology for human-made spaces where people live, recreate and work will promote better management of chronic disease and increase independence for valuable members of this population."

Committed to supporting older adults

Through its formal Healthy Aging initiative, UC Davis Health is committed to creating the healthiest and highest-functioning older adult population in Northern California via a combination of the latest technology, high-quality personal patient care, research and innovation. Technology can help individuals achieve health and independence goals by staying in regular touch with care teams.

"With the expected population growth of older adults in the Folsom area and our goal of ensuring that we can meet patients wherever they are, we are confident the combination of our new campus and this new development will keep people healthier, in their own community, for much longer," said Thomas S. Nesbitt, M.D., M.P.H., professor emeritus and co-champion of UC Davis' Healthy Aging in a Digital World initiative.

Development of the new Folsom campus will occur over a long period to accommodate innovative care delivery or equipment that may evolve, along with unique needs of Folsom residents. The outpatient clinic is slated to be first to open in 2025. UC Davis Health will implement the project within the University of California Sustainable Practices Policy, ensuring that strong levels of energy efficiency, water conservation, waste reduction and transportation efficiency are incorporated.

ADVANCED NEONATAL CARE FOR STOCKTON REGION

UC Davis Children's Hospital has partnered with St. Joseph's Medical Center to bring nationally ranked neonatal care to premature babies in the Stockton region. As part of the agreement, UC Davis Health will provide education and training to the St. Joseph's level III NICU team; resources for its NICU, including sharing best practices and innovations in technology and treatment; access to UC Davis pediatric subspecialists for telemedicine consults; and multidisciplinary quality oversight meetings. UC Davis Children's Hospital was ranked 29th for neonatology by *U.S. News & World Report* in 2022–2023, and has a level IV-designated NICU (the highest possible rating) for the Sacramento region. St. Joseph's 30-bed Level III NICU includes a 24/7 neonatologist and pediatric hospitalist.

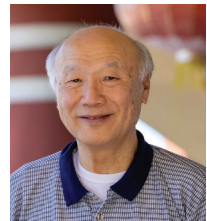


New home infusion program

UC Davis Health's new home infusion program consists of 11 home infusion nurses, clinical pharmacists, pharmacy technician navigators and administrators. Most medications are currently for patients with gastrointestinal diseases, but the team plans to expand its services this year to outpatient specialties such as genetics, neurology, immunology, rheumatology, and pulmonology. Members of the Rocklin-based team have already traveled to Truckee, Walnut Grove, Granite Bay, El Dorado Hills, Woodland, Lincoln and Placerville, with an ultimate long-term goal to serve patients within UC Davis Health's 33-county service area. For questions about the program or eligibility requirements, email hs-homeinfusion@ucdavis.edu.

Cancer center appoints new associate director for Office of Community Outreach and Engagement

Laura Fejerman, M.Sc., Ph.D., has been appointed associate director of the UC Davis Comprehensive Cancer Center's Office of Community Outreach and Engagement (COE), which works to address the cancer burden within diverse populations throughout inland Northern California. Effective July 1 Fejerman transitions into the role held by **Moon Chen, M.P.H., Ph.D.**, who helped launch the COE in 2018. Fejerman plans to focus on health equity in the diverse populations UC Davis Health serves; Chen will assume a new position as senior adviser to the cancer center director, with a focus on community

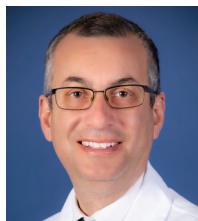


outreach and engagement as well as population sciences. He will also lead the center's innovative screening initiatives, with particular emphasis on inclusion of racial and ethnic minorities and other under-enrolled asymptomatic populations, and continue addressing disparities that disproportionately affect Asian Americans.

Partnership helps Adventist Health and Rideout achieve Level II NICU

Adventist Health and Rideout (AHRO) has received the California Children's Services (CCS) designation as an Intermediate (Level II) Neonatal Intensive Care Unit (NICU) and CCS-approved special hospital by the state of California. The designation reflects Adventist Health and Rideout's comprehensive, multidisciplinary pediatric capabilities delivered in partnership with UC Davis Health neonatology providers, and expands access and opens the door for Adventist Health and Rideout to care for premature and critically ill newborns. The designation represents untold hours by the Adventist Health and Rideout and UC Davis Health multidisciplinary team ensuring that policies, procedures, and quality of care meet CCS standards.

Alexopoulos new chief of transplant surgery



Sophoclis Alexopoulos, M.D., has been appointed the chief of the Division of Transplant

Surgery at UC Davis Health, replacing Richard Perez, M.D., who retired this year after 30 years with the organization. Alexopoulos comes to UC Davis Health from Vanderbilt University, where he was chief of the Division of Hepatobiliary Surgery and Liver Transplant, surgical director for adult and pediatric liver transplant programs, and cancer center faculty specializing in complex liver cancer surgery. Prior to Vanderbilt, he served as surgical director of the kidney transplant program at Keck Medical Center of USC, associate surgical director of the pediatric liver/intestinal transplant program at Children's Hospital of Los Angeles, and surgical director of its pediatric kidney transplant program. His extensive research portfolio includes topics such as use of machine perfusion technology to improve liver graft survival; analysis of liver transplant for hepatic malignancies; and optimization of liver transplant in critically ill patients. Alexopoulos received his medical degree from Columbia University and completed his surgical residency at Beth Israel Deaconess Medical Center and a fellowship in abdominal transplant (multi-organ transplant and hepatobiliary) at Stanford University Medical Center.

Transplant Center reaches milestone: 5,000 kidney transplants



UC Davis Health reached an institutional milestone last August when it surpassed 5,000 kidney transplants performed since its first almost 37 years ago. Established in 1985, the UC Davis Transplant Center performed 282 kidney



transplants in 2021, making UC Davis Health one of the top 10 centers in the nation for total kidney transplants. “This is a testament to our dedicated team members who have helped us develop innovative ways to help patients achieve a transplant,” said the transplant center’s medical director **Richard V. Perez, M.D.**, who has since retired after 30 years with UC Davis Health. “It is that dedication that has led us

to be recognized as one of America’s top transplant centers.” UC Davis Health has also been selected as a model hospital by the United Network for Organ Sharing (UNOS), and chosen to guide national best practices for transplant by the Centers for Medicare & Medicaid Services.

New endocrinology clinic for kidney transplant patients

UC Davis Health has established a new one-stop transplant endocrinology clinic to improve care of diabetes and other endocrinology disorders for kidney transplant patients, becoming one of the few hospitals nationwide with a dedicated transplant endocrinology clinic. The clinic team includes two endocrinologists — Prasanth Surampudi, M.D., associate professor of endocrinology, and Aili Guo, M.D., clinical professor of endocrinology — who monitor and manage insulin therapy for patients, since post-transplant medications make insulin and blood sugar levels difficult to control. Patients also work closely with a nutritionist to establish dietary interventions. Post-transplant diabetes mellitus (PTDM) affects up to 50% of kidney transplant patients, and is most commonly diagnosed during the first year after transplant.

UC Davis Health adopts low pressure surgery systemwide

UC Davis Health has adopted low pressure insufflation as the standard for all surgical laparoscopic procedures, utilizing ConMed's AirSeal® System, becoming the first multi-site health system in the nation to implement the practice systemwide. By offering a low-pressure insufflation option for every laparoscopic procedure, surgeons can safely operate at lower intra-abdominal pressures, shown to improve patient outcomes and promote patient safety. UC Davis Health's system delivers stable pneumoperitoneum, the presence of air or gas in the abdominal cavity.



It also has a valveless system which maintains optimal exposure of the operative field even with a lower pressure of insufflation and while allowing the continuous emission of surgical smoke.

“Since 2016, we have been utilizing low pressure insufflation for our robotic surgery procedures and have found success in improving patient outcomes and improving operating efficiency for our robotic surgeons. We are proud UC Davis Health has made this investment to expand this benefit for all surgical laparoscopic procedures.”



BAHAREH M. NEJAD, M.D.
DIRECTOR OF ROBOTIC SURGERY

NEW ORTHOPAEDIC ROBOTIC TECHNOLOGY FOR HIP, KNEE REPLACEMENTS

UC Davis Health has added the Stryker Mako SmartRobotics system as a technologically advanced option for hip and knee replacements that offers potential for a higher level of patient-specific implant alignment and positioning.

The new approach means surgeons can create individualized 3-D plans and perform joint replacements using a surgeon-controlled robotic arm that helps execute procedures with a high degree of accuracy. Clinical studies have shown



the system demonstrated the potential to offer patients several potential benefits, including reductions in pain, need for opiate pain relievers, length of hospital stay, and need for inpatient physical therapy, plus improved knee flexion and greater soft tissue protection.

Orthopaedics first in region to offer weight-bearing CT scan technology

The UC Davis Health Department of Orthopaedic Surgery's Sports, and Foot & Ankle Clinic is home to the first weight-bearing CT scan machine in the Northern California region. Also known as a weight bearing CT scanner, or WBCT, the innovative technology allows a patient to stand for a comprehensive scan of the feet, ankles and knees; arms and hands can also be evaluated in weight-bearing position. Images can take less than 60 seconds, with less radiation exposure than traditional CT scans. WBCT imaging allows for more precise evaluation of anatomy and more accurate image of alignment, and can allow providers to observe movement that causes pain or deformities. The new diagnostic tool is located at UC Davis Sports Medicine on C Street, in the same clinic where patients see orthopaedic providers.

New endoscopy suite for gastroenterology, pulmonology and colorectal surgery

A new outpatient endoscopy suite is open at UC Davis Medical Center as part of ongoing efforts to improve patient care and enhance technologies that result in superior outcomes and experiences. The University Tower Endoscopy Suite opened last summer and caters to patients from gastroenterology, interventional pulmonology and colorectal surgery. State-of-the-art technology includes interventional gastroenterology procedures visually aided with advanced integrated fluoroscopy suites, a 3-D mobile C-arm system, and minimally invasive biopsy of the lungs utilizing the Ion Endoluminal Robotic-Assisted Platform by Intuitive, which 3-D maps using CT.

World-first retrievable leadless pacemaker procedure



UC Davis Director of Pediatric Electrophysiology **Dan Cortez, M.D., Ph.D.**, is the first physician in the world to implant a retrievable leadless pacemaker in a child. Aveir VR, manufactured by Abbott, is designed to be easily retrievable for battery replacement. Most traditional pacemakers are surgically implanted through the chest to the outside of the heart, then connected to the heart by leads; this retrievable pacemaker was implanted through the internal jugular vein in the Cardiac Catheterization Lab and has no leads — instead, the heart absorbs it. “No incisions. Just a stitch placed in the neck the day of the procedure and removed the following morning,” Cortez said. In 2018, he was the first physician in the world to implant a Micra leadless pacemaker through the internal jugular vein in a child.

NEW GUIDANCE FOR A CHRONIC LIVER DISEASE



Christopher Bowlus, M.D., chief of Gastroenterology and Hepatology, is lead author of new national guidelines developed by the American Association for the Study of Liver Diseases (AASLD) that provide a data-driven update on the chronic liver disease primary sclerosing

cholangitis, as well as the first focused guidance from the AASLD dedicated to the diagnosis and management of the bile duct cancer cholangiocarcinoma.

NEW PEDIATRIC DKA GUIDELINES



Nicole Glaser, M.D., professor of pediatrics and pediatric endocrinologist at UC Davis Children’s Hospital, was the lead author of clinical consensus guidelines on the treatment of diabetic ketoacidosis (DKA) from the International Society for Pediatric and Adolescent

Diabetes (ISPAD), published last October in the journal *Pediatric Diabetes*. The guide includes recommendations for fluid and electrolyte replacement, insulin therapy and monitoring for complications, based on currently available evidence.

Initial transcatheter tricuspid valve replacement procedure

Cardiologists at UC Davis Medical Center recently completed their first transcatheter tricuspid valve replacement (TTVR) procedure, becoming the first hospital in the Sacramento region to perform the minimally invasive treatment. The procedure was performed as part of a clinical trial, and treats tricuspid regurgitation with a new option versus medications alone or open-heart surgery. **Gagan D. Singh, M.D., M.S.**, associate professor of cardiovascular medicine, and Structural Heart Team members replaced the valve using a catheter inserted through the major leg vein; they will monitor participants for five years.

A first transfemoral transseptal mitral valve replacement

UC Davis Health cardiologists and cardiovascular surgeons recently performed the institution’s first transfemoral transseptal mitral valve replacement (TMVR) procedure, making UC Davis Medical Center the first hospital on



the West Coast to perform the procedure with this new valve. Minimally invasive TMVR can be used to treat mitral valve stenosis, regurgitation, or a mix. Transfemoral transseptal access is through the femoral vein of the leg and the least invasive of implantation methods; the vein is exposed surgically, with the remainder of the procedure performed under fluoroscopy and echocardiography. No surgical access through the chest is required. **Jason H. Rogers, M.D., F.A.C.C., F.S.C.A.I.**, professor of cardiovascular medicine, is site principal investigator with co-investigator **Gagan D. Singh, M.D., M.S.**, associate professor of cardiovascular medicine.

Volume milestones for TCAR, robotic-assisted bronchoscopy procedure

UC Davis Health has announced its 100th Transcarotid Artery Revascularization (TCAR) procedure for carotid artery disease and its 100th robotic-assisted bronchoscopy procedure for minimally invasive peripheral lung biopsy, becoming the first hospital in the Sacramento region to reach each milestone.

New robot completes region's first comprehensive robotic neurosurgery program



UC Davis Health's robotic neurosurgery program has expanded to include a robot for cranial procedures such as deep brain stimulation implants, enabling the program to employ robotic surgery to treat patients with Parkinson's disease, epilepsy, tremor, and brain tumors. The acquisition makes UC Davis Health the first to offer a compre-

hensive robotic neurosurgery program in the region — one that spans cranial, spine, and endovascular surgery and can be used for adult and pediatric patients. The program already routinely uses robotics for spine surgery, endovascular treatment of stroke and aneurysms, and delivery of laser interstitial therapy to brain tumors and brain regions causing epilepsy. Program leaders note that robotic technology can increase patient safety; shorten procedure, wait and recovery times; and lead to better outcomes in procedures such as spinal fusions. UC Davis Health also offers comprehensive education in robotic-assisted neurosurgery to residents.

Study takes aim at low lung cancer screening

The UC Davis Comprehensive Cancer Center's Office of Community Outreach and Engagement (COE) is launching a study to investigate why it's challenging to get eligible patients to come in for lung cancer screening. An estimated 80-90% of all lung cancers are caused by tobacco use, and new lung cancer screening guidelines from the U.S. Preventive Services Task Force were rolled out in 2021 to make it easier for smokers and former smokers to qualify. But screening rates remain abysmally low, with only about 1% of those eligible getting screened in California.

New pediatric pulmonary sickle cell clinic

UC Davis Health has launched a comprehensive pulmonary sickle cell clinic for children and young adults up to age 24, designed to address complications such as asthma, exercise intolerance, and sleep disordered breathing. It is the first clinic of its kind in the Sacramento area. By embedding the pediatric pulmonologist into the sickle cell clinic, patients receive continuity from the same team giving their regular sickle cell care. They also receive the added benefit of addressing breathing problems with the help of a lung expert. Highest-risk patients are identified by their hematologist and referred to the clinic, which provides pulmonary function testing and home sleep studies.



UNIQUE PEDIATRIC LIPID DISORDERS CLINIC OPENS

A new, dedicated UC Davis Health clinic for pediatric lipid disorders opened last fall as the only of its kind in inland Northern California. The Roseville-based clinic offers care for children with abnormal cholesterol levels, elevated triglycerides and lipoprotein (a) levels, and other complex lipid disorders, after referral by their primary care physician. Care is also provided for secondary causes of lipid abnormalities, such as diabetes and kidney disease. The clinic team includes a pediatric cardiologist with additional training in lipidology, a cardiac sonographer, and a dietitian; when needed, a pediatric endocrinologist and geneticist are also available for consults. Approximately 1 out of 5 children and adolescents had at least one abnormal cholesterol measure between 2011 and 2014, per the CDC.

UC Davis Health CoLab Incubator announces first startup — WellCent

WellCent, the first startup to come out of the UC Davis Health CoLab Innovation Technology Incubator, was introduced in January at the UC Davis Health Future & Health CEO Summit.

The new company, founded by Chrysanthy Demos, M.B.A., has developed a platform to equip patients and caregivers with validated medical devices and resources, making care at home straightforward and seamless. WellCent's integrated care platform filters resources and provides training to make innovations in health care easy to use and understand.



Company provides at-home platform to make digital health resources more accessible to patients and caregivers

“Family members and friends who are caregivers play a critical role in the health of our patients,” said David Lubarsky, M.D., M.B.A., F.A.S.A., CEO of UC Davis Health and vice chancellor of human health sciences. “They represent an invisible frontline of health care, and companies

like WellCent will offer much needed services to help and support these caregivers, and patients caring for themselves, with innovative and smart home-enabled solutions.”

UC Davis Health is a leader in developing innovative technologies that are transforming medicine and making care more accessible to patients at home. In the last year, it created a Digital Health

Equity Program to improve digital health access for vulnerable populations in Northern California, and announced a new partnership with General Catalyst to drive artificial intelligence and digital health innovations.

“With the increase in care shifting to the home setting, WellCent is prepared to be a key part of bringing families and providers together through smart homes and digitally-enabled care,” said Ashish Atreja, M.D., M.P.H., F.A.C.P., A.G.A.F., UC Davis Health's chief information officer and chief digital health officer.

According to the National Alliance for Caregiving and AARP, more than 1 in 5 Americans has provided care to an adult or child with medical needs in the past 12 months. This totals an estimated 53 million adults, an increase of 9.5 million from five years prior.

“WellCent is reinventing home health care, by translating new digital health technologies and making them more equitable and accessible to the community,” said Demos, who serves as WellCent's CEO. “Digital innovations in medicine are the future of health care and we are proud to be collaborating with UC Davis Health on this transformation, as they are leading the charge in developing the future of digital health.”

WellCent is a latest initiative from UC Davis Health to advance digital medicine through its Digital CoLab (Digital Collaborative for Innovation and Validation) and the first startup to have come from its incubator. The Digital CoLab is led by Keisuke Nakagawa, M.D., its director of innovation and the executive director of the Cloud Innovation Center. The program is the AI and digital health innovation hub for UC Davis Health.

“Startups like WellCent play a critical role in expanding our health system's innovation ecosystem,” said Yauheni Solad, M.D., M.H.S., M.B.A., UC Davis Health's chief medical information officer for digital health and vice president of innovation. “They represent a key part of our strategy to accelerate innovations that we incubate at UC Davis Health that ultimately can scale nationally.”

AI-driven AAA surveillance program saving lives

UC Davis Health and AI (artificial intelligence) software company Illuminate have developed a centralized abdominal aortic aneurysm surveillance program that identifies at-risk AAA patients who may have been “lost to follow up” because they missed care due to the pandemic or other factors. In its first six months, the program identified over 11,000 patients with some mention of AAA who could benefit from monitoring; over 10,000 patients were reviewed and 1,119 patients who were lost to care entered active surveillance and management by nurse navigators. Of those, 81 patients visited UC Davis Health, which resulted in 146 imaging studies, one angiogram, and 10 life-saving AAA surgical procedures.

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‘Most Wired’ recognition



For the 11th consecutive year, UC Davis Health received Digital Health Most Wired recognition from the College of Healthcare Information Management Executives (CHIME) for 2022. The Medical Center earned a certified level 10, the highest level, on both the acute and ambulatory care surveys. UC Davis Health is one of only 17 hospitals in the nation and the only health system in California to achieve

level 10 status in both the acute and ambulatory care categories. Level 10 designates the health IT leaders that have displayed the highest and most innovative uses of technology.

Digital medicine collaboration with General Catalyst

UC Davis Health and General Catalyst announced a new collaboration last fall to develop a digital transformation strategy. UC Davis Health will utilize the General Catalyst ecosystem of companies to drive artificial intelligence (AI) and digital health innovations in several areas, including health care delivery, research, education, and public service, as well as the medical center’s ongoing transformational efforts in operations, care and outcomes. Central to the collaboration is a mutual commitment to knowledge-sharing, which will explore collaboration opportunities, co-development of new businesses and co-development of products, services, and technologies by leveraging UC Davis Health as an innovation center.



COPD clinic creates remote monitoring program


Aiming to improve health outcomes and reduce hospital readmissions, the Comprehensive COPD Clinic at UC Davis Health has created the first remote patient monitoring program in the Sacramento region for high-risk patients with Chronic Obstructive Pulmonary Disease (COPD), a condition with high readmissions rates. The program enrolls up to 12 patients at any time, who are given a pulse oximeter and asked a daily question about symptoms; data and responses are uploaded to a dashboard on the patient’s electronic health record and monitored daily by respiratory therapists. When data filters trigger alarms about concerning symptoms, the therapists reach out to provide care and guidance.

HIMSS Stage 6 data analytics designation

Last year UC Davis Health achieved the prestigious Stage 6 Adoption Model for Analytics Maturity (AMAM) from the Healthcare Information and Management Systems Society (HIMSS), the global authority on advancing digital health transformation. UC Davis Health became one of five health care systems in the U.S. and only six worldwide at HIMSS AMAM Stage 6. Only 10 health care systems in the U.S. have achieved Stage 7, the highest level of analytics maturity.

New Institute for Psychedelics and Neurotherapeutics

Interdisciplinary research will focus on translating psychedelics into safe treatments for depression, Alzheimer's disease and more



UC Davis has launched an Institute for Psychedelics and Neurotherapeutics to advance basic knowledge about the mechanisms of psychedelics and translate it into safe and effective treatments for diseases such as depression, post-traumatic stress disorder, addiction, Alzheimer’s disease, and Parkinson’s disease, among others.

The new institute will bring together scientists across a range of disciplines and partner with the pharmaceutical industry to ensure that key discoveries lead to new medicines for patients.

“Psychedelics have a unique ability to produce long-lasting changes in the brain that are relevant to treating numerous conditions,” said David E. Olson, Ph.D., associate professor in the Department of Chemistry and the Department of Biochemistry and Molecular Medicine at UC Davis. “If we can harness those beneficial properties while engineering molecules that are safer and more scalable, we can help a lot of people.”

Olson will be the founding director of the new institute, with John A. Gray, M.D., Ph.D., associate professor in the Department of Neurology, serving as associate director. In 2018, Olson and Gray published an influential study in *Cell Reports* (DOI: <https://doi.org/10.1016/j.celrep.2018.05.022>)

demonstrating that psychedelics promote neuroplasticity – the growth of new neurons and formation of neural connections.

“Neuronal atrophy is a key factor underlying many diseases,” said Gray,

“and the ability of psychedelics to promote the growth of neurons and new connections in the brain could have broad therapeutic implications.”

A historic investment

The UC Davis institute will be funded in part by a contribution of approximately \$5 million from the deans of the College of Letters and Science and the School of Medicine, the Vice Chancellor for Research and the Provost’s office. While other psychedelic science centers have been formed across the country with gifts from philanthropists, the UC Davis insti-

Drugs such as LSD, MDMA and psilocybin show great promise for treating a wide range of mental disorders that are characterized by a loss of neural connections.

tute is notable for also being supported by substantial university funds.

“We wanted to put our money where our mouth is and demonstrate our commitment to this space,” said Estella Atekwana, Ph.D., dean of the College of

Letters and Science overseeing the new institute. Additionally, philanthropic donations as well as grants and sponsored research agreements from the federal government, private foundations and industry partners will support the mission of the institute.

In 2018, Olson and Gray published an influential study in *Cell Reports* demonstrating that psychedelics promote neuroplasticity – the growth of new neurons and formation of neural connections.

“UC Davis has been leading the development of new medicines based on psychedelic research, and together with philanthropists, granting agencies, and industrial partners, I’m confident that we can produce major benefits for society,” Atekwana said.

Leveraging strengths in chemistry, neuroscience and medicine

The institute will leverage the extraordinary breadth of expertise in the neuroscience community at UC Davis, which includes nearly 300 faculty members in centers, institutes

and departments across the Davis and Sacramento campuses. Researchers will be able to work on every aspect of psychedelic

science, from molecules and cells through to human clinical trials.

“Combining the considerable expertise of UC Davis’ pioneering basic research teams, world-class neuroscientists and our nationally recognized medical center is a formula for success

that we trust will result in groundbreaking discoveries that will help patients regionally and worldwide,” said Susan Murin, M.D., M.Sc., M.B.A., interim dean of the School of Medicine who partnered with Atekwana to support the new institute.

The Institute for Psychedelics and Neurotherapeutics was specifically designed to facilitate collaborations across campus, such as that between Olson and Lin Tian, Ph.D., a professor in the Department of Biochemistry and Molecular Medicine. In 2021, their publication in *Cell* (DOI: <https://doi.org/10.1016/j.cell.2021.03.043>) was voted the #2 biomedical research discovery of the year by the STAT Madness virtual tournament.

A unique feature of the UC Davis institute will be its focus on chemistry and the development of novel neurotherapeutics.

SNAPSHOTS: TWO EXAMPLES OF THE KIND OF RESEARCH

Screening hundreds of compounds to find new addiction treatments related to psychedelics

Evidence from human and animal testing suggests the brain-altering effects of psychedelics could be repurposed for treating addiction.

Now, researchers at UC Davis and the University of Colorado Anschutz Medical Campus plan to screen hundreds of compounds to discover new, non-hallucinogenic treatments for substance use

disorders. The research is funded by a \$2.7 million grant from the National Institute on Drug Abuse, part of the National Institutes of Health.

Previous work has shown psychedelic drugs can rewire parts of the brain involved in depression, substance abuse and post-traumatic stress disorder.

David E. Olson, Ph.D., associate professor in the departments of Chemistry, and Biochemistry and Molecular Medicine at UC Davis, is searching for similar effects among compounds without the hallucinogenic effects of drugs like LSD. He calls these compounds psychoplastogens, for their ability to modify the brain.

“I’m very excited that NIDA is recognizing the potential that psychoplastogens might have for patients with substance use disorders,” Olson said. “This grant will help us to understand the basic mechanisms by which

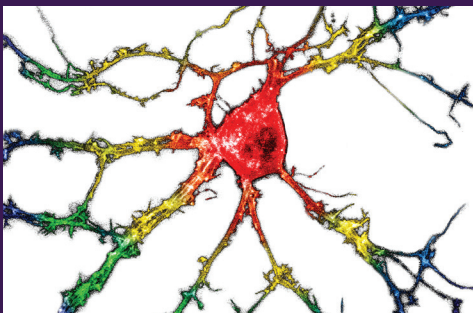
Previous work has shown psychedelic drugs can rewire parts of the brain involved in depression, substance abuse and PTSD. Olson is searching for similar effects among compounds without the hallucinogenic effects of drugs like LSD.

these compounds impact addiction, and hopefully develop more effective and better tolerated treatments.”

Olson’s work is part of a growing focus on psychedelics research at UC Davis and UC Davis Health. His lab has synthesized hundreds of molecules related to psychedelics in the search for new drug therapies. One such molecule, tabernanthalog, or TBG, produces both rapid and sustained anti-addictive effects in rodent models of heroin and alcohol self-administration.

The research will include mechanistic studies to understand how TBG impacts addiction and the development of new compounds with psychoplastogenic effects, he said. The team will use high-throughput screening to test for efficacy, safety and treatment potential. Promising compounds will undergo additional animal testing at CU Anschutz.

Delix Therapeutics, a startup founded by Olson, is also investigating non-hallucinogenic psychoplastogens for treating depression, anxiety and related disorders but is not involved in the project.



“Psychedelics have a lot of therapeutic potential, but we can do better,” Olson said. In 2020, his group published a paper in *Nature* (DOI: <https://doi.org/10.1038/s41586-020-3008-z>) describing the first non-hallucinogenic analogue of a psychedelic compound capable of promoting neuroplasticity and producing antidepressant and anti-addictive effects in preclinical models.

Olson calls these molecules psychoplastogens because of their effect on neuron growth. Novel molecules tailored to specific disease indications could offer substantial benefits and open doors to partnerships with industry by solving many issues currently faced by traditional psychedelics related to safety, scalability, and intellectual property.

Bridging the gap between academia and industry

Major challenges exist for translating academic discoveries and promising lead compounds into drug candidates for clinical use. To bridge this gap, the institute

In 2020, Olson’s group published a paper in *Nature* describing the first non-hallucinogenic analogue of a psychedelic compound capable of promoting neuroplasticity and producing antidepressant and anti-addictive effects in preclinical models.

aims to spin out companies and build strong collaborations with pharmaceutical partners through licensing and sponsored research agreements.

Delix Therapeutics, a company co-founded by Olson, has licensed UC Davis technology and supported several leading-edge basic research projects

on campus related to psychoplastogens and neuroplasticity. Recently, Delix was named a top academic spinout company by *Nature Biotechnology* and *C&E News*, and in 2021, was named one of the Fierce 15 by Fierce Biotech.

“Our relationship with UC Davis has been very synergistic, and we are excited to continue that partnership,” said Delix CEO Mark Rus, M.Sc. “Getting the brightest and most creative minds from academia and industry to work together is our best chance to solve many of the grand challenges facing society today.”

» Learn more: neurotherapeutics.ucdavis.edu.

RESEARCH AREAS BEING PURSUED BY INSTITUTE SCIENTISTS

Receptor location matters for psychedelic drug effects

Location, location, location is the key for psychedelic drugs that could treat mental illness by rapidly rebuilding connections between nerve cells.

In a paper published Feb. 17 in *Science*, UC Davis researchers show that engaging serotonin 2A receptors inside neurons promotes growth of new connections, but engaging the same receptor on the surface of nerve cells does not.

The findings will help guide efforts to discover new drugs for depression, PTSD and other disorders, said senior author David E. Olson, Ph.D., associate professor of chemistry, biochemistry and molecular medicine and director of the Institute for Psychedelics and Neurotherapeutics at UC Davis.

Drugs such as LSD, MDMA and psilocybin show great promise for treating a wide range of mental disorders that are characterized by a loss of neural connections. In laboratory studies, a single dose of these drugs can cause rapid growth of new dendrites — branches — from nerve cells, and formation of new spines on those dendrites.

Olson calls this group of drugs “psychoplastogens” because of their ability to regrow and remodel connections in the brain.

What allows brain connections to regrow?

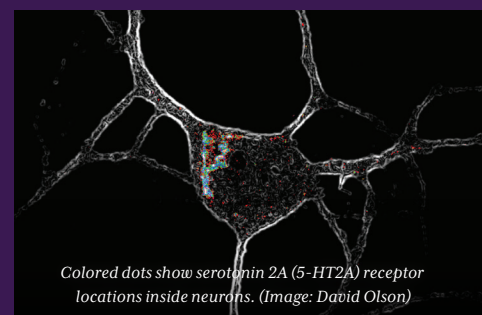
Earlier work from Olson’s and other labs showed that psychedelic drugs work by engaging the serotonin 2A receptor (5-HT_{2A}R). But other drugs that engage the same receptor, including serotonin, do not have the same growth effects.

Maxemiliano Vargas, a graduate student in Olson’s lab, Olson and colleagues experimented with chemically tweaking drugs and using transporters to make it easier or harder for compounds to slip across cell membranes. Serotonin itself is polar, meaning it dissolves well in water but does not easily cross the lipid membranes that surround cells.

The psychedelics, on the other hand, are much less polar and can easily enter the interior of a cell.

They found that the growth-promoting ability of compounds was correlated with the ability to cross cell membranes.

Drug receptors are usually thought of as being on the cell membrane, facing out. But the researchers found that in nerve cells, serotonin 2A receptors were concentrated inside cells, mostly around a structure called the Golgi body, with some receptors on the



Colored dots show serotonin 2A (5-HT_{2A}) receptor locations inside neurons. (Image: David Olson)

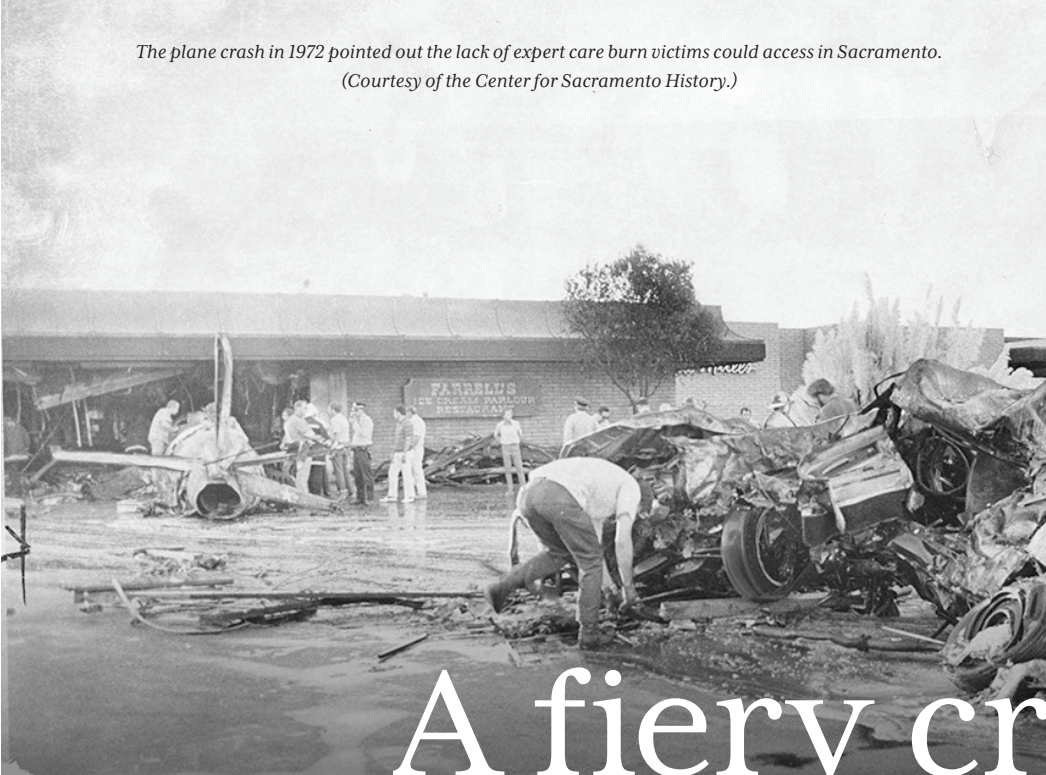
cell surface. Other types of signaling receptors in the same class were on the surface.

The results show that there is a location bias in how these drugs work, Olson said. Engaging the serotonin 2A receptor when it is inside a cell produces a different effect from triggering it when it is on the outside.

“It gives us deeper mechanistic insight into how the receptor promotes plasticity, and allows us to design better drugs,” Olson said.

Additional authors include: from UC Davis, Lee Dunlap, Chunying Dong, Samuel Carter, Robert Tombari, Lin Tian, John Gray, Shekib Jami, Seona Patel, Lindsay Cameron and Hannah Saeger; Joseph Hennessey and John McCorvy from the Medical College of Wisconsin, Milwaukee. The work was supported by grants from the National Institutes of Health and the Camille and Henry Dreyfus Foundation, and by a sponsored research agreement with Delix Therapeutics.

*The plane crash in 1972 pointed out the lack of expert care burn victims could access in Sacramento.
(Courtesy of the Center for Sacramento History.)*



A fiery crash
50 years ago
*spurred today's
world-class
burn care*



IN 1972 a jet plane skidded off a runway and slammed into a Sacramento ice cream parlor full of families. The response to the tragedy led to the nationally recognized UC Davis Health burn center — and advances in burn care, survival, and support locally and beyond.

September 24, 2022 marked a dark day for Sacramento. It was on that day 50 years ago that 22 people died — 12 of them children — when a Korean War-vintage Sabre fighter jet taking off from the Sacramento Executive Airport overran the runway and slammed into Farrell’s Ice Cream Parlour.

Witness accounts indicate about 100 people were inside the popular eatery when the crash involving an inexperienced pilot who had participated in the Golden West Sport Aviation Show changed their lives forever. Twenty-five people were injured, many with serious burns.

Margie Smith, who lived nearby with her husband and three young children, remembers that Sunday like it was yesterday.

“Our neighbor’s daughter told us about the crash. But that’s all we knew,” she recalled. “It wasn’t until the next morning that we learned how close to home it hit.”

Tina Palmieri, chief of burn surgery, credits triage criteria for improving outcomes for burn survivors today.

Smith's neighbors — Warren, Sandy, Jennifer and Brandon Krier — all died while celebrating Warren's birthday at Farrell's. Brandon was two years old, only a few weeks younger than Smith's son, Brian, at the time.

At the time, the only treatment center for burn patients was nearly 400 miles away at UCLA, with a smaller unit 90 miles away at UCSF.

"I distinctly remember watching the news. They carried out a stretcher that was covered, but the outline of a very small child's body could be seen through that cover. I often wonder if it was Brandon," Smith tearfully recounted.

Larry Hopkins, now 80 years old, was a Sacramento City firefighter with nine years under his belt. Though off

duty, he witnessed several emergency vehicles heading toward Freepoint Boulevard. He followed, saw the flames and rushed to help.

"It was utter devastation. I wasn't a newbie. I was used to that kind of stuff. But this was pushing the envelope as far as a disaster at that time," he said. "There's nothing good to be said about any of it."

But something good ultimately resulted from that day. The crash altered the future of burn care for the Sacramento region and beyond.

A fallen colleague helps spark a quest for better care

Firefighter Gene Levine was off duty that day, dining inside Farrell's with his family. Levine perished along with eight relatives.

Sacramento Fire Capt. Cliff Haskell was on duty downtown. It wasn't until later that he would learn his friend and colleague had died in the blaze. He was distraught by the tragedy. Once the ashes cooled, Haskell realized that specialized burn care was lacking in Sacramento.



To mark the Firefighters Burn Institute's 50th anniversary occasion, the organization unveiled a permanent memorial display at the Sacramento Regional Fire Museum. (Courtesy of FFBI)

Fresh off a fire safety conference in Louisiana, Haskell returned to Sacramento with one goal: to establish a world-class burn unit in Sacramento. By December 1973, he helped create the Firefighters Pacific Burn Institute, now called the Firefighters Burn Institute. A month later the burn unit opened at Sacramento Medical Center, known today as UC Davis Medical Center.

"In the aftermath of the fire, people learned that survivors were backed up in the hallways of the medical center because there was no resource to handle an event like that," said Joe Pick, current executive director of the Firefighters Burn Institute. "I don't think anyone realized our lack of good access to burn care until after that happened."

"We could do better"

A consultant hired by the Sacramento firefighters agreed. According to reports from May 1973, R.A. Kolvoord, director of the Southern Burn Institute in Louisiana, said there was "no doubt about the need for a burn treatment center" in the region. At the time, the only treatment center for burn patients was nearly 400 miles away at UCLA, with a smaller unit 90 miles away at UCSF.

Sacramento-area media gathered to report on the opening of the new UC Davis burn center on Jan. 15, 1974. (Courtesy of the UC Davis Library Archives and Special Collections)



“Cliff knew we could do better. He wanted an organized structure. So, he went to the Firefighters Local 522 union to establish an organization to raise the money to create one,” Pick said.

“Cliff had a passion that just wouldn’t end,” Hopkins added.

Haskell and the team were so devoted to creating a place for specialized burn care that they set up a fund in memory of Levine. They worked with community leaders, physicians and leadership at UC Davis Health. More than \$1 million was raised to open the Firefighters Burn Institute Regional Burn Center at UC Davis Medical Center.

The center is located on the second floor of the hospital on the UC Davis Health campus. Specialists treat victims of highway crashes and wildland fires who sometimes arrive by helicopter.

Children’s specialized needs usher in pediatric burn program

But all burn patients are not alike. For children, multiple complications can arise from the immune and metabolic changes that result from a severe burn. Young burn patients face more serious risks than adults, in part because toddlers explore with their hands and mouths and get burned. And small children with big burns can be very uncomfortable.

For many of the 25 survivors of the Farrell’s crash, especially the burn victims, the specialized care they so greatly needed did not exist. Back then, adults who suffered severe burns would rehabilitate in two to three years. But for children, it could take up to 20 years.

Fortunately, specialized pediatric burn care became a reality in Sacramento, right across the street from UC Davis Medical Center.

“It was a lot more work than I thought it would be. We had to earn the respect of the community and the doctors and the families... Some people were concerned we’d take away from UC Davis by having Shriners Children’s locally, but the opposite happened. We focused on providing the best care, and by doing so were able to grow both.”

—DAVID GREENHALGH



David Greenhalgh, Shriners Children’s and UC Davis Health (retired) burn surgeon.

“The collaborative commitment to a comprehensive burn program provided an ideal framework for leaders of Shriners Children’s to establish a multidisciplinary specialty pediatric health care facility that focused on burns as one of the main service lines,” said Alan Anderson, director of development for Shriners Children’s Northern California. “When we opened our doors in 1997, we featured a first-of-its-kind pediatric burn program led by David Greenhalgh.”

Greenhalgh (M.D., F.A.C.S.), a renowned burn surgeon was recruited to lead the burn programs at both

Shriners Children’s and UC Davis Health.

“It was a lot more work than I thought it would be. We had to earn the respect of the community and the doctors and the families,” recalled Greenhalgh, who retired from UC Davis Health last year but continues to oversee the program and his patients at Shriners Children’s. “Some people were concerned we’d take away from UC Davis by having Shriners Children’s locally, but the opposite happened. We focused on providing the best care, and by doing so were able to grow both.”

Since its launch in 1974, the UC Davis Burn Center has been one the nation's top programs for burn care, research and training. Its mission and reputation have greatly expanded over the past four decades.



UC Davis Health Burn Center Manager Len Sterling, right, leads a team that is ready at a moment's notice for whatever natural or manmade disaster leads to burn patients.

Advances lead to better survival rates, improved quality of life

The institute was a silver lining that resulted from the crash and transformed the regional response to burn care. For more than 48 years, it has offered the highest-quality treatment and recovery for severely burned patients from throughout Northern California, and greater hope for their families.

"Those injured in 1972 were taken to local hospitals, where surgeons did their best to treat them, but unfortunately they had very limited knowledge of burn care," said Tina Palmieri, M.D., a surgeon and chief of the Firefighters Burn Institute Regional Burn Center at UC Davis Medical Center. "Their initial treatment would have been to assess them for traumatic injuries and burns."

Since its launch in 1974, the UC Davis Burn Center has been one of the nation's top programs for burn care, research and training. Its mission and reputation have greatly expanded over the past four decades. Burn treatment involves many components, from initial first aid and

assessment of the degree of the burn to wound excision, grafting and infection control.

According to a national study, "the last 50 years has seen a tremendous improvement in the advancement of burn treatment with a significant reduction in mortality which can be attributed to the developments in early burn excision, early fluid resuscitation, infection control and nutrition."

Palmieri credits mortality reduction to the advent of burn center triage criteria, including burn degree, percentage of body surface area, and patients who require special social, emotional or long-term rehabilitation intervention.

"We also use new methods for mechanical ventilation and resuscitation for those critically injured," she explained. "The burn field continues to expand its knowledge about burn injury, particularly with respect to artificial skin, stem cells and cultured skin."

What has also helped is advances in physical facilities. In 2010, the UC Davis unit moved into its larger current loca-

tion — triple the size of its former space — consolidating into a single location and accommodating more patients.

The move created individual rooms for patients, which has improved the survival rate, since the leading cause of death among burn victims is infection. Since many survivors require months of care, the new rooms also included windows, which helps with emotional health. And because the improved capabilities were the direct result of an additional \$1 million raised by area firefighters, the move ushered in a new name — the Firefighters Burn Institute Regional Burn Center.

"Merely surviving a burn is not good enough," Palmieri said. "Our goal is to return our patients to a meaningful life."

In 2021, the team received re-verification as an Adult Burn Center from the American Burn Association (ABA) for meeting the highest standards of care for burn-injured patients. And for children, whose burns present a unique challenge, the expert care at Shriners Children's is across the street.

Bracing for the next emergency

The UC Davis Burn Center team can quickly leverage resources in burn management, surgery, trauma and intensive care to treat a range of burn-related injuries. And with increased expertise and need, patient volume has increased as well. In 1997 before Shriners Children's opened, the UC Davis Burn Center admitted 180 patients. In 2021, the number of patients admitted for treatment between the two centers quadrupled to approximately 750.

Part of that growth is due to the increasing numbers and size of major wildfires in Northern California. As the only burn center in a vast region, UC Davis Health takes on a mission and responsibility to being prepared for and focused on the needs of burn patients. The next nearest centers are in the Bay Area, Fresno, Las Vegas, Salt Lake City and Portland.

Over the years, the center's surgeons, nurses and rehabilitation specialists have been on the front lines of treating patients injured by wildfires. They regularly practice their response plan for large-scale fires with multiple victims, and collaborate with other burn centers throughout the western U.S.

UC Davis developed the burn disaster triage diagram that is now used in burn disasters across the nation. It has served as the primary center for triage and treatment of Northern California wildfire patients.

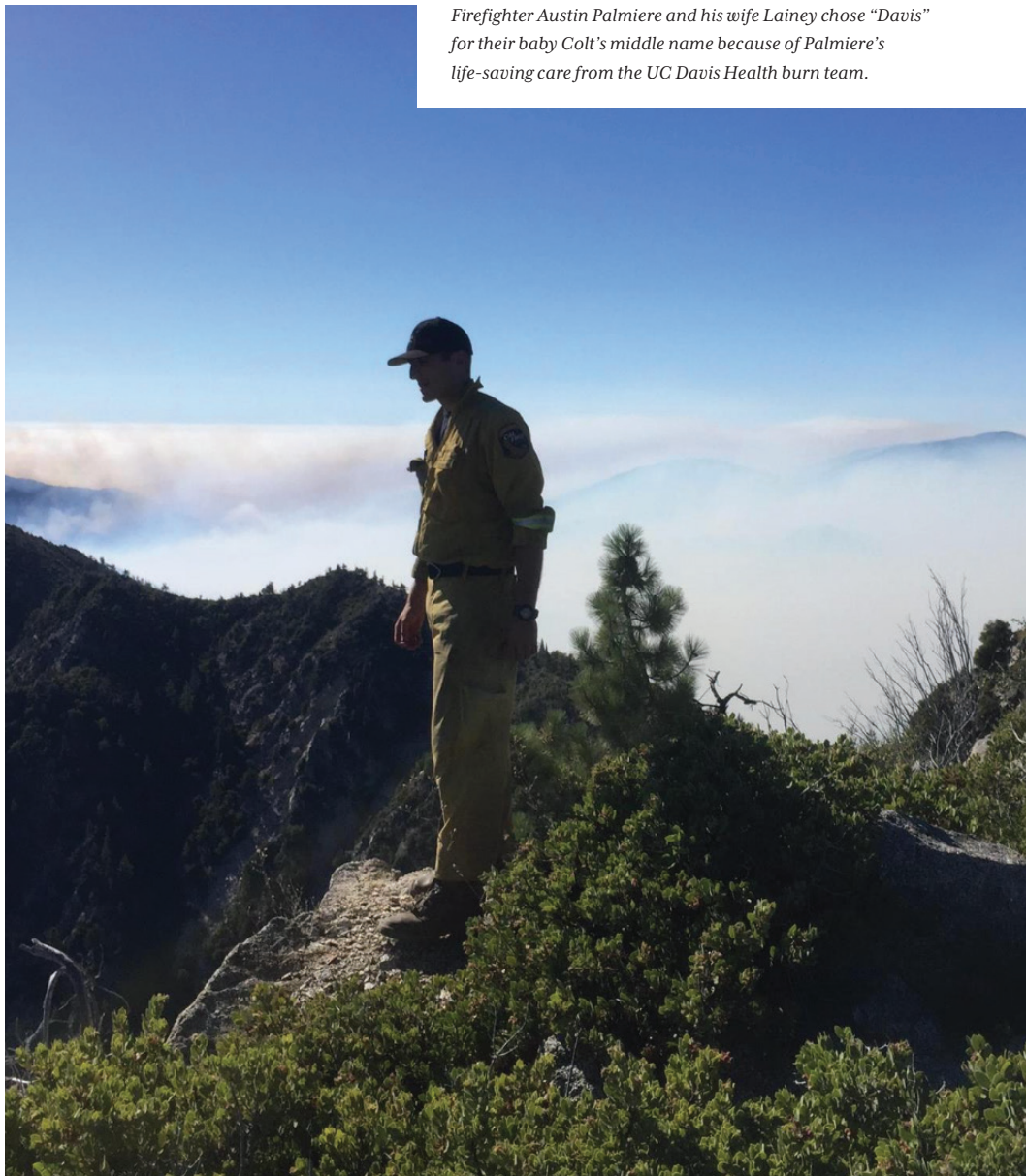
"We've been affected by so many big fire events in recent years that we have to assume another one is coming," said Len Sterling, R.N., M.B.A., N.E.A.-B.C., the burn center's nurse manager. "We want to be nimble, flexible and treat all patients who need us."

Austin Palmiere knows the risks of the job. A fire captain with CAL FIRE, he's served on the front line for 14 years.

But on Oct. 9, 2022, while at the Placerville Fire Center between calls, his shift was anything but routine.

The company vehicle he was working on caught fire. He and a fellow firefighter rushed to put out the blaze, when an explosion knocked them to the ground. They were rushed to the Firefighters Burn Institute Regional Burn Center at UC Davis.

UC Davis developed the burn disaster triage diagram that is now used in burn disasters across the nation. It has served as the primary center for triage and treatment of Northern California wildfire patients.



Firefighter Austin Palmiere and his wife Lainey chose "Davis" for their baby Colt's middle name because of Palmiere's life-saving care from the UC Davis Health burn team.

“Merely surviving a burn is not good enough. Our goal is to return our patients to a meaningful life.”

– TINA PALMIERI

“At the time I didn’t feel a ton of pain because of the shock and adrenaline. I didn’t think I was even burned that bad,” Palmieri said. “It was surreal arriving at the UC Davis ER, because I’ve dropped off patients in that room.”

Palmieri, 32, had second- and third-degree burns on 26% of his face, hands and upper body. He faced weeks of recovery. He says three things motivated him: support from his family, friends and firefighters; the expertise of the burn center team at UC Davis Health; and the expected arrival of his first son with his wife Lainey, roughly one month away.

Palmieri had two surgeries. He began walking independently three weeks after his injury. Finally, he left the burn intensive care unit 35 days after his arrival – one week before baby Colt’s arrival.

“Now, he’s holding him, rocking him and doing a bunch of things that

weren’t imaginable the day Austin came home. I’m so grateful,” Lainey Palmieri said.

“I took my time getting here, but I’m changing diapers now,” Austin Palmieri added.

Diapers that belong to Colt Davis Palmieri, whose middle name is a tribute to the team that brought his father through the worst trauma of his life.

Remaining challenges, awaiting support

Despite the success of treating burn survivors, many challenges remain, especially as people live longer. The focus of burn care in the future includes treating the elderly, caring for those with extensive burns, increasing the quality of the lives saved by shortening healing times and hospital stays, and finding more ways to reduce scarring.

“It’s hard to push the survival of the youngest burn victims any higher. But

we’ve made great strides in the elderly,” Greenhalgh said. “When I first started in burns, we wouldn’t bother to resuscitate 60-year-olds with 60% burns. But we’ve made the greatest improvements in this population because of better wound coverage and critical care.”

Palmieri added, “Quality of life has become the priority for most people who are burned, as we can save most people. For the very young and the very old, however, improving survival is still a major priority.”

Beyond the expertise of the surgery team and UC Davis Health are experts who provide resources and peer support that bring hope and inspiration to burn patients and their families. The institute and its support resources have earned a national reputation for providing critical services to survivors and families, and is a Phoenix Society SOAR-designated facility, recognized for providing peer support and mentoring for burn survivors.

Gabriel Gonzalez stayed positive after suffering third-degree burns over 46% of his body from a firepit accident.



Resources include weekly meetings ranging from half-hour lunch bunch gatherings to hour-long discussions with health professionals. There's even a session devoted to yoga and mindfulness. The institute also offers the weeklong Firefighters Kids Camp for young burn survivors; the Youth Firesetter Program for parents and troubled adolescents; the Liaison Response Team for injured firefighters; and scholarships that support survivors and the health professionals who care for them.

"From the ashes, we realized that, as firefighters, we do what we can while we're there and then figure out how can we do something better," Pick explained. "That opened up all the doors for our programs for kids and other support groups so we could connect with this community."

Coleen Gonzalez says when she learned that her 18-year-old son Gabriel was severely burned in a firepit accident last year, "it's the worst call you get." While the care team at the Firefighters Burn Institute Regional Burn Center mapped out his six weeks of physical recovery, she turned to support groups that help survivors and their caregivers deal with emotional healing.

"This is like a marathon you're running. Even when he got home, we were still running that marathon," Gonzalez said. "The group has taught me I'm not the only one. And that, yes, it's going to be different, but we don't have to stop living."

Institute leaders hope to establish additional mental health resources in the future. Pick and his team have begun work with clinical psychologists and the social work department at Sacramento State University. They hope that their expertise, coupled with funds raised through donors and the popular Fill the Boot for Burns campaign, can create a mental health program with lasting benefits.



Every year, Sacramento-area firefighters raise money through "Fill the Boot for Burn Survivors." (Courtesy of Hansen Kwok, M.D.)

Service and outreach

Nearly five decades after that tragic day at Farrell's, the UC Davis Burn Center and Firefighters Burn Institute have expanded their programs in burn research, public education, fire and burn prevention, and burn recovery for survivors and their families.

Had a burn center like today's existed 50 years ago, the UC Davis

team agrees, the Farrell's victims would have had a greater chance of not only surviving, but living more functional lives.

"I'm grateful that the firefighters long ago had the foresight to support a burn program," Greenhalgh said. "I'm proud to say we were able to work with them — and we have one of the best programs in the country."

BURN AWARENESS

The first full week of February is National Burn Awareness Week, a time for educators to share burn and prevention messages in their communities and highlight the most common injuries. This year's theme is "Hot Liquids Burn Like Fire" and the data of injuries each year in the U.S. backs that up:

- 41% are flame burns
- 31% are scalds and most burns in children less than 5
- 6% are electrical burns
- 5% are chemical burns

Resources: ameriburn.org, nfpa.org, phoenix-society.org.



How to increase diversity in medical residency programs

UC Davis study identifies evidence-backed strategies for graduate medical education

How can medical residency training programs improve diversity and, consequently, the quality of health care? UC Davis Health researchers have some suggestions, backed by evidence.

In a study published in January in *JAMA Network Open* (DOI: doi:10.1001/jamanetworkopen.2022.55110), a team of researchers analyzed more than two

dozen residency programs across the country. All employ strategies to boost diversity, equity and inclusion (DEI). The team then compiled their findings to share widely with Graduate Medical Education (GME) programs seeking to diversify the physician workforce.

The study is believed to be the first-of-its-kind to compile a comprehensive list of data-driven approaches to increasing diversity, equity and inclusion in GME programs.

“We have created a guide to help GME programs move forward in improving their DEI efforts,” said Stephany Sanchez, M.D., a co-author and an associate clinical professor of internal medicine at UC Davis Health.

“This is intended for programs that are very early in their journey toward diversifying, to be able to apply foundational strategies we highlighted,” Sanchez said. “And it’s also intended for programs that are much farther along in their path, so they can have a more aspirational list of strategies to consider.”

More diversity means better health outcomes for patients

UC Davis has long been a model for its commitment to diversity and inclusion. The School of Medicine ranked No. 3 in diversity for medical schools across the nation, according to the 2023 *U.S. News & World Report* list of “Best Graduate Schools.”

GME, commonly referred to as residency, is the training required for medical school graduates before they become eligible to take board exams for certification in their chosen specialty field. GME can last anywhere from three to seven years, most often at an academic medical center like UC Davis.

Nationally, GME programs are striving to increase the number of physicians from backgrounds underrepresented in medicine. However, challenges exist. These trainees, from Latino, Black, American Indian, Alaska Native, Native Hawaiian, and Pacific Islander populations, are less likely to be offered placement in GME.

“Closing the diversity gap is critical to ensure equity in medical education and health care quality,” the authors stated. “Nevertheless, evidence-based strategies and best practices to improve DEI in the biomedical workforce remain poorly understood and underused.”

Studies show that patients have better health outcomes when they are cared for by doctors who understand their culture, who look like them, or speak their language. Authors of the study say that diversifying GME programs is critical to diversifying the physician workforce.

Although some GME programs seek to diversify, their leaders aren't sure how

Implementing DEI strategies is fairly new to GME, and a common challenge among program leaders is not knowing the steps to take at becoming more diverse.

“GME programs really want to be more inclusive,” said co-author Tonya Fancher, M.D., M.P.H., the UC Davis associate dean for workforce innovation and education quality improvement. “But I think programs don't always know how to do it, so this work offers a menu of successful strategies to choose from.”

“This is intended for programs that are very early in their journey toward diversifying, to be able to apply foundational strategies we highlighted. And it's also intended for programs that are much farther along in their path, so they can have a more aspirational list of strategies to consider.”

— STEPHANY SANCHEZ

There is a dearth of information about what most GME programs are doing to increase diversity and inclusion, but the authors found a creative way to tap into the information: They received permission to access the submission forms of GME programs that have vied for the annual Barbara Ross Lee, D.O. Award for Excellence in Diversity, Equity, and Inclusion, given out by the Accreditation Council of Graduate Medical Education (ACGME).

The study was based on 29 award applications submitted between Aug. 2020 and Jan. 2022. Applicants described in detail what programs were doing to boost diversity, including efforts among trainees and faculty and staff as well as overall institutional culture. The institutions were not identified in the paper, but a wide range of GME specialties were represented.

Here is a sample of the themes, strategies and practices detailed in the study that some GME programs rely on to increase diversity and be more inclusive to current residents:

- Require an implicit bias mitigation course for those who interview prospective GME trainees.
- Include historically excluded and underrepresented faculty, residents and other stakeholders on selection committees.
- Financially and logistically support DEI committees of residents, faculty and staff.
- Offer clinical experiences for residents in medically underserved communities.
- Support trainees through mentorship and research opportunities as a retention tool for residents to stay on as faculty at the end of their training.

“We found there's a very large range of strategies — some are foundational, some are aspirational,” said co-author Dowin Boatright, M.D., an assistant professor of emergency medicine at New York University Grossman School of Medicine (who was at Yale during the study).

“We really want to emphasize the importance of foundational strategies — those that in many cases are considered high impact and can be achieved at probably low cost,” Boatright said. “I think we can make a lot of progress if all programs adopted even just the foundational strategies.”

The ACGME also plans to release the Equity Matters Resource Collection, which will provide even more detailed strategies for GME programs from a resource of 100 approaches identified from the Lee award.

Additional co-authors from the UC Davis School of Medicine are: Arra Jane Soriano, workforce programs manager; Marjorie Westervelt, former director of assessment, evaluation, and scholarship; and Maya London, medical student. Additional co-authors are Jed Gonzalo, senior associate dean for medical education at Virginia Tech Carilion School of Medicine and William A. McDade, ACGME chief diversity, equity, and inclusion officer.

Medical student to study mental health needs of Mexican-American parents

Fresno native returns to Central Valley roots to conduct research, thanks to scholarship



Jacqueline León, shown with her mother, at her UCLA master's degree in public health graduation in 2016.

A fourth-year UC Davis medical student has been awarded a scholarship from National Medical Fellowships to conduct research on community mental health in the Central Valley.

Jacqueline León, who dreams of becoming a psychiatrist, will use the grant on a research project studying the mental health needs of Mexican-American families, especially immigrant parents whose children are raised in the U.S.

“This project will look at how this culture mitigates adverse mental health outcomes, or positive mental health outcomes, in Latinx, rural communities,” she said.

National Medical Fellowships is a nonprofit committed to “disrupting racism in medicine,” in part by offering millions in scholarships to students underrepresented in medicine and boosting diversity in clinical research.

León is part of the inaugural group of scholars from across the U.S. to receive funding from the organization's Health Equity Leaders Program for exploring health equity service, scholarship, leadership and advocacy.

Relating to immigrant families like her own

The project is a perfect match for León. The Fresno native wants to establish her career in the Central Valley and is part of the school's SJV-PRIME pathway (which has transitioned into a similar program called REACH), which provides students with extensive clinical experience in the San Joaquin Valley.

She will conduct research to tackle health disparities in the Central Valley under principal investigator Rosa Manzo of UC Merced, a scientist with expertise in community engagement.

“I can relate to the experience of so many immigrant families, like mine, who are unable to access preventive medical care,” León said, “either because they can't afford it, or due to their immigration status, or because they're working so hard that it doesn't cross their mind.”

Much of the research will be done through a federally qualified health center in Madera County, Camarena Health. León will help organize focus groups to interview community health workers known as promotoras, who will tell her about specific community mental health needs.

León said the project speaks to the “why” she wants to be a physician. And it has a lot to do with her upbringing: She can relate to the experience of so many agricultural worker families, like hers, who face barriers to care.

“We didn't go to pediatric well-child visits,” León said. “We came from a family that only went to the doctor when you're losing a limb, or you can't breathe — high acuity emergency situations.”

Successful journey to medical school

León studied public health at UC Berkeley and enrolled in the UC Davis School of Medicine Postbaccalaureate Program,

“We didn't go to pediatric well-child visits. We came from a family that only went to the doctor when you're losing a limb, or you can't breathe — high acuity emergency situations.”

— JACQUELINE LEÓN

which prepares recent grads to apply for medical school. But instead of setting her immediate sights on medical school, León chose to attend UCLA for a master's degree in public health, which bolstered a health education career she started years earlier.

“This award is an accumulation of everything I've done, which has been centered around community and social justice,” León said. “This is pretty much the start of becoming a community psychiatrist.”



106 students match, mostly in California

All 106 UC Davis students who entered the match got placed into programs during Match Day 2023 at the UC Davis School of Medicine. The vast majority — 82% — will stay in California after graduating in May, and 23% of them will remain at UC Davis Health. Most students, 58%, will go into primary care programs; the large share is encouraging, as UC Davis and other UC medical schools fervently try to produce more internal and family medicine doctors, who are in especially short supply in underserved rural locations. Emergency medicine programs will receive 15 of the graduates, pediatrics 13, and anesthesia programs nine. Students who aren't staying in California matched into programs in 13 states.

Innovative research on display at Poster Day

A total of 114 posters — such as student Samantha Wong's study "Views of Non-Physician Stakeholders on Barriers & Facilitators of AYA Cancer Care in Latin America" — were on display in the Education Building at this year's Poster Day, as UC Davis School of Medicine continues its mission of improving health through innovative research. The school's research opportunities are particularly robust and include:

- **M.D./Ph.D. Program:** An integrated program that combines medical and graduate education, leading to both the M.D. and Ph.D. degrees.
- **Academic Research Careers for Medical Doctors (ARC-MD) Program:** A five-year program that provides medical students with skills that promote a successful physician-scientist career. Med students spend the fourth year conducting research.
- **Medical Student Research Fellowship:** Students spend four or eight weeks enhancing their medical training through basic science, clinical investigation, or health care delivery research.

Volunteers 'Build for Unity' with Habitat for Humanity

Twenty-one volunteers from the UC Davis School of Medicine braved the rain and mud in February to take part in Habitat for Humanity of Greater Sacramento's 2023 Build for Unity, the second time the school has sponsored and participated in the program. "Our core values at the UC Davis School of Medicine include diversity, equity, and inclusion," said Susan Murin, M.D., M.Sc., M.B.A., interim dean of the School of Medicine. "We think it's very important to be welcoming across all cultures and religions and to model that in our behavior, not just in our words." Build for Unity 2023 involved more than 200 inter-faith volunteers who worked side by side, contributing more than 1,200 hours on myriad tasks that ranged from siding installation to exterior painting. School of Medicine contributions also helped raise \$33,297 for the program.

Looking forward to seeing you in the fall



On behalf of the UC Davis School of Medicine Alumni Association, we want to thank you for staying connected.

As an alum, you're part of an exceptional community, and we aim to provide opportunities for you to stay engaged. In addition to learning about news, accolades, and events in the Dean's Update newsletter, you can remain connected through the School of Medicine Alumni Association (SOMAA) website. Visit health.ucdavis.edu/medalumni to submit a class note, discover volunteer opportunities, nominate outstanding alumni for awards, hear about programs, support the SOMAA Scholarship, update your contact information, and more.

We are excited to announce that Alumni Weekend 2023 will be held Sept. 8-9. Please mark your calendar for this annual event on our Sacramento campus. Join us to reminisce with classmates and hear what's new and amazing at UC Davis School of Medicine. We will also celebrate some of your remarkable peers and provide an opportunity for reunion classes to reconnect. Stay tuned for more details about this exciting weekend.

We're pleased to share that Lisa Dicce has joined as the new Director of Alumni Engagement. She has enjoyed meeting alumni, looks forward to supporting the community, and wants to hear from you. Your input will lead to a stronger alumni association, and we value your opinions. Please reach out to share your thoughts and ideas (ladicce@ucdavis.edu or 279-386-6317).

Thank you again for your many contributions to the community and for staying connected!

Doug Gross (M.D., '90)

President

*UC Davis School of Medicine
Alumni Association*

School of Medicine Alumni Updates

1976

Rahnea Lee Sunseri Vaiarello

After leaving the front lines practicing internal medicine, I spent the last 6 ½ years as part of the team founding the University of the Pacific's Master of



Physician Assistant Studies. I served as medical director and faculty, teaching pharmacology, medicine, and some behavioral medicine.

In addition, I was the advisor for Capstone projects of 22 students each year. Being involved in every aspect of the program has been fun. I loved teaching eager students. The university has since created the School of Health Sciences, which incorporated the PA program as well as other established programs, and has added new graduate degrees in the health sciences. Because I wanted to spend more time with family and friends, I decided to retire, which I did this last April. Now I can get outdoors more. Teaching is an almost 24/7 job. We Zoomed thru COVID-19. Now I'm faculty emerita, and enjoy retirement.



1982

Nancy Griffith



Our UC Davis School of Medicine Class of 1982 Scholarship Fund is now ready for contributions at give.ucdavis.edu/MEDI/325178.

Donate in honor of a friend, family member, colleague. Ask for a donation to be made in your name instead of a birthday or Christmas present. If you have to take a required distribution from your retirement account it can be given directly to the fund. No amount too small or large. Please make a contribution today. Thank you.

Caroline Hastings

I came to Children's Hospital Oakland for my pediatrics residency and never left! I have had a wonderful career here starting with being the inaugural fellow in pediatric hematology oncology and now practicing primarily neurooncology, while serving as the fellowship program director. The community and my colleagues are amazing and have made this a rewarding career. I have been fortunate to be involved in the specialty on a national level and am the president elect for the American Society of Pediatric Hematology Oncology. Along the way I developed an unexpectedly exciting side interest in lysosomal storage diseases, especially Niemann Pick Type C, and now see patients and conduct trials internationally. Of course, the true highlight of my life is my husband (Ward Hagar, met at UC Davis while he was an IM resident) and our three daughters who are finding their own unique paths around the country and world.

1987

Michelle Jolton Taube

The COVID-19 pandemic brought some happiness to us among all of the struggles. Our son, daughter and her partner all moved in with us in Eugene from the

Bay Area for about 8 months. I loved having family dinners and so much time and laughter with my adult children! I've been semi-retired since January 2021. I work "filling in" for my prior group, working anywhere from zero up to eight days per month depending on the need. I've learned to use Epic since my retirement which is good brain exercise! I now also have more time for physical exercise, volunteering and spending time with friends. We are finally starting to travel a bit more which is one of the things I looked forward to most for my retirement. I would welcome any classmates interested in visiting Eugene!

1990

Robert Tambeaux

Retired as a diagnostic radiologist last summer at age 66. Now splitting the year with wife Petice between Green Bay and Rancho Mirage. Daughter Cate is an event planner in Seattle. Son Chris is an Air Force fighter pilot (F-15e) and currently doing flight instruction at Laughlin AFB in Texas. Labradors Vinny and Vito round out the family, and spend most of their day trying to convince me that it is time to feed them.

2007

Nadia Huancahuari

Sharing a recently published article about the work my colleagues and I are doing at Mass General Brigham in Boston to decrease health care inequities, " 'So much more to do': A hospital system's campaign to confront racism – and resistance to change – makes early strides" (statnews.com/2022/08/25/mass-general-brigham-campaign-confront-racism-early-progress). We are hoping to share our wins and challenges so that other health care systems can feel encouraged about this work.

RESIDENCY/ FELLOWSHIP ALUMNI

1976

Michael Schermer

(Ophthalmology)

In April 2022 I was able to trek in Nepal to visit Everest Base Camp at 17,500 feet. At age 78 it was a challenge, an adventure, and a dream fulfilled. I'd be happy to share my experience with anyone interested.



1978

Bruce Douglas Noonan

(Ophthalmology)



Retired. Moved to Post Falls, Idaho two years ago. Home on Prairie Falls Golf Course. This month

my article, "Caring for the Faithful" was published on the Doctors for Responsible Gun Ownership website (drgo.us/caring-for-the-faithful).

Editor's note: Information shared in class notes is submitted by individual alumni and reflects their personal views, not those of UC Davis or alumni organizations. Questions or comments about individual class notes should be brought up directly with the note's author through publicly available channels.

In memoriam

Malcolm MacKenzie, M.D., a former professor in the Division of Hematology/Oncology at the UC Davis School of Medicine, died at home in October 2022 at age 87.

Malcolm studied medicine at UCSF and later completed post-doctoral fellowships in physiological chemistry and hematology. His goal of combining research and clinical work, seeking treatments for his patients, led to his career in academia. He served as an assistant professor at UCSF and an attending physician at San Francisco General Hospital, and similar roles at the University of Cincinnati and Cincinnati General.

Returning to California, he joined the faculty at the nascent School of Medicine at UC Davis as a professor of medicine in the Division of Hematology/Oncology, where he spent the rest of his academic career, teaching, seeing patients and doing research. Malcolm retired from UC Davis at age 60. He then became director of the Center for Blood Research of the Sacramento Medical Foundation Blood Center for 10 years before he (once again) retired.

Although most of his research involved cancer studies, Malcolm also published papers to help further understanding of AIDS treatment. As a pioneer in the study of multiple myeloma, he published many papers identifying markers on specific types of blood cells.

Malcolm is survived by his wife, Natalie; daughter Leslie and son-in-law Jonathan Blackie; daughter Tracie and son-in-law Augusto Sarti; daughter-in-law Heather K. MacKenzie; grandchildren Lindsay and Stuart Blackie, and Alexander, Sean and Kevin Sarti; and brother Sherwin MacKenzie. He was preceded in death by his son, Kenneth MacKenzie.

Excerpted from The Davis Enterprise

Anne Kent, M.D. '84, passed away at her Newport Beach home in November 2022 surrounded by her beloved family. She was 64. During Anne's final years, she lived with ALS. Anne is survived by her husband of 38 years, Robert; children Tyler (Andrea), Ryan (Kristin), and Victoria (Joshua) Samuels; grandchildren Hudson, Calvin, Lucas, and Iris Anne; and her seven siblings, numerous nieces and nephews and countless friends, dear colleagues, and patients. Her parents, James and Patricia Murphy, preceded her in death.

Born in San Jose, Anne was the oldest daughter of eight siblings. She attended Presentation High School, but determined to be a doctor like her dad, took specialized science classes at the all-boys' high school across town. At UCLA, Anne met her love, and life partner, Rob. In 1980, she graduated magna cum laude and went on to medical school at UC Davis, where she was a member of Alpha Omega Alpha Honor Medical Society. Anne completed her ob/gyn residency at UC Irvine, and in her final year served as chief resident.

Anne moved into private practice at Doctor's Office for Women, which grew into a prominent women's health practice in Orange County. She delivered over 10,000 babies at Hoag hospital and ended her career as president of Pacific Women's Healthcare Associates. Her passion lives on at Hoag with the "Jeffrey M. Carlton Endowed Chair in Women's Health, in honor of Dr. Anne Kent." She received a Courage Award from Augie's Quest, a foundation seeking a cure for ALS.

Excerpted from the Orange County Register



An update from Stephen Cavanagh, dean of the Betty Irene Moore School of Nursing at UC Davis

Health care is a team sport that requires different perspectives



Stephen Cavanagh, Ph.D.,
M.P.A., R.N., F.A.C.H.E., F.A.A.N.

Registered nurses (RNs) are the frontline of patient care and the backbone of our health care system. They deliver person-centered care and assist family caregivers in the transition from clinical settings to home. They offer the best hope for more equitable health care by bringing more diversity to the workforce.

I was reminded of these qualities and why nursing is the most trusted profession — for the 20th straight year — at the Betty Irene Moore School of Nursing at UC Davis' December pinning ceremony for our Master's Entry Program in Nursing Class of 2022. While RNs are the largest segment of the health care workforce, they by no means can care for patients and families alone.

Health care is a team sport that requires different perspectives from clinicians trained in different disciplines to collaborate on a common goal. In fact, several studies suggest that a team-based approach both improves patient outcomes and improves clinician well-being.

For us at the School of Nursing, optimal health and health equity for all is the goal woven into each education and clinical experience for our students — future RNs, physician assistants (PAs), family nurse practitioners and nurse scientists. We are, by design, a team-based school that brings interprofessional education and exposure to every facet of our curriculum.

Upon completion, our alumni bring with them the values, beliefs and skills of the Betty Irene Moore School of Nursing. The school was founded to create agents of change in an ever-evolving health care system. The past three-plus years illustrate that constant change and paint a challenging future:

- A predicted increase of up to 12% in inpatient hospitalizations in 2025 — due to those with long-COVID and those who delayed treatment during COVID.
- An aging population with more chronic conditions that will greatly expand visits to ambulatory and outpatient settings.
- Inequitable care for underserved populations and communities of color due to systemic racism and years of biased research and practice.

The demand for critical-thinking, problem-solving providers is evident now more than ever. To prepare them to be the change agents and leaders we know they can be, we expose them to those realities while still in school.

Recently, future nurses in the School of Nursing partnered with future physicians in the UC Davis School of Medicine in an interprofessional poverty simulation. Students role-play the lives of families who are low-income to understand the realities of poverty. The simulation is designed to sensitize those who frequently deal with families that are disadvantaged. Later this year, future nurses and PAs will have the opportunity to work on a School of Nursing led mobile health clinic that serves people experiencing homelessness, refugees and unaccompanied minors.

These experiences expose students to underrepresented populations — the very ones they will care for in the future — with the goal of seeing beyond the patient to understand the person and all the challenges they face in accessing and maintaining their health. We believe going beyond traditional education is how we achieve health and health care equity.

The RN workforce is expected to grow by 6% over the next decade. More than 40,000 new PAs will join the health care ranks in the next 10 years. The Advanced Practice Registered Nurse workforce — including nurse practitioners, nurse anesthetists and nurse midwives — is expected to grow much faster by 40%. Their contribution and leadership in health care have never been more needed.

Today, more than 70 of our master's-prepared nurses now work in our health system. In addition, more than a dozen of our PAs and advanced practice nurse practitioners work throughout the UC Davis Health network to expand patient access and equip future students with the skills they need to go beyond traditional practice.

At the School of Nursing, we're proud to contribute to the future of health care and to serve as an indispensable partner at UC Davis Health. I know our graduates will make a difference for years to come.

Pioneering a profession

UC Davis Health nurse practitioner residents practice GI tube management in a Betty Irene Moore School of Nursing simulation suite. UC Davis' first class of FNPs graduated five decades ago.

At 29 years old and with six years as a nurse under her belt, Pat Foster wanted something more. Working on the border, south of San Diego with Chicana girls, she felt inadequately prepared to handle all the issues they were dealing with.

From 'experimental health manpower' to increased medical independence, much has changed since UC Davis' first class of Family Nurse Practitioners graduated in 1973.

So, she joined 16 other nurses in a pilot program at UC Davis to prepare family nurse practitioners. In September 1971, both the program and the profession were unknowns.

"When we came into the program, we all may have had a different idea of

what this was because it was so new," recalled Foster, a graduate from the first class.

"They recruited public health nurses and it sparked my interest," added her Class of 1973 classmate Vicki Houle, 24 at the time. "We were the Wild West."

Fighting against pushback

After one year at UC Berkeley, the Family Nurse Practitioner Program (FNP) transitioned to the UC Davis School of Medicine, where the goals aligned. Both were focused on solving California's



Betty Labastida at the Warm Spring Indian Reservation preceptorship in 1973.

lack of primary care, especially in rural and underserved areas. Graduates earned a Master of Health Services Degree in Family Nurse Practice. Upon completion 50 years ago this year, they faced a harsh reality.

“There was pushback. We weren’t taken very seriously,” said classmate Betty Labastida.

“It was needing to wear a flak vest every day. We had pushback from the physicians and the nurses. We were fighting on a survival level,” Houle said. “It amazes me how the current NPs take for granted all the things we fought for.”

While everyone agreed on the need for more primary care providers in California, the nurse practitioner profession was both innovative and unorthodox, which led to many questioning its legality. The leaders of the UC Davis program gained support from Sen. Alfred Song who ultimately passed the Experimental Health Manpower Act in 1972, allowing NPs and physician assistants to practice under medical supervision.

“No one had any idea what I was and what I could do,” said Mary Garofalo, another member of the Class of 1973. “I had a lot of testing from physicians who enjoyed seeing me squirm.”

Serving the underserved

In addition to the hurdles of being accepted in practice, program leaders also faced a test in getting the students exposed to rural areas and the populations of greatest need. After one year of didactic instruction and some clinical exposure, the students embarked on a 6-month-long preceptorship, or training, in rural locations.

Those early experiences planted a seed in many in that very first class. Foster would go on to work several years in Colombia, to teach FNP skills to master’s-level nursing students from four Latin American countries. Houle



The Family Nurse Practitioner program and the UC Davis School of Medicine both focused on solving California’s lack of primary care, especially in rural and underserved areas.

co-owned a practice in Tahoe City and helped launch a nursing program in Swaziland (now Eswatini) with the Peace Corps. And Labastida would spend the half of her 40-plus-year career in eight countries with the U.S. Department of State Foreign Service, and the other working in county medical services along the West Coast.

“It was my dream job,” she said. “I feel fortunate that the program prepared me to be part of the change.”

A profession and legislation evolve

The Manpower Development and Training Act was the first of several legislative acts that were completed to provide permanent support. In fact, not until 2020 did NPs gain the power to practice independently via Assembly Bill 890. The bill requires a phased-in approach making eligible nurse practitioners fully independent around 2026.

“We fought to change prescription privileges. It took us five times working with the legislature to get that passed,” Houle recalled. “When we went down in flames for independent practice, I realized what tough skin we had to have.”

As those early NPs pioneered their new roles and the profession itself, the UC Davis program, which also included a physician assistant program, evolved. In 1974, it earned accreditation by the American Medical Association and opened up to all nurses as a certificate program. After 40 years of successful contribution to the primary care workforce, both programs transitioned to the new Betty Irene Moore School of Nursing at UC Davis in 2013 and, just as that first class, at the master’s-degree level. Now the 111 graduates from the School of Nursing’s program join the 1,800 who graduated from the medical school.

Celebrating a half century

In May, those trailblazing alumni from the Class of 1973 reunite at Betty Irene Moore Hall to mark their 50th year since graduation.

“What an incredible impact these providers have had on the foundation of the NP profession and the health and well-being in communities here and beyond,” said Cat Adams, senior development director at the School of Nursing. “We want to celebrate all they’ve accomplished and let them know that even though they graduated from the School of Medicine, we consider them part of our School of Nursing family too.”

For some, it will be the first time in 50 years to see each other.

“I’m looking forward to reconnecting with old friends and hearing what everyone’s done with this pilot project. We’ve all spread our wings and done a lot of interesting things,” Foster said.

“I think we proved ourselves, therefore we proved it for UC Davis,” Houle added. “I think it was a win-win for both of us.”



High schoolers get hands-on lessons in nursing

Students learn about pathways to a future health care career

What do you want to be when you grow up? For many students of color, the answer may not be a future in health care. They may not realize how the profession could be for them or understand the path to achieving that goal.

But a two-week summer experience at the Betty Irene Moore School of Nursing at UC Davis seeks to change that.

“I have worked with enough pre-nursing students who didn’t really know some of the important things that they needed to know about their freshman and sophomore years in college, to the extent that they were no longer able to get into a nursing school,” said Piri Ackerman-Barger, Ph.D., R.N., C.N.E., F.A.A.N., the School of Nursing’s associate dean for Health Equity, Diversity and Inclusion. “We thought that by starting high school students off with some of the core pieces of information they needed to know, so that they were successful as soon as they walked in the door to community college or to a university, that would be really helpful.”

“If we’re going to change health outcomes we must invest in our future generation.”

—PIRI ACKERMAN-BARGER,
ASSOCIATE DEAN FOR
HEALTH EQUITY, DIVERSITY
AND INCLUSION

Levert Bryant, left, and a fellow SHINES participant get hands-on experience in a hospital manikin simulation.

Driven by the desire to show students a possible future and the need to diversify the future health care workforce, Ackerman-Barger launched the Summer Health Institute for Nursing Exploration and Success (SHINES) program. Last summer, 38 students from eight high schools serving underrepresented students in Sacramento began the inaugural program.

Simulations for health care, workshops for life

Coursework includes hands-on simulations, developing a deeper understanding of the nursing practice and the social determinants of health, plus resume writing and personal branding workshops. Current nursing students also share experiences.

“I believe deeply that education is a key piece in diversifying our nursing staff and the way to achieve that is through inspiring high school students,” explained Patricia Fernandez, SHINES co-director and incoming Doctor of Philosophy student at the school. “They are our future. This is just the perfect opportunity to bring students together and get them excited about becoming a nurse.”

The 16- and 17-year-olds learn whether nursing is the right fit for them. SHINES both paints a nursing pathway and fosters identity formation. It gives students confidence, self-efficacy and a sense of the value they bring.

“That just really inspired me and made me like feel more comfortable and confident in like my journey to becoming a nurse,” said Anointed Amasowomwan, a student at Consumnes River College. “We need more diversity in the medical field that I feel like I could bring in.”

Participant Levert Bryant also wants to go into health care. “I thought this was a chance to get me introduced to it, to go through the different aspects of it,” the Sacramento Charter High School student said. “And it doesn’t hurt to always try something new.”

Ackerman-Barger credits overwhelming volunteer support and donor investment for the inaugural launch. The year’s partners included several School of Nursing alumni, Cristo Rey High School, Arthur A. Benjamin Health Professions High School, St. HOPE Academy and Improve your Tomorrow. Thanks to involvement and investments from UC Davis Medical Center nursing leadership and School of Nursing donors, students receive a \$500 completion stipend and \$200 wardrobe allowance.

Betty Irene Moore School of Nursing Updates

SCHOOL OF NURSING CO-FOUNDER GORDON MOORE DIES

Gordon Moore, co-founder of the Betty Irene Moore School of Nursing at UC Davis and Intel Corporation, died in March at 94. After his success at Intel made him a billionaire, Moore and his wife of 72 years, Betty, focused on philanthropy, creating the Gordon and Betty Moore Foundation which invests in environmental conservation, science and patient care. UC Davis received a \$100 million commitment in 2007 to launch an innovative nursing school. Bearing Mrs. Moore's name and dedicated to transforming health systems and education, the Betty Irene Moore School of Nursing opened its doors to the first students in 2010. After the initial commitment, the foundation continued investing in the School of Nursing; in 2017, a \$5 million grant founded the Family Caregiving Institute, dedicated to supporting the more than 40 million caregivers in the U.S. In 2019, a \$37.5 million investment (and recently \$7.4 million more) launched the Betty Irene Moore Fellowship for Nurse Leaders and Innovators. In the past 13 years, the school has launched six graduate-degree programs, graduated more than 1,000 alumni, and is ranked among the top 25 U.S. nursing schools by *U.S. News & World Report*. In 2017, Gordon and Betty Moore were recognized as California's most generous philanthropists. To date, their foundation has donated more than \$5.1 billion to charitable causes since its founding in 2000.

FELLOWSHIP FOR NURSE LEADERS EXPANDS

A \$7.4 million grant from the Gordon and Betty Moore Foundation announced in March will expand the Betty Irene Moore Fellowship for Nurse Leaders and Innovators at the School of Nursing. The new grant increases the number of future fellows and builds upon the momentum of the first three cohorts, who have had significant national impact. The fellowship itself is innovative in that it supports early-to-mid-career nurse scientists who bring diversity of perspectives and thought; the fellowship funds their prototype development and exploratory work not typically funded by the NIH, such as mobile applications for health intervention, artificial intelligence to identify patients at risk of certain conditions, and new tools to help prevent readmissions. In the past three years of the program, 32 early-career nursing scholars have developed their potential to accelerate leadership in nursing-science research, practice, education, policy and entrepreneurship.

NATIONAL BLACK NURSES ASSOCIATION AWARDEE

The National Black Nurses Association (NBNA) has named Aron King, M.S., R.N., a 2022 Under 40 Awardee. King, an assistant nurse manager at UC Davis Medical Center and 2021 graduate from the School of Nursing, is one of only 16 nurses in the nation to receive the honor. After caring for patients as a bedside nurse for 8 years, King entered the master's-degree leadership program at the School of Nursing in 2019. He is currently a student of the school's Ph.D. program.

Help make a difference

Need a quick and easy way to feel great about yourself and know you're making a difference in the lives of UC Davis students?

Make a gift to the School of Medicine or Betty Irene Moore School of Nursing. No matter the size of your donation, what counts is your participation!

Visit give.ucdavis.edu/MEDI
or give.ucdavis.edu/SONU

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UC Davis Health

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Interim Dean, UC Davis School of Medicine

**Stephen Cavanagh, Ph.D., M.P.A.,
R.N., F.A.C.H.E., F.A.A.N.**
Dean of the Betty Irene Moore School of Nursing

Alumni Networks

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An economic powerhouse for the region and California

UC Davis Health is a major driver of economic prosperity for both the Sacramento region and California, according to a new economic impact study released last year. According to an assessment of pre-pandemic data, in 2019 UC Davis Health expenditures led to a total economic impact of \$4.60 billion for the seven-county local region — an additional \$1.08 for every dollar UC Davis Health spent. The report also calculates UC Davis Health's statewide economic and employment impacts, and impacts for UC Davis as a whole.

