A PUBLICATION OF THE UC DAVIS SCHOOL OF MEDICINE UC DAVIS SCHOOL OF MEDICINE

ESHIE

Summer 2021

The beginning of the end

Helping to deliver the vaccines, testing and treatments that will halt the pandemic

School of Medicine #4 for diversity page 3 Craniopagus twins separated page 22 Historic human stem cell trial page 24 Firearm injury prevention resources page 26

Protecting our patients and community



We've accomplished so much since the beginning of this pandemic. Last February, UC Davis Health started treating our first patients for COVID-19 as we all faced the effects of a spreading pandemic. We never lost sight of our patient-centric approach in the months that followed. The care provided by our team to all our COVID patients — and our regular medical patients — has been so caring, so personal, and so warm, reflecting

our core values and exercised on a daily basis despite the stress our entire team was experiencing.

That type of humanity defines UC Davis Health. In this issue, we share more about this through the COVID-19 timeline that spotlights our efforts on vaccination, testing outreach and other achievements on behalf of our patients and underserved populations in the region. The game

"This concern for our patients" total well-being is in our DNA and mindsets."

changer was last December when our first employee received one of the first shots in the first U.S. batches of the Pfizer vaccine — we participated in those clinical trials — and soon we were rolling vaccines out to patients and our greater community. We're fully engaged and committed to overcoming this pandemic, working with our patients and our surrounding communities every step of the way.

On other key fronts of patient health, we're proud to cover additional examples of UC Davis Health expertise and innovation, including the MIND college program, our successful conjoined twins surgery, and the world's first, FDA-approved human clinical trial to treat the most serious form of spina bifida with stem cells, among other compelling content. Everything we do is about helping people live better, fuller, healthier, happier lives. We believe that each patient who walks through the doors of the UC Davis Medical Center is a very special person, inclusive of their background, orientation, and material circumstance. Equitable access to quality and compassionate health care is foundational to an advanced, democratic society.

And so, I'd like to emphasize the role of compassion here at UC Davis Health. Stephen Trzeciak is the author of *Compassionomics: The Revolutionary Scientific Evidence that Caring Makes a Difference*, which found that compassion in medical and clinical relationships leads to better patient outcomes, lower health care resource use, and reduced medical costs. To quote Trzeciak, "Once you believe it's powerful, you'll want to use it as much as possible."

This concern for our patients' total well-being is in our DNA and mindsets. As you'll discover in this magazine, we've learned so many lessons during the last year, and now we're pivoting to help our region recover in the post-pandemic world, expanding our virtual health systems in patient-centric ways, reducing health equity gaps and investing in care for our surrounding neighborhoods, all while serving as a leading-edge health care model on these issues among others. UC Davis Health is truly transforming health care for people, delivering "Tomorrow's Healthcare Today"!

Yours in health,

David Lubarsky, M.D., M.B.A. Vice Chancellor of Human Health Sciences Chief Executive Officer, UC Davis Health

Transforming health through innovation and collaboration



The graduation of UC Davis School of Medicine's 50th class on May 22, 2021 and considerable global progress in the battle against COVID-19 mark a hopeful new chapter.

The Class of 2021 and all our

exceptional medical students have shown incredible leadership, perseverance and commitment to caring for everyone, especially our underserved communities. This is exemplified by our student volunteers at the Shifa student-run clinic who organized COVID-19 vaccine clinics and immunized thousands of vulnerable community members. Our students, faculty and residents also volunteered at the many UC Davis Health vaccination clinics in our region in the last year.

I am grateful to our students and faculty for our shared commitment and partnership to advance health equity. A powerful example of this is the student, faculty and staff collaboration that resulted in the recent elimination of race-based references in the standard estimated glomerular filtration rate (eGFR) test to check our patients' kidney health. UC Davis Health is among the first health systems in the nation to make this change to the eGFR.

In collaboration with our students, faculty and stakeholders, our school is actively looking at clerkship grade inequities and working with the American Association of Medical Colleges to explore solutions to such national inequities in medicine. While there is a great deal more work to do, I am heartened by the changes we are collectively making as we work to create a more equitable School of Medicine and tackle the larger issue of inequities in medicine as a whole.

This spring, U.S. News & World Report ranked UC Davis School of Medicine as the fourth most diverse medical school in the country, No. 9 in family medicine and No. 11 in primary care training. We were also featured on the May 2021 cover of INSIGHT into Diversity magazine, highlighting the effectiveness of our holistic admissions approach to create a more diverse physician work force. While we have made strides in the diversity of our medical students, we will continue our work to significantly expand diversity in our faculty and leadership.

On May 3, 2021 we launched our leading-edge I-EXPLORE curriculum, which emphasizes cross-disciplinary collaboration and focuses on the pillars of biomedical science, clinical science and health system science. I-EXPLORE will be a keystone to preparing our students to practice medicine in an ever-changing health care landscape. This is also a critical component as we prepare for our LCME accreditation renewal in 2022.

Since UC Davis Health treated the nation's first known community acquired case of COVID-19 in February 2020, the School of Medicine has been a catalyst for unprecedented campus-wide research collaboration across disciplines and real-time problem solving. This resulted in groundbreaking rapid asymptomatic COVID testing in collaboration with the UC Davis main campus that received national recognition as model to protect public health.

In 2020, the School of Medicine also received its highest-ever National Institutes of Health research funding with more than \$181 million. Bringing our research discoveries and care innovations to our patients' bedside is one of the greatest benefits of academic medicine.

To incentivize collaborative science across departments and centers throughout UC Davis, in May, we launched the Cultivating Team Science seed grant program, awarding \$200,000 in research grants to two different teams. Next year we will expand the program to three teams.

Looking ahead, we will continue to grow and diversify our research, including expanding our clinical trials to offer our patients new, potentially lifesaving treatments for COVID-19, stem cell treatments, cancer, and neuroscience, among many others.

The School of Medicine and the Betty Irene Moore School of Nursing at UC Davis are also collaborating on a new Healthy Aging Initiative to provide wrap-around care for older adults, and new education and clinical trial opportunities.

As the UC Davis School of Medicine embarks on its next 50 years, I am grateful for the dedication and partnership of our many collaborators as we strive to educate the next generation of physicians and transform health through groundbreaking research and care innovations.

a Bustice mp

Allison Brashear, M.D., M.B.A. Dean, UC Davis School of Medicine

SUMMER 2021 · VOL 17 / NO 2

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

in this issue

12 The beginning of the end

From trialing vaccine candidates to

playing key roles in distribution, UC Davis Health is helping to deliver the shots and the tests that will help to halt the pandemic.

22 CRANIOPAGUS TWINS SEPARATED

After months of intense planning and practice, surgeons at UC Davis Children's Hospital separated ninemonth-old twins born conjoined at the head.

27

#4 IN THE U.S. FOR DIVERSITY The new U.S. News & World Report ranking is a testament to the UC Davis School of Medicine's innovative programs and more.

more features

- 24 First human trial using stem cells to treat spina bifida
- $\begin{array}{c} 26 \hspace{0.1 cm} \text{New firearm injury prevention} \\ \text{resource} \end{array}$





departments

News briefs and	
leadership updates3	
School of Medicine and	
alumni updates 27	
In memoriam	
School of Nursing and	
alumni updates	

On the cover: UC Davis Health helped to trial the Pfizer-BioNTech COVID-19 vaccine last year, and was among the nation's first health systems to receive an initial allotment for health care workers in December.

2

#4 in America for diversi

Schools of medicine and nursing listed among nation's best

The UC Davis School of Medicine was named No. 4 for its diversity and No. 9 in family medicine in U.S. News & World Report's 2022 graduate school rankings, while maintaining high rankings in primary care and research.

UC Davis was the top-ranked medical school for diversity outside of the East

Coast, based on enrollment of underrepresented minority (URM) groups (defined as Hispanic/Latinx, Black/African American, American Indian/Alaskan Native or Asian Pacific Islander) and its comparison to the state's demographics. The school reported a total URM enrollment of 37.3% in the ranking period.

The School of Medicine also ranked #11 in primary care and #49 for the most graduates practicing in primary care fields.



"Our goal is to improve the health of our community, and one of the best ways we can do that is to train a diverse physician workforce who are committed to alleviating health disparities, especially in California's rural and underserved urban areas," said School of Medicine Dean Allison Brashear, M.D., M.B.A.

The 10-year-old Betty Irene Moore School of Nursing at UC Davis moved up 16 spots to land at No. 24 among best graduate schools for master's degree nursing programs (see entry in partnership section).

UC Davis School of Medicine scored a record year of NIH funding

In 2020 the UC Davis School of Medicine secured its highest-ever level of National Institutes of Health (NIH) funding at more than \$181 million, an increase of about \$4.7 million compared to the previous year.

According to the latest rankings from the Blue Ridge Institute for Medical Research, UC Davis ranked among the nation's leading medical schools for NIH funding. Eight School of Medicine departments ranked in the top 20 nationally.

The Department of Public Health Sciences had the greatest funding increase among all departments, followed by psychiatry and internal medicine. The Department of Surgery received the most research funding among surgery departments in the UC system.

"We're proud of the NIH's trust in our researchers and medical school," said Allison Brashear, M.D., M.B.A., dean of the School of Medicine. "This funding supports our investigators who are leading groundbreaking research that will transform patient care and improve the health of our communities."

UC Davis School of Medicine departments in Top 20 for NIH funding in 2020:

Public Health, 8th Anatomy/Cell Biology, 11th Dermatology, 11th Neurology, 13th Surgery, 14th Psychiatry, 14th Emergency Medicine, 17th Physical Medicine, 19th

Brooks-Kayal new neurology chair

Internationally recognized neurologist **Amy Brooks-Kayal, M.D., F.A.A.N., F.A.N.A., F.A.E.S.**, has been named the Andrew John Gabor, M.D., Ph.D., Presidential Chair in Neurology at UC Davis. Brooks-Kayal is known globally for her work as a neurologist and researcher who has led advances in epilepsy, pediatric neurology and neuroscience. Her research has identified cellular and molecular changes involved in the transition of the brain from normal to epileptic, with the goal of developing therapies that target that transition. She was most recently chief of Pediatric Neurology and co-director of the Translational Epilepsy Research Program at the University of Colorado School of Medicine.





Morris new radiology chair

Elizabeth Anne Morris, M.D., has been appointed chair of the UC Davis School of Medicine Department of Radiology. The Cal Aggie alumna is an internationally recognized expert in breast disease and the use of MRI, and the author of the book "Breast MRI: Diagnosis and Intervention" and numerous published papers. Her recent research efforts have involved using imaging biomarkers to assess risk and treatment response. Morris comes to UC Davis from Memorial Sloan Kettering Cancer Center, where she was chief of Breast Imaging Services and the Larry Norton Endowed Chair at Weill Cornell Medical College.

Simmons named Chief Administrator of UC Davis Medical Center

Brad Simmons, M.H.A., F.A.C.H.E., has been appointed to the newly created position of Chief Administrator, UC Davis Medical Center and Chief Operating Officer, UC Davis Health Hospital Division. The position is the senior most administrator for the medical center, replacing the prior position of hospital CEO which has been eliminated. Simmons is responsible for all inpatient care for UC Davis Health, and reports to David



Lubarsky, M.D., M.B.A., Vice Chancellor of Human Health Sciences and UC Davis Health CEO. He also works closely with Michael Condrin, M.B.A., Chief Operating Officer, Ambulatory Care, who is responsible for all UC Davis Health outpatient care.

Atreja named Chief Information and Digital Health Officer

UC Davis Health has appointed Ashish Atreja, M.D., M.P.H., F.A.C.P., A.G.A.F., to the new position of Chief Information and Digital Health Officer. Atreja, a gastroenterologist, has been the chief innovation officer



for the Department of Medicine at Mount Sinai Hospital, where he established one of the first innovation hubs within an academic medical center to build and test disruptive (transformative) digital health technologies. Atreja is credited with coining the term "Evidence-based Digital Medicine (EBDM)," and established the non-profit Network of Digital Medicine Association to connect innovation centers worldwide and share best practices for evidence-based digital medicine between industry, payers and health systems.

Harvath is Gerontological Society president



Terri Harvath, Ph.D., R.N., F.A.A.N., F.G.S.A., has been elected president of The Gerontological Society of America,

the nation's largest interdisciplinary organization devoted to the field of aging. An internationally recognized expert in gerontological nursing and nursing education, Harvath is senior director for strategic initiatives at the Betty Irene Moore School of Nursing at UC Davis, and serves as founding director of the school's Family Caregiving Institute. She was also founding director for the school's Master's Entry Program in Nursing.

CANCER CENTER TO HELP IMPROVE NATIONAL GUIDELINES

The UC Davis Comprehensive Cancer Center has been elected the newest member institution of The National Comprehensive Cancer Network* (NCCN®), a nonprofit alliance of 31 leading cancer centers that helps to create national clinical practice guidelines. As part of NCCN, the UC Davis cancer center will now appoint subject matter experts to join more than 1,600 multidisciplinary members across 60 panels responsible for more than 80 clinical practice guidelines (NCCN Guidelines[®]).



National Comprehensive Cancer Network®

Brashear elected to McKnight Brain Research Foundation board

UC Davis School of Medicine Dean Allison Brashear, M.D., M.B.A., has been elected to the board of the McKnight Brain Research Foundation, the nation's only private foundation dedicated exclusively to solving the mysteries of the aging brain. Brashear, an expert in rare neurological disorders known as ATPIA3-related diseases, was co-principal investigator on NeuroNext and served as principal investigator on more than 50 clinical trials, leading to three FDA-approved medications. She serves on the American Board of Psychiatry and Neurology and the California Institute for Regenerative Medicine Independent Citizens' Oversight Committee, and has served on the boards of the American Neurological Association and the American Academy of Neurology.





Melnikow appointed to national task force

Joy Melnikow, M.D., M.P.H., a professor in the Department of Family and Community Medicine, has been appointed to the U.S. Community Preventive Services Task Force. Established in 1996 by the U.S. Department of Health and Human Services, the independent, nonfederal panel provides evidence-based guidance on community-based health promotion and disease prevention interventions. Melnikow has directed the UC Davis Center for Healthcare Policy and Research since 2009, and has served on the U.S. Preventive Services Task Force.

Farmer presidentelect of American Surgical Association

UC Davis Department of Surgery Chair **Diana Farmer, M.D.**, is the new presidentelect of the American Surgical



Association (ASA) for the 2021–22 year. She assumes the presidency in 2022–23. Farmer is the first surgical leader from the UC Davis School of Medicine and the first woman from UC Health to be named to the position, and only the third woman elected to the position in the association's 141-year history. Farmer, who also serves as surgeon-inchief of UC Davis Children's Hospital, is a fellow of the Royal College of Surgeons of England and a member of the Institute of Medicine of the National Academies.



Despite a pandemic and nationwide hospital capacity concerns, UC Davis Health's kidney transplant team was among the top 10 busiest kidney transplant centers in the nation for 2020, ranking No. 7 in the country for total volume of kidney transplants and No. 1 in California for total number of deceased donor kidney transplants. By the end of last year, transplant center surgeons had performed 352 kidney transplants, the second-highest year on record since the program began in 1985.

"Most Wired" ninth year in a row



UC Davis Health has again been recognized as a level 9 out of a possible 10 in the 2020 Digital Health "Most Wired" program from the College of Healthcare Information Management Executives (CHIME), earning the rating in both the Acute and Ambulatory categories. UC Davis Health was one of just two health care organizations in Northern

California to earn level 9 status for ambulatory in 2020, and one of three to achieve level 9 for acute.

One of Newsweek's World's Best Hospitals 2021

Newsweek magazine has again named UC Davis Medical Center to its annual list of the "World's Best Hospitals." In the U.S., UC Davis Medical Center ranked 27th out of more than 300 hospitals, and was the Sacramento region's only to earn recognition in 2021. *Newsweek*, in partnership with Statista, Inc., used patient experience and satisfaction data, metrics such as patient safety, and peer recommendations to evaluate hospitals in 25 countries.

A *Newsweek* Best Maternity Care Hospital



UC Davis Medical Center was named to *Newsweek's* 2021 list of Best Maternity Care Hospitals, which recognizes facilities that have provided exceptional care to mothers, newborns and their families, as verified by the 2020 Leapfrog Hospital Survey. Best Maternity Care hospitals meet Leapfrog standards for lower rates of C-sections, early elective delivery, and episiotomy, as well as for assuring bilirubin screening for all newborns and blood clot prevention techniques for mothers delivering via C-section.

Top honor for provider organizations

UC Davis Health is among the winners of the 2020 Integrated Healthcare Association (IHA) Excellence in Healthcare Award, California's top honor for provider organizations. Only 20 of more than 190 participating organizations statewide met the standard of placing in the top 50 percent in clinical quality, patient experience and total cost of care. IHA is a nonprofit industry association that leverages its expertise, data and role to solve health care challenges.

Rogawski a fellow of the National Academy of Inventors



Michael Rogawski, M.D., Ph.D., professor of neurology and pharmacology in the UC Davis School of Medicine, has been elected to the National Academy of Inventors. Rogawski is the inventor, with UC Davis project scientist Dorota Zolkowska, M.D., Ph.D., of brexanolone (Zulresso), the first FDA-approved drug for the treatment of postpartum depression, which became commercially available in the United States in June 2019 and is being used at more than 40 clinical sites, including UC Davis Medical Center. Rogawski also holds seven U.S. patents and has additional pending applica-

tions, mostly related to new treatment approaches for seizures and epilepsy. His work in neurotherapeutics laid the groundwork for the development of epilepsy drugs, including perampanel (Fycompa), now used throughout the world to treat various forms of the condition.

AMERICAN COLLEGE OF PSYCHIATRISTS HONORS





Francis Lu

Helen Kales

The American College of Psychiatrists has announced that **Francis Lu, M.D.**, the Luke & Grace Kim Professor of Cultural Psychiatry, Emeritus, has been honored with its Distinguished Service Award for his significant achievements and leadership. **Helen Kales, M.D.**, the Joe Tupin Endowed Chair in Psychiatry, was named the recipient of the Award for Research in Geriatric Psychiatry. Lu is a leading light in cultural psychiatry, and Kales internationally renowned for her insights on geriatric mental health services.

Most inspiring Hispanic scientists





Fernando Santana, Ph.D., and Rebecca Calisi Rodríguez, Ph.D., were included on Cell Press's list of 100 Inspiring Hispanic/Latinx Scientists in America last fall. Published in honor of National Hispanic Heritage Month, the list was based on scholarly achievement, mentoring excellence and commitment to diversity, equity and inclusion. Santana, professor and chair of the Department of Physiology and Membrane Biology, is well-known for his

work in cardiac and vascular biology, where his lab studies calcium and potassium channels. Rodríguez is an associate professor in the Department of Neurobiology, Physiology and Behavior and investigates avian biology, reproductive neuroendocrinology, genomics and science communication.

A TOP U.S. BIOMEDICAL ENGINEER



Julie Sutcliffe, Ph.D., professor of biomedical engineering and hematology/ oncology, has been elected to the American Institute for Medical and Biological Engineering College of Fellows for outstanding leadership in molecular imaging and translational sciences. AIMBE

Fellows comprise the top 2% of U.S. medical and biological engineers. Sutcliffe leads three active clinical trials, a UC Davis pancreatic cancer consortium and research team, and is immediate past-president of the World Molecular Imaging Society.

MARCU AMONG AAAS FELLOWS



Laura Marcu, Ph.D., a professor in the Department of Biomedical Engineering, was elected to the 2020 class of fellows of the American Association for the Advancement of Science, the world's largest general scientific society. Fellows are recognized for distinguished efforts to advance

science or its applications. Marcu was elected for research and development of optical instrumentation and techniques for tissue spectroscopy and imaging, with applications in management of critical human disease and regenerative medicine.

In Brief

240 Top Docs



UC Davis Health physicians practicing in 61 medical specialties, including 15 pediatric subspecialties, were included on a list of the region's best doctors published in the December 2020 issue of *Sacramento Magazine*. "Top Docs" are selected through a peer-review survey led by Professional Research Services Company of Troy, Mich. This list is available online at health.ucdavis.edu/medicalcenter/top-docs/top-docs-2020.html.

Boone editor-in-chief of Medical Physics



Professor of Radiology **John Boone**, **Ph.D.**, has been named editor-in-chief of *Medical Physics*, the flagship journal of the American Association of Physicists in Medicine (AAPM). For the past two decades Boone's lab has studied the potential of dedicated cone beam breast

CT as a new method for both breast cancer screening and diagnostic breast examination, and has created four prototype breast CT scanners.

Early career honor for MIND researcher



Angela John Thurman, Ph.D., associate professor in the Department of Psychiatry and Behavioral Sciences, has been honored with the highly competitive Early Career Award from the American Association on Intellectual and Developmental

Disabilities (AAIDD). Thurman has authored or coauthored 34 peer-reviewed journal articles and 11 chapters in edited volumes, and made over 100 presentations at scientific and professional meetings.

Cooke president-elect of Thoracic Surgery Directors Association



David Tom Cooke, M.D., F.A.C.S., chief of general thoracic surgery, has been voted president-elect of the Thoracic Surgery Directors Association (TSDA) and will assume the position in May. Cooke becomes the first African American to hold the position, and

will transition to president of the 43-year-old organization in May 2023. Cooke was also inducted last year into the American College of Surgeons Academy of Master Surgeon Educators, which recognizes surgical educators committed to promoting excellence in the next generation. Cooke is a former director of UC Davis Health's cardiothoracic surgery residency program, and known for advancing minimally invasive chest surgery.

Liver specialist a 'Health Care Visionary'



Christopher Bowlus, M.D., the Lena Valente Professor and Chief of the Division of Gastroenterology and Hepatology, has been recognized by the American Liver Foundation as a "Health Care Visionary" based on peer nominations. The expert in

inflammatory liver disease is nationally known for his work in identifying markers, treatments and practice guidelines for primary sclerosing cholangitis (PSC) and primary biliary cholangitis (PBC).

NEXT-GEN HD LINEAR ACCELERATOR

UC Davis Comprehensive Cancer Center is adding two Elekta Versa high-definition (HD) linear accelerators, also known as "linacs." Versa Blue, as it is called by the Department of Radiation Oncology, involves 3D and 4D image guidance and is ideal for treating tumors that are hard to reach, prone to move, or next to vital organs.

Center of Comprehensive Care for Pulmonary Hypertension

UC Davis Health has received reaccreditation as a Center of Comprehensive Care from the Pulmonary Hypertension Association (PHA), the organization's highest level granted. The designation recognizes high quality and depth of resources for expert care. UC Davis first received accreditation in 2016, as one of the early programs recognized.

Lodi partnership featured in NEJM Catalyst



UC Davis Health's partnership with Adventist Health Lodi Memorial Hospital was highlighted in an issue of *New England Journal of Medicine (NEJM) Catalyst* last fall. UC Davis Health pediatrics and business leaders authored "Constructive Self-Cannibalism: Pediatric Affiliation Between an Academic University and a Community Hospital," available on the *NEJM Catalyst* website.



Motility testing for pediatric GI patients

UC Davis Children's Hospital has added rare esophageal manometry and anorectal manometry capabilities through the expertise of **Maheen Hassan, M.D.** The services are helpful for diagnosis around severe but nonspecific symptoms, and for decisions about medical management versus surgery.

Calendar

Friday, November 12

45th Annual UCDH Diabetes and Endocrinology Symposium (virtual) Registration and additional information to come at **health.ucdavis.edu/cme**.

Ongoing

On-demand courses:

Preventing Firearm-Related Injury and Death: A Targeted Intervention

Limb salvage

Medication-assisted treatment for opioid use disorder

Pediatric Acute Care Education Sessions (PACES) program:

Bronchiolitis

Ketoacidosis

- Diabetic
- Brief Resolved Unexplained

Head Trauma

Events (BRUE)

Sepsis

Date-certain events are in Sacramento unless otherwise noted. For more information about upcoming educational courses, please visit **health.ucdavis.edu/cme**. Or contact the Office of Continuing Medical Education at **916-734-5352** or **cmereg@ucdavis.edu**.

Important note: Before making travel arrangements, please call the Office of Continuing Medical Education at **916-734-5352** to confirm there are no changes to dates or locations printed in this calendar.

Notable quotes

"It is not the responsibility for our communities of color that have been traditionally disadvantaged to trust us. It is the responsibility of care providers, for health care, to establish that trust."

Chief of General Thoracic Surgery **David Tom Cooke**, **M.D.**, **F.A.C.S.**, in an Associated Press national feature about his efforts to allay vaccine hesitancy among Black Americans.

"It's working. The numbers are a testament, people's stories are a testament, that the vaccine is truly working, and we're going to be OK."

UC Davis Health's interim Employee Health Services Director **Anne Tompkins**, **M.S.**, in a February "CBS This Morning" national feature about UC Davis Medical Center reaching vaccine-induced herd immunity among its employees.

"Suddenly, there was like this pressure lifted from our shoulders."

Emergency Medicine Chair **Nathan Kuppermann, M.D., M.P.H.**, in the same CBS story, on the emotional impact of emergency department staff receiving vaccinations.

"One of the biggest problems of this pandemic is that people don't see the suffering."

Emergency medicine physician **Nick Sawyer**, **M.D.**, **M.B.A.**, speaking to CNN about his Twitter videos warning of the dangers of COVID-19. Sawyer was among UC Davis Health providers who volunteered in New York City during the initial surge there.

"What does it mean to keep your campus well when everyone else is getting sick around you? The university is part of the community."

Public Health Sciences Chair **Brad Pollock**, **M.P.H.**, **Ph.D.**, in a *New York Times* feature on Healthy Davis Together, a joint university-city COVID-prevention project. The newspaper called the effort the most ambitious of its type in the country, and a possible model for other universities.

"It's all playing the odds and the odds are that if you're coming into contact with somebody with the new variant, even masking and social distancing, there's increased risk of transmission to you."

Chief of Pediatric Infectious Diseases **Dean Blumberg, M.D.**, in a January Salon article on the emerging threat from variant of concern B.1.1.7.

For updates on UC Davis research related to SARS-CoV-2, please see the center feature section starting on the following page.

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

Body of Knowledge

A unique UC Davis-led study in JAMA Network Open recommends a new way for triaging mammogram patients during times of limited capacity, such as pandemic surges.

In one of the largest studies of its kind, researchers looked at nearly 900,000 individuals and close to 2 million mammograms, and found that a risk-based algorithm successfully maximized cancer detection.



A UC Davis Health study in *Cell Host and Microbe* points to the need for a different approach to treating gut inflammation and bacterial imbalance in the colon, after

finding that an enzyme in the organ's lining releases hydrogen peroxide to protect the body from gut microbial communities. Authors pointed to the opportunity of restoring host functions instead of eliminating microbes.



A UC Davis MIND Institute study of pregnant mice found that high amounts of folic acid during pregnancy harmed the brain development of embryos. Researchers say the

findings, published in *Cerebral Cortex*, indicate that more investigation is needed about best recommended dosage.

Using machine learning, UC Davis MIND Institute researchers have identified several patterns of maternal autoantibodies highly associated with the diagnosis and severity of autism. Their study in *Molecular Psychiatry* specifically focused on maternal autoantibody-related autism spectrum disorder (MAR ASD), a condition accounting for around 20% of autism cases. The effort created a new, translatable test for future clinical use.



In the largest-ever study of U.S. access to 3D mammography, researchers found that Black women and Latinas, as well as less-educated and lower-income women, haven't been able to access

the more-accurate technique as easily as white, well-educated and higher-income women. UC Davis played a senior role in the *JAMA Network Open* review of 2.3 million screening exams.



Only 38.5% of women in the U.S. are aware that breastfeeding lowers a mother's risk of breast cancer, UC Davis Health researchers reported in *Obstetrics & Gynecology*. Mothers who breastfeed

for more than a year cut their risk by 26%, but only 35% of U.S. mothers breastfed for at least a year as recommended by CDC.

Cover story







The be

Clockwise from bottom left:

The first Pfizer-BioNTech doses arrive Dec. 15; community vaccinations in Sacramento's underserved Oak Park neighborhood; freezers ready for vaccine; helping our staff reach herd immunity: point-of-care use of rapid combined molecular tests.





From testing the Pfizer-BioNTech candidate to key roles in distribution, UC Davis Health is helping to deliver the vaccine doses that will end the pandemic.

"See, WE DID IT!" exclaimed Eva Teniola, throwing her arms wide with joy as others broke out into applause around her.

The 47-year-old UC Davis Medical Center emergency department nurse had just become UC Davis Health's first person to receive a dose of historic coronavirus vaccine — a jab that, along with the clinical trial for the Pfizer-BioNTech candidate — cited as the first time mRNAbased vaccines were used against an infectious disease. The FDA granted emergency use authorization after data showed a stunning 95 percent effectiveness.

From then on, UC Davis Health would also become a key player in vaccine pursuit of herd immunity is a monumental task — and a deadly winter surge would need to be dealt with first. At one point during the holidays, COVID-19 patients filled as many as a fifth of UC Davis Medical Center's 600+ beds. Outside of the inpatient wards, UC Davis clinicians cared for an increasing number of "long haul" patients at one of the nation's first multidisciplinary post-COVID-19 clinics.

Although spring brought a drop in cases, new virus variants also heightened the urgency to distribute the vaccine as fast as possible. As public rollouts

ginning of the end

many others, would help symbolize the proverbial light at the end of the tunnel for the novel coronavirus pandemic.

UC Davis was among the nation's inaugural health systems to receive an initial allotment of the first approved coronavirus vaccine, when a total of 4,875 Pfizer-BioNTech doses arrived shortly after 7 a.m. on Dec. 15. The first shots were administered about three hours later.

"This is just like a lifeline," said Shashi Kant, 65, a veteran ICU and ER custodian, whose 36-year-old daughter had died months before from COVID-19. "The whole world prayed" for the vaccine, he added.

UC Davis School of Medicine and UC Davis Health played an important part in making it a reality, as one of 150 sites worldwide to participate in distribution, with the State of California targeting it for a major role due to its storage capability, highest-risk health care population, and community distribution ability.

Over the next several months (and in accordance with public health guidelines), UC Davis Health would delivermore than 162,000 doses of approved vaccines by Pfizer and other manufacturers. The first doses went to health workers here and in the community, and then to seniors and the elderly, emergency and essential workers, and high-risk patients. Throughout, UC Davis Health teams also worked to vaccinate underserved groups, in partnership with neighborhood and faith-based organizations, community clinics, and others.

But vaccinating 70 to 90 percent of Californians (let alone Americans) in

marched on throughout spring, UC Davis clinician-scientists continued to tackle the pandemic on multiple fronts joining clinical trials for the Novavax vaccine candidate and anti-variant boosters; testing new treatment approaches for both acute and "long" COVID; lending expertise and capacity for variant sequencing and community testing; and more.

"This pandemic is widely considered the public health crisis of our time, and UC Davis Health has modeled the key role of academic medical centers in the wellbeing of our society," said UC Davis School of Medicine Dean Allison Brashear, M.D., M.B.A. "It's clear now that our survival depends on staying ahead with science and partnering with science, and that we all depend so much on continued inquiry, expertise and ingenuity to be healthy."

Our continuing response to the **coromavirus pandemic**

"The pandemic has exposed deep and disturbing demographic disparities in health care that we're fully responding to as an institution... We're all in this together for our patients and our community."

> DAVID LUBARSKY VICE CHANCELLOR OF HUMAN HEALTH SCIENCES AND UC DAVIS HEALTH CEO

2020

Sep. 16

Historic pandemic, meet historic wildfires



Nicholas Kenyon

UC Davis pulmonologists help Californians understand how heavy wildfire smoke increases COVID risks; how to protect the lungs from both pollution and

viruses; and which respiratory symptoms indicate COVID-19 testing. UC Davis mental health experts add resiliency tips for locked-down citizens who are now stuck indoors, as well.

Sep. 17

Introducing COVID19questions.org

UC Davis Health is part of a research consortium that rolls out COVID19questions.org, a web portal that taps medical data from 200+ hospitals to help answer questions from clinicians, researchers and the public. The tool can draw from data on more than 45 million patients, including tens of thousands who tested positive for COVID-19 or were hospitalized with the infection.

September

Military doctors battle COVID-19

Emergency physician and Army reservist Joshua Elder, M.D., M.P.H., M.H.S., returns from overseas deployment supporting specialops troops with trauma care and coronavirus prevention. He's one of a number of UC Davis Health military members fighting against COVID-19 both home and abroad. Joshua Elder Emergency medicine physician and Air Force Lt. Col. Rory Stuart was awarded the Bronze Star for early COVID-response work in Afghanistan.



Oct. 1

Free testing for Central Valley farmworkers

Four UC Davis research centers receive a \$3.7 million NIH grant to test workers in the Central Valley, where the pandemic has reached alarming levels. UC Davis is one of 32 institutions to receive funding from the federal Rapid Acceleration of Diagnostics (RADx) initiative and RADx Underserved Populations (RADx-UP) program.



Sep. 28

Global deaths reach 1 million.

0ct. 2

U.S. President

Donald Trump

in the wake of

a White House

"super spreader"

event.

tests positive for the coronavirus

Oct. 12



Stuart Cohen

Monoclonal antibodies as prophylaxis?

UC Davis Health begins participation in a clinical trial of the Regeneron monoclonal antibody combination treatment given to President Donald Trump, but this time with a different aim – preventing COVID-19 in the first place.

Oct. 28

New COVID clinic

UC Davis Health launches the region's first Post-COVID-19 Clinic, becoming one of only a handful of U.S. health systems to create a dedicated multidisciplinary venue for so-called "long-haul" patients. Studies estimate that about 10% of COVID-19 patients face long-term symptoms; later studies will up that number to 25% or more.



Nov. 12

'Nothing else as fast and accurate'

UC Davis Health becomes first in the region and among the first in the nation to use rapid, combined molecular tests at the point of care — rolling out a highly accurate version that can check for both COVID-19 and flu in minutes. "There is nothing else



right now that is as fast and accurate as this test" notes Lydia Pleotis Howell, M.D., medical director of UC Davis Health's clinical laboratories and chair of pathology and laboratory medicine. The health system is a standing member of California's COVID-19 Testing Task Force.

Dec. 7

Another vaccine trial underway

UC Davis Health launches clinical trials for the easier-to-store Novavax COVID-19 vaccine, which follows a more traditional model using a protein subunit. The overall trial prioritizes highly impacted groups such as Latino, African American and Native American communities.

Nov. 21

FDA grants emergency authorization for the Regeneron monoclonal antibody treatment given to Trump.

Nov. 29

Nearly 1.2 million travelers pass through TSA checkpoints, as California begins a long string of near-daily records for COVID-19 hospital and/or ICU patients.

Dec. 3

California announces a new stay-at-home order tied to regional ICU capacity.

Dec. 11

First COVID-19 vaccine approved

FDA authorizes the Pfizer-BioNTech messenger RNA vaccine for emergency use after data shows 95 percent efficacy. UC Davis Health was one of 150 sites worldwide participating in the clinical trial for the candidate, cited as the first time mRNA-based vaccines are used against an infectious disease.

The Pfizer-BioNTech messenger RNA vaccine shows a





Dec. 11

A novel exposure-warning app

The state of California rolls out CA Notify, a Bluetoothdriven app that sends anonymous notifications when users have been in close contact with someone who tests positive for COVID-19. UC Davis and six other UC campuses helped to pilot and test the project, based on Google and Apple's exposure notification technology.

Dec. 14

As the U.S. death toll surpasses 300,000, the nation administers its first coronavirus vaccinations.



Dec. 15

Pfizer vaccine arrives

UC Davis becomes among the nation's first health systems to receive an initial allotment of the Pfizer-BioNTech vaccine, and begins inoculating frontline health care workers three

hours later. The state targets UC Davis Health for the vaccine due to its storage capability, highest-risk health care population, and community distribution ability.

Dec. 18

FDA approves the Moderna mRNA vaccine for emergency use.

to your

Phone

Dec. 21

Stem cells for a COVID complication



UC Davis Health joins a landmark multicenter clinical trial to test whether mesenchymal stromal/stem cells may help reduce inflammation in the lungs of patients

Rachael Callcut

with life-threatening acute respiratory distress syndrome, whether driven by COVID-19 or other causes. Aside from supportive care with ventilation, there are virtually no ARDS treatments that reduce mortality.



Dec. 22 Moderna vaccine arrives

In a dose of holiday good news, UC Davis Medical Center receives its initial allotment of 4,300 doses of the Moderna vaccine. Data from clinical trials suggests 94% efficacy.

Dec. 21

President-elect Joe Biden is vaccinated on live TV.

Dec. 29

The nation's first known case of the U.K. variant is announced in Colorado. **Jan. 12**



0004

Jan. 3

The U.S. sets another pandemic TSA screening record, screening 1.3 million people.

Jan. 13

Peer review confirms vaccine effectiveness

The Pfizer/BioNTech vaccine

is 95% effective, according to a study in the *New England Journal of Medicine* that

includes clinical trial data

from the UC Davis School of

Medicine. The published find-

ings confirm data previously

released for emergency use

authorization. UC Davis was

the only academic medical

center on the West Coast to participate in the trial.

being administered worldwide



Angela Haczku



Timothy Albertson

UC Davis Health launches COVID-19 patient vaccinations

The initial group is identified by medical records as the most vulnerable of patients: those 75 and older with underlying conditions.

Jan. 15 Global deaths reach **2** million

Jan. 19 The U.S. death toll

surpasses 400,000.

Ian. 25

California lifts its regional stayat-home order.

Jan. 28

The U.S. identifies its first cases of the South Africa virus variant.

Jan. 28 Farmworker

safety initiative

the most ambitious of its type in the count of the count of the second determined by the count of the second determined by the second determined determined determined by the second determined dete

Feb. 2

Multiple COVID-19 clinical

it is actively recruiting for more than a

COVID-19 treatments, in focus areas

adaptive platform trials.

dozen clinical trials in the search for new

including stromal cells, natural killer cells, cardiosphere-derived cells, monoclonal antibodies, antiviral protease inhibitor, remdesivir, molnupiravir, AT-527, and

The UC Davis School of Medicine announces

trials underway locally

Shielding a city from the virus

The Healthy Davis Together COVID-prevention project is

the most ambitious of its type in the country, the *New York Times* notes in a feature article, and could be a model for other universities. The joint City of Davis-UC Davis initiative — which provides free asymptomatic testing to anyone who lives or works in Davis and their immediate households — aims to facilitate a coordinated and gradual return while preventing the spread of COVID-19 in the Davis community.

Ian. 28

To help reduce the pandemic's impacts on California's 800,000 farmworkers — essential workers who often live and work in close quarters — UC Davis launches the COVID-19 Statewide Agriculture and Farmworker Education training and safety program. The \$3 million, state-funded project is led by experts at the multidisciplinary UC Davis Western Center for Agricultural

Health and Safety, which includes investigators from the School of Medicine, School of Veterinary Medicine and other university units.



Feb. 6

Helping to reach vulnerable communities

UC Davis Health partners on the first of many planned community-based COVID-19 vaccination clinics designed to reach vulnerable populations. Over the coming months, a growing number of COVID-19 vaccination initiatives involve partnerships between UC Davis Health and community organizations in Yolo and Sacramento counties. In



Vaccinations at La Familia Counseling Center

addition to weekly clinics at two Oak Park churches and South Sacramento's La Familia Counseling Center, UC Davis Health faculty, staff and volunteers are also key partners with Dignity Health, Sacramento County, Yolo County, Elica Health, the Mexican Consulate, the Sacramento Fire Department and other organizations in pop-up clinics in parking lots and school auditoriums, and help offer vaccine to people experiencing homelessness in central Sacramento.

Feb. 18

An example of herd immunity

A "CBS This Morning" national story explains how UC Davis Medical Center has reached herd immunity among staff through vaccinations. With more than 90% of staff receiving at least their first dose of the coronavirus vaccine, the hospital sees a 95% decline in employees sick with COVID-19.

Feb. 21

As U.S. deaths top 500,000, UC Davis Health delivers more than 50,000 COVID-19 vaccines to combat the virus. The U.S. makes up less than 5% of the world's population, but accounts for about 20% of its known coronavirusrelated deaths.

Feb. 27

The FDA authorizes Johnson & Johnson's COVID-19 vaccine for emergency use.

Mar. 1

News media report that former President Donald Trump and the first lady quietly received COVID-19 vaccinations at The White House in January. Later in March he makes public statements backing the vaccines' safety.

Mar. 24

Testing a possible new **COVID-19 therapy**

A multidisciplinary team led by UC Davis Health orthopaedic surgery researchers receives funding to test a new class of anti-inflammatory, antiviral compound as a COVID-19 treatment. It's thought that delivery via inhaler could help the experimental compound "catch" the virus in the lungs before it spreads and multiplies to cause ARDS and fibrosis damage.



Orthopaedic researcher Dominik Haudenschild

Apr. 8

Booster shot trial targets variants

UC Davis Health begins recruiting for a clinical trial to answer questions being asked around the world regarding COVID-19 immunization. Does a combination of different vaccines or a booster shot help us make more antibodies against COVID-19? And does a modified version of an existing vaccine help us generate a more robust immune response against the new South African virus variant?

Early May

UC Davis Health reaches 100,000 doses of vaccine administered

Feb. 3

More people in America have received their first vaccine dose than have been infected.

A game-changer

111111

New residential college program for students with intellectual disabilities

This fall, UC Davis will enroll 12 extraordinary new students. All will have intellectual disabilities. They'll be called Redwood SEED (Supported Education to Elevate Diversity) Scholars, part of California's first four-year residential program for students with intellectual disability associated with conditions such as autism, traumatic brain injury, fragile X syndrome and Down syndrome.

"It's a game-changer. It's the only thing like it in the west," said Beth Foraker, an instructor in the UC Davis School of Education and co-founder of Redwood SEED Scholars.

Foraker has envisioned a program like this for years. Her 21-year-old son Patrick has Down syndrome, and she knows firsthand how limited the post-secondary options are for people like him.

"Ninety-seven percent of adults with intellectual disabilities are living in poverty," she said. "This is a chance for them to go on to make a living wage, to live an authentic life of true freedom."

Students in the program will have an opportunity to live on campus, engage in social activities and organizations, take college classes and pursue an internship or job. They'll leave at the end of four years with a meaningful credential, prepared for employment success.

A potential model

The UC Davis MIND Institute and the university's Office of Diversity, Equity and Inclusion will jointly run the program, which will be fully integrated into the campus community. It's funded largely by a \$2.1 million grant from the U.S. Department of Education, and the goal is to create a model that could be used by all schools in the UC and CSU systems. Renetta Tull, vice chancellor for diversity, equity, and inclusion, is also a principal investigator on the grant.

"People with intellectual disability should have the same rights to post-secondary education options as everyone else," said Leonard Abbeduto, director of the MIND Institute.

The program will be the first of its kind in the Western U.S.

Redwood SEED scholars will have a support system, including undergraduate students who will serve as peer mentors, helping with academics as well as social activities, health and wellness and oversight of internships. A curriculum that combines regular UC Davis courses with some special courses focused on relevant issues such as independent living, is also planned.

The program gets its name from the T. Elliot Weier Redwood Grove on the UC Davis campus. "Redwoods don't grow in the Central Valley," said Foraker. "Our summers are too hot, and our winters not wet enough, yet this grove flourishes thanks to careful tending, a habitat that allows them to thrive and people willing to make the impossible happen. Redwood SEED Scholars will take their cue from these on-campus giants."

» This story first appeared in the spring/summer 2020 issue of *UC Davis Magazine*.

A first-ever separation of conjoined twins at UC Davis Children's Hospital



Abigail and Micaela

After months of intense planning and practice, surgeons at UC Davis Children's Hospital successfully separated nine-month-old conjoined twins Abigail and Micaela Bachinskiy in a marathon surgery this past October. The two girls were craniopagus twins born fused at the head, a condition that occurs approximately only once every 2.5 million births.

The 24-hour surgery – the first separation of conjoined twins at UC Davis Medical Center – took place in a UC Davis Children's Surgery Center operating room custom-built for the procedure's high complexity. Team members included more than 30 surgeons, nurses, anesthesiologists and other key surgical staff, led by pediatric neurosurgeon Michael Edwards, M.D.; Granger Wong, M.D., D.M.D., craniofacial surgeon and Chief of Plastic and Reconstructive Surgery; director of pediatric anesthesiology Rajvinder Dhamrait, M.D.; and Children's Surgery Center nursing lead Aida Benitez, R.N.

First task: A safe delivery

Mom Liliya, 33, discovered she was pregnant with conjoined twins at 11 weeks gestation. Although initially told she would have to terminate her pregnancy, her doctor referred her to the UC Davis Fetal Care and Treatment Center, inland Northern California's comprehensive fetal diagnosis and therapy center.

Fetal MRIs there provided more details about the twins' anatomic structures and informed the development of a set of manikin dolls, used to help identify positioning challenges.

Delivery team members practiced other simulations and scenarios for months to prepare for the numerous possible risks: compromised airways, collapsed lungs, the need for a CPAP machine to aid in breathing or IV placement. CPAP headgear was customdesigned for each girl.

Abigail and Micaela were born at UC Davis Children's Hospital in December 2019, and spent seven weeks in the NICU before going home.

From VR goggles and 3-D printing to old-fashioned house calls, intensive planning makes a one-in-a-million surgery a success.





Granger Wong, Chief of Plastic and Reconstructive Surgery (right) and Michael Edwards, pediatric neurosurgeon (left) prepare for surgery using 3-D models.

From virtual reality goggles to house calls

Surgeons decided to separate the twins at nine months, both to keep shared blood vessels and organs from developing further and to allow for adequate tissue expansion for later coverage of the defect after separation. With a date scheduled, they began preparing in earnest for what may be the most complicated case of their careers.

Along the way, they carefully tracked the twins' growth through MRIs and CT scans.

In June, Wong's team placed customdesigned tissue expanders under the skin of the girls' heads, to encourage enough skin growth for skull coverage upon separation.

3-D printing allowed generation of multiple models of the twins' fused skulls, useful for precision planning and practice. Surgeons were also able to explore inside their heads with the use of mixed reality goggles, which offered an augmented view of the complex network of blood vessels to be detangled and separated.

On the more traditional side, surgeons also made house calls to

the family, helping them avoid travel during the COVID-19 pandemic.

'A choreographed ballet'

Finally, 10 months of preparation and practice became reality as a team of more than 30 surgical professionals embarked on the operation itself. With so many key players in one space, each with a distinct role to play, the team members were divided by color. Leaders Edwards, Wong, Dhamrait and Benitez donned black caps. Team Purple took care of Micaela, while Team Orange cared for Abigail; they donned surgical caps in either purple or orange for easy visibility in the operating room. Surgical residents wore grey caps and could assist with either girl. Purple and orange masking tape were used to label equipment for the respective teams in the operating room.

Surgical challenges included dividing large veins and brain matter that connected the twins so they could have independent circulatory systems. The team performed a fistula ligation, a process that involved clipping and separating shared veins. The twins required five position changes – all posing potential complications – and blood transfusions.

Throughout the long procedure, the care team provided regular updates to the family, who was praying and nervously awaiting news about their girls.

Twenty-four hours later, on Sunday morning, the previously joined twins were resting comfortably – and separately – in their room in the UC Davis PICU. Abigail and Micaela were able to face and see each other for the first time.

» To view a six-part video series of the first-ever separation of conjoined twins at UC Davis Children's Hospital, visit *ucdavis.health/twins.*



Launching the first human in-utero stem cell treatment for spina bifida

Our Department of Surgery has launched the world's first human clinical trial using stem cells to treat spina bifida. The historic effort will test an innovative approach developed by Department of Surgery physician-scientists over the course of more than a decade — that combines in utero surgery and cellular therapy.

The Food and Drug Administration issued its approval last fall for clinical trials of the one-of-a-kind treatment, developed by a team led by Department of Surgery Chair Diana Farmer, M.D., F.A.C.S., F.R.C.S., and by Aijun Wang, Ph.D., the department's Vice Chair for Translational Research, Innovation and Entrepreneurship. The California Institute for Regenerative Medicine (CIRM) followed in the winter with a \$9 million grant award, allowing investigators to proceed with recruitment and launch.

Spina bifida affects about 1,500 to 2,000 children each year in the U.S., and represents the most common cause of lifelong paralysis. The birth defect occurs when spinal tissue improperly fuses during the early stages of pregnancy, and commonly leads to a range of lifelong cognitive, mobility, urinary and bowel disabilities.

The complex treatment being targeted by UC Davis involves mesenchymal stem cells and a form of biomaterial scaffold, creating a kind of stem cell "patch" that's placed over the condition's injury site in



A stem cell treatment developed at UC Davis could reduce the lower-extremity paralysis associated with spina bifida, a birth defect of the lower spinal cord.



Trials for the in utero stem cell treatment begin this year, with help from a \$9 million state grant.

the womb during fetal surgery. Farmer and Wang are generating the mesenchymal stem cells, known to be among the most promising in regenerative medicine, from donor placental tissue, that is specifically engineered for neuroprotection and regeneration.

The hope is to help human patients boost motor function and walk independently, particularly those with the severe form of the disease known as myelomeningocele.

A decade-long pursuit

Farmer, Wang and their research team have been working on their novel approach for more than 10 years. Over that time, animal modeling has shown it capable of preventing the paralysis associated with spina bifida. It's believed that the stem cells work to repair and restore spinal tissue, beyond what surgery can accomplish alone.

Preliminary work by Farmer and Wang proved that prenatal surgery combined with human placentaderived mesenchymal stromal cells, if held in place with a biomaterial scaffold, helped lambs with spina bifida walk without noticeable disability. When the team refined their prenatal surgery and stem cells technique for canines, the treatment also improved the mobility of dogs with naturally occurring spina bifida.

A \$5.6 million CIRM grant followed in 2018 to support final preparations for human trials. The agency had provided an initial \$2.2 million preclinical development award three years earlier.

Building on fetal surgery advances

As a leader of the MOMS trial in the early 2000s, Farmer had previously helped to prove that in utero repair surgery reduced neurological deficits from spina bifida. Many children in that study, however, still required wheelchairs or leg braces.

She recruited Wang specifically to help take that work to the next level. Together, they launched the UC Davis Health Surgical Bioengineering Laboratory to find ways to use stem cells to advance surgical effectiveness and improve functional outcomes. Farmer launched the UC Davis Fetal Care and Treatment Center with fetal surgeon Shinjiro Hirose, M.D., F.A.C.S., and the Children's Surgery Center several years ago.

Participants for the current spina bifida trial will be treated at those centers, with UC Davis Children's Hospital and Shriners Hospitals for Children -Northern California providing followup care. Shriners has also helped fund related research, along with the National Institutes of Health.

New website for firearm injury prevention

'BulletPoints' is an in-depth resource for health professionals

The BulletPoints Project, part of the University of California's Firearm Violence Research Center, has launched a new resource-rich website to enhance education, training and awareness about firearm injury prevention for medical and mental health professionals.

The website is designed to fill gaps in knowledge and experience by developing, implementing and evaluating training programs for health care providers to work with patients to prevent firearm-related harm.

"We created the BulletPoints website to equip providers with clinically-relevant knowledge about firearms, their uses, benefits, risks and safety," said Amy Barnhorst, director of the project

and an associate professor of psychiatry and behavioral sciences and emergency medicine at UC Davis Health. "Just as clinicians discuss other potential household health dangers like cigarettes, swimming pools or medications, there's a big need to help clinicians be comfortable in talking with their patients about the risks of firearm access."

The BulletPoints Project is the result of legislation, authored by Assemblymember Marc Berman, that was signed into law by California Gov. Gavin Newsom in 2019. It provided nearly \$4 million for the development, distribution and evaluation of a curriculum to teach medical and mental health care providers about counseling and intervening with patients at risk of firearm injury (suicide, violence or accidental injury).

Practical tools

The new site has three main sections:

- The Basics (how to counsel patients, epidemiology, and more)
- Clinical Scenarios in which firearms might be relevant (including suicide and accidental injury)
- Interventions (safe storage counseling, gun violence restraining orders, etc.)
- » Visit www.bulletpointsproject.org.

It also features a blog, FAQs, a glossary, and links to related external resources, including peer-reviewed journal articles.

"We'll continue to build onto the website, first with a section designed specifically for medical educators," said Rocco Pallin, M.P.H., director of education for the project. "It will include lessons on firearms and public health, scripts for risk assessment and counseling at-risk patients, presentation slide sets about firearm injury prevention, and other tools for educating the next generation of clinicians on how they can reduce their patients' risk of firearm injury."

Other resources, including a variety of online and in-person training programs, will also be created by the BulletPoints Project as it evolves and gathers momentum.

"BulletPoints puts public funds to work saving lives," said Garen Wintemute, M.D., M.P.H., professor of emergency medicine and director of the research center.



The School of Medicine's path to #4 in the U.S. for diversity

The U.S. News & World Report nod is a testament to innovative programs and more

The rest of the country now knows what the UC Davis School of Medicine has for years: The school is one of the most diverse in the nation.

Beginning in 2009, the School of Medicine has implemented methods to boost underrepresented minority enrollment, particularly among students who want to work in medically underserved regions. Among these targeted curricula or tracks are:

- Accelerated Competency-based Education in Primary Care (ACE-PC), a three-year M.D. program designed with Kaiser Permanente to connect students with underserved communities.
- TEACH-MS, or Transforming Education and Community Health for Medical Students, geared for work in urban underserved areas.
- REACH, or Reimagining Education to Advance Central California Health, for students aspiring to work in the Central Valley.
- COMPADRE, or California Oregon Medical Partnership to Address
 Disparities in Rural Education, a cross-state partnership to address
 workforce shortages in Oregon and
 Northern California by connecting students from underserved tribal,
 rural and urban communities to medical school and residency
 experiences throughout the region.

In addition to the Rural Program in Medical Education (PRIME) track, a new PRIME track is being planned for students committed to serving Native American patients and indigenous communities.

"The solution to health disparities is the development of a more diverse physician workforce — one more reflective of the



various communities in our state and country," said Mark Henderson, M.D., F.A.C.P., associate dean for admissions and outreach and one of the leaders who's helped implement programs such as holistic admissions. "Being ranked No. 4 in the U.S. is validation of a decades-long effort to build diverse programs and a team of people committed to improving the health of California, including our Center for a Diverse Healthcare Workforce."

A factor in quality care

Internal medicine resident Jorge Salazar, a native of Mexico who grew up in Alabama and attended a historically black college, chose UC Davis because of its commitment to diversity and the opportunity to treat patients who, like him, are Latinx.

"I value diversity tremendously and I think it's probably the No. 1 factor to providing excellent care to patients," he said. "You can be the smartest person in the world, but if you can't connect to a patient, culturally, certainly that's a barrier to providing great care." Fellow internal med resident Elise Boykin, who received her M.D. here, aspires to stay in the region because of its diverse population.

"I imagine my patient panel will be slightly higher in African American/ Black patients because right now I'm still such a unicorn," she said. "Black women account for less than 3% of U.S. doctors. My patients love that I am also Black."

As good as the new ranking is, administrators acknowledge there's a long road ahead at continuing to become more inclusive, one that goes beyond enrollment. "Diversity is one of our core values, and I think these rankings reflect that we continue to honor this value," said Jorge García, M.D., M.S., F.A.C.P., associate dean for diverse and inclusive learning communities. "However, they also remind us that we all still have a lot of work to do. While diversity is great, it's really only the first step, and it necessarily precedes a far greater goal-institutional excellence."

He added: "I really love the more perfect institution we are becoming."

Still serving in new ways

What does a free community clinic do when a pandemic puts a stop to in-person medical services for those who can't afford health care? You call every patient who's been seen in the past five years and ask them how they're doing.

For the volunteers at the Paul Hom Asian Clinic, that was nearly 2,000 people-and represented the type of personalized, compassionate care it's been delivering for the underserved in Sacramento for nearly 50 years.

The School of Medicine's 12 nonprofit, free clinics provides care to a variety of vulnerable patient populations. They're staffed by health professions student volunteers -mostly from UC Davis, the School of Medicine and the Betty Irene Moore School of Nursing-monitored by volunteer physician preceptors.

As the pandemic spread rapidly around Sacramento between late winter and early spring, the clinics were temporarily shuttered for safety reasons. To adjust, volunteers turned to telehealth video appointments and a variety of other strategies to continue helping communities. Some examples:

Before the pandemic, the rural Knight's Landing One Health clinic-whose patient population includes many migrant farmworkers from low-income Hispanic households-was open one day on alternate weekends. Starting last summer, a telehealth effort provided access to health consultations nearly every day of the week-a transition helpful for patients with long and structured workdays. The undergrad team also distributed donated clothing and food onsite.

When the pandemic limited in-person care, volunteers at UC Davis Health's student-run community free clinics got creative.

- Premed student volunteers at the Imani Clinic developed a mentorship program for neighborhood youth in Sacramento's disadvantaged Oak Park neighborhood.
- In November, volunteers from UC Davis and Sacramento State reached out to underserved Hmong population with free flu vaccines and groceries in the parking lot of a Del Paso Heights community center. The clinic took months of planning by Hmong Lifting Underserved Barriers, a newer student-run clinic connected to the Hom Clinic.



Student and faculty volunteers at a Woodland vaccination clinic in February.

Building immunity

Clinics began reopening to in-person patient care starting in September, when a student-driven effort resulted in new safety protocols under a pilot program. Patient care was consolidated at a central location, the Shifa Clinic near downtown Sacramento.

Once COVID-19 vaccines were approved, students then

joined the push to build herd immunity. Dozens have volunteered at several community vaccination clinics in Yolo and Sacramento counties, serving thousands.

At one clinic at Pioneer High School in Woodland in February, students and faculty administered more than 700 first-

dose Pfizer-BioNTech vaccines. At another drive-through at Sacramento's La Familia Counseling Center, students helped administer 156 doses in partnership with the Sacramento Native American Health Center, the Sacramento County Department of Public Health, the Latino Economic Council of Sacramento, and HealthImpact.

As vaccine availability grew in spring, by mid-April the Shifa student-run clinic had vaccinated more than 6,000 patients in five weeks.

Three students advance in a global competition to address health inequities

The Innovate4Health contest inspires innovators to tackle urgent challenges, and supports finalists with expertise

Three UC Davis School of Medicine students are finalists in a global competition to develop solutions for health inequities associated with emerging infections, including COVID-19.

Annica Stull-Lane, Erica Lin and Christina Lowry joined the Innovate4Health competition because of their desire to improve community health by addressing antibiotic resistance in marginalized populations.

They're among nearly 100 teams of medical and public health students who submitted project ideas late last year. A panel of experts connected to several prestigious academic organizations, including Johns Hopkins Bloomberg School of Public Health, evaluated the projects.

When their application was accepted, the UC Davis trio became one of 32 finalist teams and transitioned into the so-called design-sprint phase, where they work several hours a week on their project with the help of mentors from UC Davis and elsewhere. Finalists are rewarded with access to national experts in infectious diseases, public health and advocacy to help refine their projects.

The team's accomplishments have impressed the director of the medical school's M.D./Ph.D. program, Saul Schaefer, M.D., noting "the incredible quality and resourcefulness of our students, their care for underserved populations, and the collaborative nature of their work."

The project started when Erica Lin, in consultation with Michael Wilkes, M.D., M.P.H., Ph.D., the School of Medicine's director of Global Health, assembled a team passionate about improving quality of care in low-resource settings. Lin is a medical student with experience working with free clinics and Federally Qualified Health Centers, where she developed resources and projects to further integrate care with social work programs.

Teammate Annica Stull-Lane, an M.D./Ph.D. student in infectious diseases with experience in public health, microbiology and research, had recently designed an online course for the One Health Institute on the threat of antimicrobial resistance.

And Christina Lowry is a graduating medical student who's worked in low-resource care settings domestically and internationally.

"We came together as a team and ideated about challenges around community health systems, food systems and emerging infectious diseases," Lin said. "After a robust brainstorm, we homed in on a project addressing antimicrobial resistance in low-resource settings."

The goal, said Stull-Lane, is to create a replicable, sustainable model for implementing antibiograms—the periodic summary reports that indicate a patient's antimicrobial susceptibility. UC Davis Medical Center has an antibiogram, so the students are trying to adapt it for lowresource settings. "We would like to have a proof of concept with local community partners and then share our experience with others as a template, with the goal of decreasing inappropriate antibiotic usage and improving health outcomes," she said.

In addition to Johns Hopkins, other major organizations that back the competition are: ReAct, an international, independent network to articulate the complex nature of antibiotic resistance, and the International Federation of Medical Student Associations.



We hope the following pages highlighting our 2020 School of Medicine (SOM) Alumni Awards recipients and our virtual Alumni Weekend will inspire and motivate you to commit to participating in our 2021–2022 Alumni Weekend — in whatever form it may take as we slowly segue back to our pre-COVID event world. School of Medicine Alumni Weekend and Awards Presentation

We'll be sharing our plans as soon as we determine when we can safely host all of you on campus to celebrate with classmates, friends, students, and faculty in person.

Beyond Alumni Weekend, there are many ways to engage in the life of UC Davis School of Medicine, and we hope you'll consider them as well.

One of the easiest ways to stay informed and participate in the life of your medical alma mater is through the School of Medicine Alumni Association (SOMAA) website. In addition to the information on the homepage, visit health.ucdavis.edu/medalumni to:

- Submit a class note, to share your latest news and let your classmates and friends know what you're up to.
 Click Connect
- Nominate fellow alumni for our annual Alumni Awards.
 - » Click Awards
- Express your willingness to be a resource to our students.
 - » Click Volunteer
- Learn more about the SOMAA and our Board of Directors.
- » Click About Us

- Indicate your interest in serving the SOMAA in a leadership role.
 - » Click Volunteer
- Keep abreast of upcoming alumni events.
 - » Click Events
- Update your contact info when anything changes!
 - » Click Connect
- Give a gift to the SOMAA Scholarship or the School of Medicine Annual Fund.
 » Click *Give*
- Provide feedback and ideas so we can better serve alumni.
 - » Click Contact Us

We want – we *need* – your input to continue building a truly great alumni network and a strong alumni association.

Tell us how we can better engage you, keep you informed, and motivate you to find the time to be an active part of the UC Davis medical alumni community. If you're willing to share your thoughts directly, we'd love to have a conversation. Please be in touch at **mlfarrell@ucdavis.edu** or **916-734-9408**.

Finally, to keep informed and up-to-date on things happening at the School of Medicine, watch your email for "News for Alumni from Dean Allison Brashear," coming to your inbox monthly.



Doug Gross (M.D., '90) President UC Davis School of Medicine Alumni Association



M.L. Farrell Director Alumni Engagement 916-734-9408 mlfarrell@ucdavis.edu

Connecting when it's needed most

Alumni Week 2020's virtual class reunions allowed old friends and acquaintances to share notes about life during a historic time in health care.

Class of 1980 Virtual Reunion

Twenty classmates joined our 40th reunion, a remarkable evening of sharing our professional and personal stories including the diverse ways we all built careers in medicine and in community service.

We talked about our spouses, children, grandchildren, and even a great-grandchild, and about our current lives in retirement, ongoing medical practice, or various combinations of both. We paused to remember and mourn the passing of ten of our classmates. Mike Petersen shared a terrific photomontage from our medical school days. We wished everyone continued good health and safety.

Some of the memories shared:

- Dave Bressler and Bryna Kane shared our class cookbook, which included many gems as well as Rick Caesar's recipe for frozen peas (boil, drain and serve).
- Kay Taylor remembered fondly the start-up of the Women's Health Clinic and the bake sale to raise funds held by the newly formed Men's Auxiliary.
- Jerryl Lynn Rubin remarked how happy she was with the ease with which we all reconnected despite the intervening decades — "a gratifying and meaningful evening for many of us."

Kindly submitted by Paul Seligman



Members of the Class of 2010 catch up during their Zoom reunion. "None of us thought we would end up battling a pandemic in our careers," members of another class remarked.

Class of 1985 Virtual Reunion

Seven classmates participated in an interesting and inspiring call. We are all very active with practice and growing families. We are coping well with COVID and the ever-changing challenges of medicine. We look more mature but are very young in spirit and ideas!

We are mentoring junior colleagues, volunteering in the developing world and leading our health care institutions. We fondly remembered a few classmates who left us too soon but are focused on the future.

Bring on our 40th in 2025!" Kindly submitted by Regina Gandour-Edwards

Class of 1990 Virtual Reunion

A lot can change in 30 years, but it is also remarkable how much can stay the same. Friendships, shared memories, commonalities in the growth and development of one's career and other commitments or life's passions were all quite apparent when a dozen-plus of us from the Class of 1990 reconnected during Alumni Week.

Many recalled stories of the past and how the deep friendships created during our med school days made all the difference for so many. We didn't want the call to end and have subsequently reconnected again over the holidays!

We hope to continue to widen the circle, so please spread the word and reach out to one of us to join a future call. We wish everyone continued good health, happiness, and safety! *Kindly submitted by Barbara Klencke*



Class of 1995 Virtual Reunion

Seven classmates from the Class of 1995 got together virtually for our 25th reunion. Many of us could not believe where we ended up now, both professionally and personally.

We reminisced about living in Davis and then Sacramento, and how much technology had affected our lives. All of us talked about our families and running across classmates that we had seen and kept in touch with over the years. Some of us have had significant health challenges, and none of us thought we would end up battling a pandemic in our careers. Looking at our class photos was good for some belly laughs.

- Michelle Thomas showed us a glimpse of her beautiful children and how they are her world.
- Kristin Van Konynenburg talked about her adventures of practicing medicine in Antarctica.
- Gavi Oliva is now doing administrative work for the VA.
- Abdul Harris is presently practicing surgery in Fresno, after serving our country in the Iraq War and then practicing in the Santa Rosa area.
- Sunil Bhopale, Frances Chu, and Lynn Mortensen all work for TPMG (Kaiser) in Northern California.

All of us are suffering from pandemic fatigue but still finding ways to enjoy life, families, and careers. We also felt that Davis really prepared us well for our future careers. *Kindly submitted by Sunil Bhopale*

Class of 2010 Virtual Reunion

Fifteen of our former classmates gathered for our 10-year medical school reunion. It was held over Zoom, which was quite convenient and allowed classmates from across the country to attend who otherwise would not have.

We talked about fellowships, marriages, and children most often. Nap schedules, potty training, and virtual kindergarten were top of the conversation list. Babies and young children — the next generation of UCD SOM alumni frequently wandered in and out of the shots.

We were all thankful for the incredible day of reconnection and the continued good health that we have been fortunate enough to enjoy during these times — and we look forward to an in-person get-together next year. *Kindly submitted by Ryan Spielvogel*

A new way of celebrating our exceptional alumni

Next time you join us on campus in Sacramento, you will notice a new way of honoring our distinguished alumni – our "Alumni Wall of Honor" on the Education Building's third-floor breezeway has been updated. An interactive



touch-screen kiosk now replaces the pictures of graduates that for years crowded the wall near the dean's office.

The new technology was born of a good dilemma of sorts. Space was running out on the wall, allowing us to share only very little information beyond a headshot of each award recipient and a small plaque with their name and award year.

The dozens of 5-by-7-inch portraits have now been scanned

into digital files for the kiosk, and users can navigate through a series of options to see them and deeper accompanying profiles for all of our past School of Medicine Alumni Association Award recipients:

- Distinguished Alumnus Award
- Humanitarian Award
- Transformational Leadership Award
- Resident Professionalism Award
- Clinical Fellow Professionalism Award

"The wall was outdated and just packed. This is much more useful to look up and learn who these important people are," said M.L. Farrell, the School of Medicine's director of alumni engagement.



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



SCHOOL OF MEDICINE BETTY IRENE MOORE SCHOOL OF NURSING



Missed our Alumni Week talks?

Recordings can be viewed through our YouTube page. (**Dr. Yellowlees**' presentation can be viewed at the UC Davis Office of Campus Community Relations YouTube page).

The list of recordings includes:

- Kick-off Dean Allison Brashear and alumni award recipients
- Vijaya (Vee) Kumari, former
 Associate Dean turned author,
 actress and film producer —
 A Journey from the Left Side
 of My Brain to the Right (a reading and conversation)
- Medical student panel from the classes of 2021, 2022 and 2023
- Faculty Forum with Stuart Cohen and Angela Haczku — UC Davis Health's Response to COVID: Patient Care, Research and our Vaccine Trial
- Faculty Forum with Chief Wellness
 Officer Peter Yellowlees Coping
 with COVID: Short and Long-term
 Approaches
- Faculty Forum with Amy Barnhorst (M.D., '06), Director of the BulletPoints Project — Infectious Diseases, Mental Illness and Gun Violence: My Meandering Path to Public Health

For more content, visit UC Davis Health's YouTube page or follow the SOMAA on Facebook at facebook.com/UCDavisHealthAlumni.

Distinguished Alumni Award

Lynne Smith, M.D. '90

Distinguished neonatologist and prolific researcher Lynne Smith is the chair of pediatrics at Harbor-UCLA Medical Center, a professor of pediatrics at David Geffen School of Medicine at UCLA, and a leader in multiple other clinical, research and provider-development efforts.

Smith serves as medical director for Harbor-UCLA's High-Risk Infant Follow-up Program, designed to provide multidisciplinary outpatient services essential for vulnerable NICU graduates to reach their full potential. She's an internationally recognized expert in the effects of prenatal methamphetamine exposure on child outcome, and serves as a co-investigator for multiple NIH-funded studies in neonatology.

Smith is also a champion for creating and sustaining a culture of compassion for health care professionals. She's



founding director of Schwartz Rounds at Harbor-UCLA, a program across all hospital staff for multidisciplinary sessions exploring the emotional side of caregiving. She also helped establish Helping Healers Heal, a Second Victim peer support program to help staff

following unanticipated adverse patient events.

Smith has authored more than 100 publications in peerreviewed journals and textbooks, and was the recipient of the Richard Weitzman Memorial research award, the highest honor bestowed on young investigators at Harbor-UCLA. She has earned four outstanding pediatric faculty teaching awards as well as the UCLA Geffen School of Medicine Award for Excellence in Education.

She serves on the board of directors for the Lundquist Institute, a major independent non-profit research institute, and is a member of the American Pediatric Society, an elected membership group reserved for individuals whose contributions to pediatric medicine have garnered national and international recognition.

Transformational Leadership Award

Kathleen (Jennison) Goonan, M.D. '81

Ensuring that quality is part of all levels of health care, and that our institutions remain capable of successfully adapting to an ever-changing environment, has been Kathleen Goonan's life's work.

Goonan is a nationally recognized writer, speaker and advisor in all aspects of performance excellence and transformational change, with experience in large-scale strategies with health systems, integrated delivery networks and health plans. The Philadelphia-based physician executive has 30 years coaching executive teams on transformational strategy and effective use of Baldrige.

Goonan founded Goonan Performance Strategies (GPS) before joining Navigant Consulting in 2016. Navigant became a Guidehouse Company in 2019, where she is currently a partner



in the health care practice.

Goonan has coached several national and state Baldrige award recipients in fundamental transformational change and performance excellence. She is the lead author of Journey to Excellence: How the Baldrige Healthcare Leaders Succeed,

a guide to successful change based upon in-depth studies of Baldrige recipients.

She has been among the national judges for the Malcolm Baldrige National Quality Award, Joint Commission Codman Award, and the American Hospital Association McKesson Quest for Quality Award.

Goonan has also served as director of the MGH Center for Performance Excellence (MGH CPE), a consulting practice based at the Institute for Healthcare Policy, Massachusetts General Hospital in Boston. She worked as a senior executive in a wide diversity of hospitals and medical groups in Massachusetts, and has taught in the Harvard School of Public Health Leadership Development Program for Physicians, Intermountain Health Care's Advanced Training Program, and served on the Institute for Healthcare Improvement faculty since its founding in 1988.
Humanitarian Award

G. Rom Kandavel, M.D. '01

The need for ophthalmic surgery in other countries is great, and Rom Kandavel has been traveling internationally to provide eye care since the start of his career.

After graduation from UC Davis, Kandavel completed ophthalmology training at UC Irvine and went on to train eye surgeons as a specialty instructor in cataract surgery. He received post-graduate training in refractive surgery using the laser technologies, and was one of the first doctors to introduce laser cataract surgery to Los Angeles.

Outside of Southern California, Kandavel participates in missions to Gujrat, India where he helps to perform hundreds of cataract surgeries, along with blindness-preventing eye muscle surgery in young children.

Since 2006, he's also participated in medical missions to



Nuevo Progreso, a village in Guatemala accessible by an 8-hour bus ride from Guatemala City. Kandavel performs eye surgeries at no cost to local inhabitants, and since 2013 has organized future mission trips and supplies with the help of physicians, nurses, and volunteers.

Together with partner Michael Colvard, he runs the nonprofit Friends of Vision.

In March of 2019, Friends of Vision partnered with Liga International to help sponsor a trip to El Fuerte, Mexico, where Kandavel provided 25 surgeries and free eye care over the course of four days.

Back in the Southern California community, in 2013 Kandavel was chosen as team ophthalmologist for the LA Galaxy soccer team, and provided eye care for the U.S. Men's National Team for the 2014 World Cup in Brazil. In 2019, he was chosen as team ophthalmologist for the LAFC soccer team. Alumni, students & friends

Match Day celebrates more than 100 medical students



Most students matched into programs in the Golden State, which aligns with the school's values of preparing doctors to work in California communities where they're most needed.

Vast majority will train in California, and most of them in primary care

Months of anxiety ended on the morning of March 19 for 104 soon-to-graduate medical students.

At exactly 9 a.m., sitting in their homes surrounded by loved ones, members of the UC Davis School of Medicine Class of 2021 refreshed the web page to their academic portals. Within seconds, students learned where they will spend the next three to seven years of their journey to train as specialists.

It was a scene repeated simultaneously across the U.S. as 38,106 residency positions were offered to graduating medical students, thanks to a complex algorithm that plays matchmaker.

And just like last year, the pandemic forced medical schools to shun a large, festive ceremony. In its place, Match Day was celebrated during a class-wide Zoom session that aired live to everyone else via Facebook.

It was still a cheerful event as students announced their matches.

"So, I matched into pediatrics at Stanford!" said Morgan Conley, sitting in front of a "congrats" sign with supporters. A wide-smiling Kimberly Ngo declared, "I'm so happy to say I matched into my No. 1 for family medicine, UCSF!" She broke into applause and thanked her family, friends and mentors.

"I'm obviously crying," said Christina Lowry, sitting between her partner and her mother. "I'm going to obstetricsgynecology at Kaiser San Francisco!"

"The pandemic has demonstrated the important role of physicians, and how much our patients and global community depend on your expertise, your passion, your courage and your leadership."

SCHOOL OF MEDICINE DEAN ALLISON BRASHEAR

Roxana Cabrera held up the blue "I matched" placard sent by the School of Medicine and announced: "I matched at my No. 1, Stanford-O'Connor. So excited!

"I'm surrounded by my lovely parents, who have been with me through everything," she added, her voice cracking, "and my future husband, he deserves an honorary medical degree." As usual, most students matched into training programs in the Golden State, which aligns with the school's values of preparing doctors to work in California communities where they're most needed, including in urban underserved and rural areas. Some 85% of students will train in California, and 22% at UC Davis, said Sharad Jain, associate dean for students.

Many were excited to match near where they were raised. For Alejandra Beristain-Barajas, it means providing care at Natividad Medical Center in Salinas. "We're going back home, to see my parents in Watsonville," she said.

For Farsam Fraz, it means training to be an OB-GYN at Stanford, near where she grew up in San Mateo County.

Sixty percent of students will specialize in primary care, and 21% of them will train for internal medicine.

The program was broadcast from Betty Irene Moore Hall, where administrators extended their well wishes. "This is a journey, and one that you're very well prepared for," said School of Medicine Dean Allison Brashear. "The pandemic has demonstrated the important role of physicians, and how much our patients and global community depend on your expertise, your passion, your courage and your leadership."

» See more at facebook.com/UCDavisMedicine/videos/437040750688450.

precious life is, and that we should treasure every moment now with those we love."

His contributions to medical education at the School of Medicine are innumerable, but highlights include the adoption of new technologies to support medical student education, including simulation and standardized patients, and the promotion of new pedagogies such as Doctoring, problem-based learning and team-based learning. Drummer was also the school's unofficial historian.

Recently, Drummer had played an important role in a comprehensive plan to update the School of Medicine's curriculum, now scheduled for implementation this coming academic year. Known as I-EXPLORE, short for Integrated Explorative Patientand Learner-Oriented Education, it is the culmina-

> tion of 18 months of hard work by a core design team who consulted with hundreds of faculty, students, residents, staff

John Drummer



JOHN DRUMMER, a longtime UC Davis School of Medicine academic coordinator and a beloved colleague and friend to many around the school throughout its entire history, passed away last September

shortly after his summertime retirement.

"John was with the School of Medicine since its founding 50 years ago," said Mark Servis, the school's vice dean for medical education, in a note to the School of Medicine community. "He was a consummate professional, kind and considerate to all, and a fount of wisdom on all things related to medical education."

"He was a consummate professional, kind and considerate to all, and a fount of wisdom on all things related to medical education."

MARK SERVIS, VICE DEAN FOR MEDICAL EDUCATION

Drummer was an institution at UC Davis due to both his expertise and his attitude toward others. Those around him said he touched the lives of countless future physicians in multiple ways, including through his good nature in everyday encounters, his knack for the nuts and bolts of

the curriculum, and his generosity and advocacy around non-traditional medical students.

"It is hard to imagine he is no longer with us, and some of us continued to informally consult with him even after his retirement last year," Servis said. "His death is tragic and a reminder to us all of how and community members. Drummer provided the principal staff support to this effort and patiently assembled outside resources and organized design team activities.

"John so enjoyed thinking of new solutions to old problems, while also being an excellent listener who fully acknowledged and respected all points of view," said Kristin Olson, associate dean for curriculum and medical education. "We're all deeply grateful for the tremendous work he did in getting us to where we are today."

Drummer never missed his two favorite School of Medicine events, Match Day and Commencement. He enjoyed meeting the friends and family members of students he had come to know so well, and his smiling face could always be seen in the crowd.

Drummer is survived by his wife Lynn, their children, and the many family members and friends that were blessed to know him. The School of Medicine helped stage a virtual memorial service, with remarks by colleagues and musical performances by medical students. A recording is available at: http://ucdavis.health/Drummer-memorial. The Office of Medical Education also solicited messages, stories and photos for a memory book presented to Lynn.

The School of Medicine has established the John Merrill Drummer Scholarship, which will continue Drummer's legacy of caring by providing need-based awards to non-traditional medical students. The fund's page is **give.ucdavis.edu/MEDI/324711**.

Morris Pleasant

MORRIS PLEASANT, M.D. '75, R.S. '77, passed away in September 2020. Dr. Pleasant was a prominent and beloved psychiatrist who practiced in the Sacramento area for more than 40 years.

Dr. Pleasant was born in Taft, Texas in 1946, and attended the UC Davis School of Medicine. During his residency, he received the distinct honor as a Child Fellow at the University of Boston medical school.

In 1977, Dr. Pleasant started his private practice in East Sacramento. He went on to work for many board and care homes throughout Sacramento County, and also the Oak Park Community Center, Sutter Health and Sutter Center for Psychiatry. Notably, he was appointed three times as Sutter's Chief of Psychiatry.

His affiliations included the African American Mental Health Professionals (founding member), Omega Psi Phi, Capital Medical Society, American Psychiatric Association, Golden State Medical Association and National Medical Association. He was loved by his patients, and was diligent and committed to patient care up to the very morning of his untimely death.

He is survived by his wife Sharon, daughter Shakira, son Morris II (Kelly) (wife Renalyn), sister-in-law Gerilyn Zeigler, brothers-in-law, Assemblyman Jim Cooper (wife Kristen), Kevin Cooper (wife Samantha); brother Charles Pleasant (wife Gia), sister Vickie Lee (husband Tyrone), nieces, nephews, family, friends, and colleagues. In his memory, the Dr. Morris K. Pleasant Memorial Scholarship has been established at **give.ucdavis.edu/go/PLEASANT**. *Excerpted from an obituary published in the Sacramento Bee.*

Terril Spitze

TERRIL SPITZE, M.D. '75 passed away from COVID-19 pneumonia in January at age 70. He had spent almost four decades serving the Mother Lode region as a Sonora-based internist.

Dr. Spitze was born in Kansas in 1950 and raised in San Jose. Following medical school, and an internship and residency at the VA in Martinez, he worked briefly in Bay Area emergency rooms until he spotted a job opening in Sonora. The outdoor lover opened a private practice as an internal medicine specialist in March 1979. He was also appointed as head of respiratory therapy at the nowdefunct Tuolumne General Hospital, and served on the cardiac rehabilitation committee at Columbia College.

In 1984, he and fellow internist Dr. James Mosson teamed up to start Sierra Internal Medicine and were joined a year after by Dr. Lynn Austin. The trio worked together at Sierra Internal Medicine for more than 30 years. Dr. Spitze had what Mosson described as the most amazing memory he's ever known, as well as a dry sense of humor. He was also talented at music.

Dr. Spitze is survived by his wife Karen, brothers Randy Spitze, Kevin Spitze, Kim Spitze and Shawn Spitze; his children, Rain Monson, Chelsea Dubinski, and Bryce Spitze; and stepchildren Jesse and Jenny Riedel and Jennifer Kesterson; along with nine grandchildren.

Excerpted from The Union Democrat

Sue Hammond Innes

SUE HAMMOND INNES, M.D. '82, passed away of cancer in December. She was the first person in her family to go to college, and went on to become a pathology professor, researcher and department leader at one of the nation's best children's hospitals.

She was born in 1952 in Willits. California, and attended Stanford University and then Harvard for an MPH, before adding her M.D. at UC Davis (where she met her husband, Jeff Innes, M.D. '81). She pursued a residency in pathology at Ohio State University, and was board certified in both anatomic and laboratory pathology. After serving on the faculty of OSU for five years, she completed a fellowship in pediatric pathology at Nationwide Children's Hospital in Ohio. For the last 10 years of her career before retiring as a full professor, she served in a chair position with more than 450 employees under her guidance.

Her research focused on the longterm health of childhood cancer survivors with a small group of researchers from children's hospitals across the U.S., collaborations that resulted in more than 75 research papers. After living in Columbus for more than 30 years, she and Jeff retired to Asheville, North Carolina. Her interests included travel, attending Chautauqua, quilting, Ukrainian Easter eggs, German paper cutting, painting, block printing, Jeopardy, reading, and promoting scientific literacy. *Excerpted from EverLoved.com*

John (Jack) Rutledge

Longtime faculty member JOHN (JACK) RUTLEDGE, M.D., (FELLOWSHIP '83) passed away from cancer in January. Dr. Rutledge was a professor of cardiovascular medicine, Vice Chair of Research in Internal Medicine, and the inaugural Richard A. and Nora Eccles Harrison Endowed Chair for Diabetes Research at the UC Davis School of Medicine.

Born in rural Kennedy, Texas in 1949, Dr. Rutledge completed a cardiology fellowship at UC Davis in 1983, and joined the faculty as an assistant professor the following year. He and his future wife, UC Davis cardiovascular medicine professor Amparo Villablanca, met on the wards at UC Davis during their medical training.

Dr. Rutledge went on to devote nearly 40 years to his patients, teaching, research, and service to UC Davis, contributing greatly to the development of the Department of Internal Medicine and shaping the Division of Cardiovascular Medicine. He held several leadership roles prior to his retirement for health reasons last December, including Chair of the Physiology Graduate Group, Chief of the Division of Endocrinology, Clinical Nutrition and Vascular Medicine, and Co-Vice Chair for Research in the Department of Internal Medicine.

Dr. Rutledge co-authored more than 150 manuscripts which have had a major impact on the field of vascular biology, atherosclerosis, and lipid metabolism. He also helped many science trainees and early-career faculty to achieve independence and success, and received one of the inaugural Dean's Excellence in Mentoring Awards.

Peter Franklin

PETER FRANKLIN, M.D. '87,

passed away of cancer in January 2020. He was the first person with quadriplegia to be admitted to a medical school in California, and went on to have a remarkable career as a physician.

Born in 1957 in Toronto, Canada, Dr. Franklin immigrated with his family to Los Angeles in 1965. At age 19, he suffered a complete spinal cord injury following a surfing accident. But despite seemingly insurmountable obstacles, he was determined to become a physician and refused to allow his physical limitations to deter him from achieving his dream.

Following his graduation with honors from medical school, he completed a prestigious internal medicine residency at Cedars Sinai, and a second residency in PM&R at the renowned Rancho Los Amigos National Rehabilitation Center.

Dr. Franklin practiced PM&R in the Woodlands and throughout Montgomery County, Texas for more than 25 years. He will always be remembered by his patients for his heartfelt empathy and professionalism, and will be dearly missed and remembered by all for his exceptional courage, determination, kindness and irreverent sense of humor. He is survived by his wife, Rita Franklin; brother, Philip Franklin (Terry); and niece, Erin Coleman (Jon). *Excerpted from an obituary published in The Woodlands Villager.*

Irene May-Ling Hutchins

IRENE MAY-LING HUTCHINS, M.D. '12, **RESIDENCY** '15, passed away in 2020 at age 37. The hematologist-oncologist was a highly esteemed, accomplished doctor and also a former professional ballroom dancer, who used her passion for the sport both to inspire individual patients and fundraise for health and community nonprofits.

A native of San Francisco's North Bay, Hutchins became a professional ballroom dancer at age 20, winning a Pro-Am national championship title in international Latin dance before going onto medical school. After her medical training, she practiced hematology/ medical oncology at Desert Regional Medical Center, with a special interest in lung cancer.

While an oncology and hematology fellow at Scripps/MD Anderson Cancer Center, Dr. Hutchins ballroom-danced as a feature act at cancer fundraisers. It began when she made a pact with a patient — a former dance instructor that when he recovered, they would dance together. After they choreographed a performance for Scripps Survivor Day to cancer patients, they were featured on national television and went on to dance at many other charity events. They eventually founded Dancers Vs. Cancer, a campaign for the Leukemia and Lymphoma Society.

Dr. Hutchins also served on the society's board of trustees, and was awarded the society's 2018 Woman of the Year title for her philanthropic work in support of blood cancer research. Partially excerpted from The La Jolla Light

Navigating next

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

Summer 2021 arrives with new optimism and renewed determination. As we round the corner on the coronavirus pandemic and look ahead to what McKinsey & Company terms "the next normal," the Betty Irene Moore School of Nursing at UC Davis charts a course for the next decade of preparing future health care providers, researchers and educators and impacting health care practice in California and beyond.

The COVID-19 crisis tested our resiliency. The reality of virtual learning fasttracked how we leverage technology to deliver our valuable curriculum. The disruption reframed our approaches to collaboration. And now the experience presents a new course to navigate to the next normal.

For the School of Nursing, that means sunsetting a flagship program and launching an innovative hybrid option for a Doctor of Nursing Practice degree to meet the evolving needs of California and beyond.

When the school welcomed its first classes in October 2020, 25 registered nurses with a desire to lead bold system change took a chance on a new school and a Master of Science – Leadership degree. In the decade since, more than 225 alumni have gone on to lead qualityimprovement initiatives at area health systems, advocated for community organizations and started professional organizations. The leadership program sparked contributions at UC Davis Medical Center and beyond that embody Betty Irene Moore's vision for the school and how nurses drive change. The program cultivated relationships with dozens of community organizations that moved our students out of their comfort zones to forever change the landscape of Northern California.

American philosopher William James said, "The great use of life is to spend it for something that will outlast it." Though a degree program ends, the people connected to its experience and their contributions endure for generations.

As the School of Nursing commemorates its 10th Anniversary during the 2020–2021 school year, our leadership team is creating a strategic plan to guide the school for the next 10 years. That future includes a new degree program. We plan to offer a hybrid post-baccalaureate Doctor of Nursing Practice – Family Nurse Practitioner (DNP–FNP) degree program.

In 2018, The National Organization of Nurse Practitioner Faculties committed to assisting all entry-level nurse practitioner programs with shifting to the DNP by 2025. The DNP is a practice-focused degree that prepares nurses to improve the health of people and populations through practice, bold system change, as well as translation of research to patients and populations.



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

So, while our research-intensive Doctor of Philosophy program discovers new knowledge in an academic setting, a DNP puts that knowledge into practice in the clinical environment. Today's health care system needs both and each degree prepares nurses for leadership roles that our patients need and deserve.

Yes, the COVID-19 crisis upended the health care landscape. But it also spurred us at the School of Nursing to live out our goal of creating leaders who are nimble enough to lead in health care settings that are continually evolving.

Technology will, no doubt, play a major role in that evolution. The use of telehealth has greatly increased since last March. Our students even experienced telehealth rotations to prepare for the reality that faces them after graduation. At the School of Nursing, we leverage technology and data science to advance research, enhance education and improve clinical practice.

As we look ahead, we embrace the increased collaboration with our UC Davis School of Medicine colleagues to develop our students into the excellent providers they dream of becoming. We leverage our expertise in family caregiving and geriatric care delivery to contribute to the Healthy Aging Initiative. We embody confidence as we chart a new course and navigate to the next realities that await us on the other side of the pandemic. The Betty Irene Moore School of Nursing at UC Davis ranks among the top 25 best master's-degree nursing programs, according to *U.S. News & World Report's* 2022 Best Graduate Schools. The publication ranks the Master's Entry Program in Nursing and master's-degree leadership program as 24th, up 16 spots from last year and tied with one other program. This year 220 schools provided enough data to be included in the rankings, which are based on a weighted average of 15 indicators



such as peer assessment, health care professionals' assessment, faculty achievements, and number of faculty in clinical practice, student-faculty ratio, and research activity.

Nursing Diversity Champion

The School of Nursing is one of 12 in the country recognized as Nursing Diversity Champions by *Minority Nurse*, a nursing magazine by Springer Publishing. The award recognizes "a select group of colleges, universities and health care institutions across the nation that committed to recruit and retain diverse students, faculty and clinicians."

American Academy of Nursing fellows

Five nurse leaders connected to the School of Nursing were inducted as AAN fellows this past fall for their contributions to nursing leadership. Doctoral alumnae Michelle Camicia (Class of 2018) and Sheridan Miyamoto (Class of 2014) joined Dawn Aycock, Nicholas Dionne-Odom and Melissa O'Connor – who, with Miyamoto, are inaugural fellows of the Betty Irene Moore Fellowship for Nurse Leaders and Innovators.

City of Davis Citizen of the Year

Jann Murray-García, M.D., M.P.H., a pediatrician and associate clinical professor at the School of Nursing, has earned the City of Davis' C.A. Covell Award, more commonly referred to as 'Citizen of the Year.' A Davis school district teacher and a school volunteer nominated Murray-García, noting "her sustained volunteer work to promote platforms for positive discussion of race and social justice in our community." Among her many activities, Murray-García has trained high school students to research racial disparities in students' experiences, and mentored young people to help create a college preplevel U.S. history course at Davis High about race relations.

Gerontological Society of America fellow

Fawn Cothran, Ph.D., R.N., G.C.N.S.-B.C., F.G.S.A., was among the GSA's 33 new fellows last fall. As an assistant professor in the Family Caregiving Institute, she conducts research focusing on the stresses that affect African American family caregivers. She plans to develop interventions to help reduce stress and demands on caregivers while respecting cultural values.

Best Jobs for 2021 list

According to the annual ranking by U.S. News & World Report, the physician assistant (P.A.) profession is No. 1 in the Top 100 Best Jobs and the Best Health Care Jobs. The nurse practitioner (N.P.) profession is close behind, landing at No. 3 for all professions and No. 2 in health care. The School of Nursing is one of the nation's only to prepare students for both professions, with students learning together in a collaborative environment.

School of Nursing leadership student finds his purpose — and expands a program's legacy



Calene Roseman. King is an alumnus of the master's-degree leadership Class of 2021, where he took on new leadership roles in the community and his profession.

> ron King saw himself as a bedside nurse. But when he came to the Betty Irene Moore School of Nursing at UC Davis, he found his purpose and a new trajectory to change the futures of more African Americans.

"I really wanted to push my family forward and education does that," said King, M.S., R.N., an assistant nurse manager at UC Davis Health and alumnus of the master's-degree leadership Class of 2021.

King is part of the final Master of Science – Leadership cohort, the school's flagship program that matriculated its first class of 25 students in October 2010. Throughout a decade, the program sought registered nurses focused on important societal health issues through the work of advancing health and improving the systems that provide health services.

Many of the 220 alumni say they were drawn to the School of Nursing because they were frustrated with the status quo. They sought to develop the skills to lead transformative change beyond the bedside at the systems level.

Upon arrival at the School of Nursing, King connected with alumni who launched the Capitol City Black Nurses Association and faculty who taught from a multicultural perspective. Witnessing their influence and realizing his own potential, he took on new leadership roles in the community and his profession.

"Being a graduate-prepared nurse, you can influence change at a different level," he explained.

King focused on applying his new-found leadership skills outside the classroom. He led virtual discussions about social justice last summer, provided forums on COVID-19 in the Black community and amplified others' work to promote health equity.

Just the beginning

King and the final class of 25 entered in 2019. School leaders reassessed workforce demand and suspended the program that year. A new proposed Doctor of Nursing Practice degree

> program presents opportunities to serve evolving needs in health care and strengthen community relationships for the school.

> "Though this degree program ends, the people connected to its experience and their contributions endure for generations," explained School of Nursing Dean Stephen

Cavanagh. "We will always innovate for the future because that is how we drive change."

As school leaders strategically map out the future of the school, King adds to the legacy of leadership in cultural inclusiveness, knowledge of organizations and system change, teamwork and a commitment to healthy communities.

"I really want to be that change maker alongside other leadership alumni," King said. "It may be the end of this program, but it is just the beginning for myself and many others in our final cohort."

"Being a graduate-prepared nurse, you can influence change at a different level."

-ARON KING

'I felt a call to action'

Matthew Vega wants to improve nursing care for transgender patients

As a registered nurse, Matthew Vega ('11, M.S. '20) is on a mission. He wants to improve nursing care for transgender patients, who suffer from health care disparities including higher rates of mental health problems and suicide.

"Because of their negative health care experiences, transgender patients tend to delay care and not disclose they're transgender, which leads to poor health outcomes," said Vega.

Vega learned of these challenges while caring for transgender patients, and he researched them further while earning his master's degree at the Betty Irene Moore School of Nursing at UC Davis.

"As my thesis project, I wanted to discover what nurses could do to help reduce these disparities," said Vega, who currently works at the Sacramento VA Medical Center.

Searching the literature, Vega found little transgender-specific health education for nurses. So he embarked upon a painstaking effort to create materials, drawing from standards of care established by the World Professional Association for Transgender Health and other sources.

Much of his work is synthesized into a one-hour training module that nurses can use on the job. It provides an overview of transgender care — including the terminology of sexual identity and the particular risks and disparities transgender populations face — as well as the many different surgical procedures, hormone treatments, and resources to help transgender patients.



Vega sees his work, currently being reviewed by a panel of experts, peers and patients, as a good start to a journey that could one day help shape national guidelines for transgender patient nursing education.

Filling a critical need

Vega's passion for improving transgender patient care dates back to his earliest experiences in health care.

"Years ago, I volunteered at an AIDS hospice that cared for mostly LGBT patients. One of our clients was a transgender woman. She was kind and strong and an incredible person," Vega said.

And the staff provided impeccable care for her — high quality, compassionate and respectful. New to the field, Vega assumed this was the norm.

"In my more naïve and younger mind, I believed that quality of care would be similar everywhere," Vega said. "But one day she told me that, while the care there was exceptional, it also was very much the exception." It pained him to hear about mistreatment and even cruelty she had experienced in other settings.

As Vega embarked on his nursing career, he began to understand what she was talking about.

"I became aware of the huge health disparities, and I felt a call to action," said Vega.

With a fresh master's degree in hand, Vega is committed to refining the nursing education materials he's started – and get them out into the field. He sees the first and most immediate use in primary care.

"Primary care clinics tend to be the central hub for the majority of care and can act as a gatekeeper for genderaffirming treatments," said Vega. "In this setting, nurses can be wonderful advocates, allies, and educators. They can really make a huge impact on helping transgender people achieve their health goals as well as gender expression goals."

Betty Irene Moore School of Nursing Alumni Updates



Porscha Adams, P.A.-C. '04

Covid has changed the day-to-day operations of our Occupational Health Clinic over the last year. Managing positive employees, coworker risk tracing and vaccination of 1,400 employees are all new adventures we've embarked on. We've adjusted to the daily, sometimes hourly changes in operations. Now back up to a full schedule of injured workers on top of these new duties can be taxing. We take it day by day, supporting each other and laughing whenever possible. *Photo is with Allison O'Brien, M.H.S. '15, P.A.-C.*

Ann Bruner-Welch, P.A.-C. '95, D.F.A.A.P.A.

Can't believe I retired a year ago, just before the pandemic struck. Our travel plans went out the window, but the long list of home projects sure received attention. We have been able to complete several, as well as welcome a new family member. Maintaining CME has been a bit more challenging than anticipated because my family is requiring more of the time I had planned. Such is life. I taught a little for a P.A. school – was fun, but a lot like work, mostly because of Zoom. Many screens were turned off, so no feedback that I'm used to – in fact, I wasn't even sure if there were people behind those blank screens. I give our regular teachers a lot of credit.

I reflect on my 25-year career. I'm grateful for it. My advice to newer grads: stay flexible, be willing to take on challenges, but maintain your integrity be true to yourself. You can receive good benefits and retirement when working for larger companies, and, depending on the company or provider(s), you can earn autonomy. You have the right, and should have the expectation, to be treated fairly with respect and dignity. Be cautious of those who don't give you your due. Best wishes.

Patricia Ann (McCririe) Gericke, F.N.P. '77

I have been retired for over 25 years now, suffered some losses due to the pandemic but holding my own so far, along with my husband, a retired UC professor. I try to keep abreast of new medical developments. I appreciate hearing from you.

Lori Jagoda, M.S. '15, R.N., P.H.N.

I am back at work at Amador County Public Health, first as a volunteer to sign people up for COVID testing, then hired as a case investigator/contact tracer. Now I have brushed off my immunization skills and am administering vaccine. All this helps to keep me busy while I wait for the world to one day get back to something closer to normal and take the trips I have had to cancel this past year. I am truly thankful I am able to use my skills to respond to the pandemic.

Melissa Johnson-Camacho, M.S. '19, R.N.

My role did change! I became California Nurses Association Chief Nurse Rep for UC Davis Medical Center. I never could have imagined the obstacles we faced as advocates for bedside nurses and patients. Sometimes it was hard to speak up, I felt tired of fighting. I continued. I feel like this role was what Betty Irene Moore intended to protect patients and transform nursing leadership. I'm proud to be an alumna on the frontline.

Rebecca Lash, Ph.D. '15, R.N.

I accepted an assistant professor position at the Indiana University School of Nursing, Fort Wayne. I will be teaching in the undergraduate nursing program and plan to continue my research focused on emergency department utilization among patients with cancer.

Cheryl L. McBeth, M.S. '15, R.N., N.E.A.-B.C.



Wow what a year it has been... as the pandemic began to make the news, I accepted a temporary interim position as the manager on

the oncology/BMT Unit at UC Davis. This was a huge step out of my comfort zone of the Children's Hospital. I was surprised to discover that I loved my new role, and my home unit was thriving, so I took the plunge and accepted the permanent position. It has been challenging and extremely rewarding to lead a new staff through this last year. On a personal note, to cope, we adopted a COVID puppy we named Willow, and she is the new love of our family. For my own self-care, my husband and I take our fifth wheel and camp monthly. This allows me to relax and refuel my tank so I can be my best self and leader for the staff.



Karen Paolinelli, M.S.N., F.N.P.-C. '92, P.A.-C.



I began my career in rural health and have remained passionate about the work for nearly 40 years. From building my own

outpatient practice and serving as a working clinic director for our hospitalbased rural health clinic system, to establishing the emergency department fast track with nurse practitioners and physician assistants, I continue to advocate for both patients and practitioners.

While serving as Chief Operation Officer of Madera Community Hospital, I was appointed President of the California Association of Rural Health Clinics. A capstone of my career was being appointed as Chief Executive Officer for Madera Community Hospital in October of 2016. Madera Community Hospital is a private, independent, notfor-profit, 106-bed adult general acute care hospital with four hospital-based rural health clinics, outpatient diagnostic imaging and draw station. In early March of 2019, it was the first in the Central Valley of California to receive and discharge a COVID-19 patient.

Leading a hospital through the pandemic has been life-altering. My resolve to never compromise on quality patient care has been tested beyond my imagination. An increase of very sick patients and shortages of staff and PPE are just a few of the concerns that have kept me up at night. My nursing education started with a desire to improve the health and well-being of my patients. Developing a patient practice has manifested into a lifelong commitment to ensuring Madera Community Hospital and our rural health clinic system provide quality and safe patient care for anyone who seeks our services.

Brooke Peiler, M.S.N. '18, R.N.

If you would have told me in nursing school that I would be in my second year of my career when a world pandemic hit, I wouldn't have believed you. 2020 has been a trying year for many of my friends, family, colleagues, patients and their families. Working as an R.N. in the NICU at UC Davis Children's Hospital, our patients are very fragile as well as vulnerable, making it a special privilege to care and advocate for them. When I am not at work caring for the teeny tinies, I am at home caring for my adorable new goldendoodle puppy, Reese. We brought Reese home a few days before Christmas and we are so in love!



UC Davis Health

David Lubarsky, M.D., M.B.A. Vice Chancellor of Human Health Sciences Chief Executive Officer, UC Davis Health

Allison Brashear, M.D., M.B.A. Dean of the 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

School of Medicine

Association President Douglas Gross, M.D., Ph.D. M.D. 1990, Residency 1993

Director of Alumni Engagement M.L. Farrell 916-734-9408 / medalumni@ucdavis.edu School of Nursing Director of Alumni Engagement Sarah Mentze 916-734-9614 / smentze@ucdavis.edu

Publication Team

UC Davis Health Editor Jonathan Jeisel

Alumni News M.L. Farrell, Sarah Mentze

Feature Writers and Contributors Rebecca Badeaux, Erin Baily, Jenny Carrick, Charles Casey, Edie Ernst, Joan Fischer, Edwin Garcia, Sarah Heise, Lisa Howard, Michael Hsu, Jennifer Jacobs, Jonathan Jeisel, Rick Kushman, Christopher Nelson, Clifton Parker, Marianne Russ Sharp, Tricia Tomiyoshi, Stephanie Anne Winn, Pamela Wu, Nadine Yehya

Design Serena Evans, Barb Hennelly, Brittany Hernandez

Feature Photography Wayne Tilcock

Publications Coordination Doreen Purvis, Emily Lillya

Website Public Affairs and Marketing

Visit UC Davis Health online at health.ucdavis.edu/health-magazine

UC DAVIS HEALTH magazine is published by the Department of Public Affairs and Marketing. For more information about UC Davis Health and the UC Davis School of Medicine, visit health.ucdavis.edu or health.ucdavis.edu/medschool, or contact the Public Affairs Department at 916-734-9040, hs-publicaffairs@ucdavis.edu or 4900 Broadway, Suite 1200, Sacramento, CA 95820

The University of California does not discriminate in any of its policies, procedures or practices. The university is an affirmative action/equal opportunity employer.





#9852



Public Affairs and Marketing 4900 Broadway, Suite 1200 Sacramento, CA 95820

Address service requested

NON-PROFIT ORG US POSTAGE **PAID** Davis, CA Permit No. 3



A university-industry partnership's **COVID testing breakthrough**

Leaders from a partnership between UC Davis and alumnus Maurice J. Gallagher, Jr., chairman and CEO of Allegiant Travel Company, gathered in April to announce a new, highly accurate 20-minute COVID-19 test. The innovative platform pairs mass spectrometry, robotics and automated machine learning, and may help to empower larger-scale rapid screenings. Gallagher and UC Davis entered into a Sponsored Research Agreement for the project, with support from Shimadzu Scientific Instruments, and their collaboration is part of a new interdisciplinary center in the School of Medicine, the UC Davis Center for Diagnostic Innovation. University experts are now helping to guide Gallagher's startup SpectraPass through the steps needed for FDA authorization. Info: health.ucdavis.edu/diagnostic-innovation