A neurosurgeon trades his scalpel for a plane and wood knife to craft exquisite violins.

THE STRADIVARI OF WESTWOOD
DEPARTMENTS
02 Leadership
Taking it to the streets.
By Jennifer Spisso, MPA

04 COVID-19 Countdown
A look at major developments over two years of the pandemic.

06 Perspective
Calling out antiracist racism in academic medicine.
By Jennifer M. Lucero, MD, MA; Maxime Cannesson, MD, PhD, and Gregg J. Gold, PhD

08 Viewpoint
Athletes’ responsibility in the time of COVID.
By Dr. Christopher J. Jones

10 The Cutting Edge
A centenarian WWII vet regains his hearing.

18 Conversation: Dr. E. Dale Abel
New chief of medicine looks to the future.

22 Spotlight: Dr. Stephanie Correa
Why does the brain regulate temperature differently in men and women?

FEATURES
24 The Stradivari of Westwood
Neurosurgeon Dr. Daniel Lu steps out of the operating theater to make music on a different stage crafting exquisite violins.
By Veronique de Turenne

26 Spotlight: Dr. Raphael J. Landovitz
The Price
COVID-19 has exacted a heavy toll on the nation’s health care workforce on the frontlines of the pandemic.
By Sandy Cohen

46 UCLA In the Time of AIDS: The Long Road
In the 40 years since a UCLA immunologist first identified AIDS, the university has been at the forefront of research and clinical advances to fight the disease.
By Dan Gordon

54 Faculty
[Dr. Raphael J. Landovitz goes for a ride. By Robin Keats]

56 Friends
Sowing the seeds for future breakthroughs.
By Zina Jawadi

58 Epilogue
People with disabilities should be part of the conversation about justice, equity, diversity and inclusion.
By Zina Jawadi

NEWS & NOTES
52 The Stradivari of Westwood
By Johnese Spisso, MPA

U Magazine digitally, go to: uclahealth.org/u-magazine
To subscribe to U Magazine, go to: uclahealth.org/u-magazine/subscribe
For more news and information about UCLA Health, go to: uclahealth.org/getsocial

Patients, or the families of patients, quoted and/or photographed or pictured in this publication have given their consent to have their names and/or images used and their stories told.

“Copyright 2022 by The Regents of the University of California. Permission to reprint may be granted by contacting the editor, U Magazine, 10960 Wilshire Blvd., Ste. 1955, Los Angeles, CA 90024. E-mail: editormedicine@mednet.ucla.edu

Your input is important, so please give us your comments and feedback. Include your name, email address, city and state of residence and, if you are a UCLA medical alum (MD, PhD, resident and/or fellow), your degree(s) and graduation year(s). Letters and/or comments may be edited for clarity and/or length.

Submit letters to: edittormedicine@mednet.ucla.edu
To read U Magazine online, go to: uclahealth.org/u-magazine
To subscribe to U Magazine digitally, go to: uclahealth.org/u-magazine/subscribe

uclahealth.org/getsocial
Taking It to the Streets

Accessing medical care is beyond the reach of many people experiencing homelessness. With the launch of our mobile-van program, UCLA Health takes a major step toward improving access to care for vulnerable populations by bringing essential health care services to where they are needed most.

UCLA HEALTH HAS AN ENDURING COMMITMENT to providing quality health care to our community, but there are many for whom necessary services are out of reach. These are the men and women who live without permanent shelter throughout the Greater Los Angeles area. California has the largest number of people experiencing homelessness in the country, an estimated 160,000. There are more than 66,000 unhoused people in Los Angeles County, with 41,290 in the Greater Los Angeles area. The COVID-19 pandemic has caused an increase in the number of people experiencing homelessness due to unforeseen economic hardship—an average of 227 people in L.A. County become homeless every day.

How can we best help? By doing what we know how to do best and working to provide this vulnerable population with access to high-quality medical care. That is why we have joined together with community-health and social-service organization partners to create the UCLA Health Homeless Healthcare Collaborative. Our mission is straightforward: to promote greater health equity for all in our community.

Johnne Spisco, MPA
President, UCLA Health
CEO, UCLA Hospital System
Associate Vice Chancellor, UCLA Health Sciences

For more information about the UCLA Health Homeless Healthcare Collaborative, go to uclahealth.org/hhc.

For information about UCLA Health equity initiatives, go to uclahealth.org/community-equity.

The UCLA Health Homeless Healthcare Collaborative will provide:

- Medical screenings
- Primary care
- Urgent care
- Preventive care and vaccinations
- Continuity care for chronic medical conditions
- Referrals to housing and social services
- Primary psychiatric care

Every day 227 people become homeless in L.A.
Living on the street can take more than 20 years off one’s life.

Who are the unhoused people in L.A.?
- 20% are families with children
- 17% are living with a physical disability
- 29% have experienced domestic violence

Unhoused populations are more vulnerable to disease, and often can’t access care.

Unhoused people suffer higher rates of:
- Tuberculosis
- Hypertension
- Diabetes
- Asthma
- HIV/AIDS
- Hospitalizations

Learn more and find out how you can help: uclahealth.org/hhc

The primary causes of homelessness include:
- Increasingly unaffordable housing
- Inequitable access to health care
- Stagnant wages
- Systemic racism
March 2022 marks two years of the COVID-19 pandemic. Keeping up with the rapid pace of developments has been a challenge. U Magazine offers this timeline of selected milestones over the past two years, current to February 6, 2022.

California woman is first confirmed coronavirus death in the U.S.

California’s outdoor events and theme parks allowed to reopen with limited capacity under strict government guidelines.

Gov. Newsom announces all California residents age 16 or older can get vaccine beginning in April.

Gov. Newsom issues statewide mask mandate.

Remdesivir becomes first drug approved by FDA to treat COVID-19.

Pfizer and Moderna begin large-scale trials of potential COVID-19 vaccines.

Remdesivir becomes first drug approved by FDA to treat COVID-19.

FDA approves emergency-use authorization for Pfizer vaccine.

Pacific gas and electric says it will stop shutting off service due to non-payment.

Global death toll tops 1 million.

Gov. Newsom cancels state’s stay-at-home order. Some services allowed to reopen with limited capacity.

Gov. Newsom declares state of emergency in California.

President Trump declares national emergency. LA Unified School District announces school closures.


CDC confirms California's first coronavirus case, the third case in the U.S.

California's outdoor events and theme parks allowed to reopen with limited capacity under strict government guidelines.

Gov. Newsom issues statewide mask mandate.

California’s outdoor events and theme parks allowed to reopen with limited capacity under strict government guidelines.


California’s outdoor events and theme parks allowed to reopen with limited capacity under strict government guidelines.

Gov. Newsom issues statewide mask mandate.

COVID-19 COUNTDOWN

Data compiled by UCLA Health Communications managing editor Leo Smith and senior writer Sandy Cohen.

To see the complete timeline, go to tinyurl.com/COVID-Timeline

Illustrator: Kerry Hyndman

U Magazine Winter 2022
CALLING OUT AVERSIVE RACISM IN ACADEMIC MEDICINE

By Jennifer M. Lucero, MD, MA; Maxine Cannesson, MD, PhD; Catherine L. Chen, MD, MPH; and Gregg J. Gold, PhD

In the language of social psychology and sociology, aversive racism results from the interplay of normal cognitive processes, including social dominance, implicit bias and in-group favoritism. Aversive racism occurs when decisions or judgment calls by people who don’t recognize the effects of intergroup dynamics on their thought processes. Social–dominance theory explains the mechanisms behind the inevitability of group-based hierarchies. According to this theory, society and social systems have at least two groups—the dominant or top group, which has the most of whatever attribute society deems valuable (e.g., power or money), and the less-dominant group or groups. When it comes to race, the hierarchy is upheld by institutional racism (racial discrimination within financial, legal and education systems, among others); interpersonal racism (discrimination, overt or aversive, by members of the dominant group against members of less-dominant groups); and internalized racism (conscious or unconscious acceptance of the racial hierarchy by members of less-dominant groups). To avoid sanctions or to move up the hierarchy, members of less-dominant groups tend to show deference to members of the dominant group, a process that reinforces and perpetuates this hierarchy, whereas people at the top often deny that a group-based hierarchy exists.

The hierarchy is maintained in part by societal myths that legitimize inequity. People at the top of the hierarchy not only have a stronger preference for hierarchical societies than members of less-dominant groups, but they are more likely to endorse such legitimizing myths. In academic medicine, myths that legitimize inequity include the concept of a meritocracy—the idea that success is based primarily on a person’s abilities, which ignores the structural effects of aversive racism. Implicit bias—the unconscious, automatic association of negative stereotypes or attitudes with a particular group—also helps maintain inequality. Implicit bias works in concert with in-group favoritism, which entails preferring members of one’s own group to outsiders. When faculty members interview residency applicants, for example, in-group favoritism manifests when an interviewer ranks students from a school they personally attended higher than they otherwise would have, thereby disadvantaging other applicants. Aversive racism occurs when people fail to recognize the influence of these forces on their judgments. Social dominance theory awarded fewer honor-society memberships, implicit bias and in-group favoritism intersect within academic medicine, resulting in aversive racism that affects the judgments of decision makers and contributes to structural racism in medicine.

“They are clearly qualified for the job, but they’re too ‘in your face.’ I’m worried people won’t respect their opinion.”

Behaviors that reflect aversive racism are harmful to people from historically marginalized groups but maintain the positive self-image of the people carrying them out. For example, Dovidio and colleagues had white college students evaluate hypothetical university applicants. Participants had previously completed a questionnaire, which was used to stratify them into high-prejudice and low-prejudice groups (although even the high-prejudice students ranked low on measures of prejudice as compared with the general population). Participants then evaluated admissions packets of Black and white applicants that were constructed to reflect high, low or ambiguous academic achievement. There was no difference between high- and low-prejudice participants’ evaluations of high- or low-achieving applicants, regardless of the applicant’s race. When evaluating applicants with ambiguous achievement records, however, high-prejudice participants rejected Black applicants significantly more often than they rejected white applicants. The investigators concluded that the ambiguity of the application allowed participants to justify their admissions decisions to themselves by focusing on the application’s weaknesses.

“But I voted for Obama.”

The COVID-19 pandemic unmasked the structural racism that exists throughout the United States. Academic medicine isn’t immune to the scourge of white supremacy and structural racism. No matter how many institutional statements are made condemning racist acts, we cannot expect to overcome structural racism within academic medicine until we acknowledge the reality of aversive racism. In addition to examining their role in upholding a race-based hierarchy, members of the academic medicine community must do the difficult work required to challenge their own conscious and subconscious thoughts and actions that contribute to aversive racism. This work includes unlearning implicit biases, countering negative stereotypes and legitimizing myths, and eliminating the use of automatic, biased judgments to make decisions, all of which will require extensive and deliberate practice.

Future work will involve developing evidence-based anti-aversive-racism programs to break down academic medicine’s unspeakable racial hierarchy, which contributes to structural racism in health care. Effective programs would help normalize anti-racist attitudes; provide continuous and effective anti-racism education for trainees, faculty, executive leaders and staff; and refashion existing systems that favor the “in group.” Finally, academic institutions should capitalize on the good intentions and desires of progressive academic leaders to overcome their aversive racism thoughts and actions. We hope academic leaders will lead the charge by acknowledging the need to openly address aversive racism within broader efforts to dismantle structural racism in medicine. •
IN 1993, BASKETBALL STAR CHARLES BARKLEY PROCLAIMED in a national TV ad: “I am not a role model.” Nearly three decades later, sports heroes like Green Bay Packers quarterback Aaron Rodgers and Tampa Bay Buccaneers wide receiver Antonio Brown are saying essentially the same thing, though more covertly, with their COVID-19 vaccination deceptions.

But, like it or not, these high-profile athletes are role models for millions of fans, young and old. And in the polarized environment of today’s debates about how best to address the pandemic, for many people their actions speak louder than words.

As a physician, I know that, two years into this pandemic, vaccines are the best tool we have to prevent widespread and recurrent outbreaks of COVID-19. And the single-best tool we have to convince people that vaccines are not only effective at controlling spread of the disease, but also are safe, is information. Whether it’s a patient in the office or an athlete in the training room, education is paramount, and it is incumbent upon me to make sure they are well informed.

The overwhelming majority of professional athletes have gotten vaccinated. Others have not. I acknowledge that there may be legitimate reasons for someone to refuse the vaccine — a medical condition, perhaps, or a strongly held religious belief. But for many people, none of these justifications pertain. I am proud to say that 100% of the players on the Los Angeles Lakers, for which I am head team physician, are fully vaccinated.

Abundant evidence demonstrates the vaccines prevent severe disease symptoms and limits the spread of COVID to others. When I speak to anyone, athletes included, about the vaccines, I try to impress upon them that by taking the shot, they are protecting not only themselves from severe disease, but also their friends and loved ones who may be at higher risk for severe COVID-related complications. They also are protecting young people — a large percentage of athletes’ worshipful fans — who may not yet have received the vaccine, or who are too young to be eligible, including children under the age of 5. And they are delivering a message that, if not for themselves, then for the common good, they are willing to be vaccinated.

But does their example even make a difference anymore? Before the vaccines became widely available, I thought that athletes would be in the perfect position to use their influence to urge the broader population to get vaccinated. Now, everything around COVID, vaccines included, has become so politically charged that it is difficult to know what messages might break through. It’s not enough anymore for someone with the stature of Elvis Presley to go, as he did in 1956, on The Ed Sullivan Show to receive the polio vaccine to encourage others to follow his example.

Still, doesn’t a professional athlete, who has reached the pinnacle of public acclaim and admiration, have a responsibility to be an example to others, as Elvis was, to do what clearly is in the public interest? Perhaps the public glare is too bright in our internet age — where any comment or action, no matter on which side of the political line it falls, can instantaneously become a lightning rod for criticism and hostility — for star athletes to step forward to take a position that might push against the beliefs of a large percentage of the population, and of their fans.

Or maybe Charles Barkley was right and athletes are not inherently role models. They are what we make them. Role model or not, I do believe that athletes, like every other person in today’s COVID-altered society, have a baseline obligation to be truthful to their fellow citizens about their vaccination status.

I will leave it to others to debate Aaron Rodgers’ and Antonio Brown’s choices to not be vaccinated. There is no debate, however, that by deceiving people about their status — Rodgers misled the public into thinking he was vaccinated, until he tested positive for COVID-19 and the truth came out, and Brown, who was cut from the team in January for an unrelated infraction, was found to have used a fake vaccination card to misrepresent his status — they have done a serious disservice. There are real, potentially life-threatening, consequences to exposing someone who may be at higher risk for severe disease from the virus. Neither Rodgers nor Brown have any way of knowing if they might have exposed someone like that.

Athletes are not absolved of the responsibility to not endanger others. Maybe they are not role models, but they have the same societal obligations as the rest of us.
PILOTING BOMBING MISSIONS OVER EUROPE in a B-17 during World War II was a dangerous job. More than 4,700 of the planes — over a third of all the B-17s produced — were lost in combat. During one mission, while flying in formation with 28 other planes, one of the engines of Irvin Poff’s Flying Fortress failed five minutes before he was to drop 6,000 pounds of explosives over an Austrian oil refinery. Knowing that German fighters were keen to pick off solo flyers, he diverted full-throttle emergency power to his remaining three engines — risking a possible engine explosion — to stay in formation and complete his bombing run.

Poff survived the war, but the repeated climbs to 20,000 feet in the plane’s unpressurized and unheated cockpit and descents to return home following his missions wreaked havoc on his inner ears and led to hearing loss. Seventy-five years later, when hearing aids no longer worked for him, he decided to pursue a cochlear implant.

He was 92 years old. “I realize that cochlear-implant surgery is unusual for someone of my age,” Poff says. “You have to be open to change, because the world is going to change, with or without you.”

When Poff underwent surgery for the implant at UCLA, he became one of the oldest Americans to receive the device. “Mr. Poff wants to hear so he can continue to socialize and be independent,” says Akira Ishiyama, MD (RES ’96), director of UCLA’s cochlear implant program. “I’ve never seen anyone like him. He doesn’t look a day over 80.”

Age-related hearing loss is a serious concern, leading to social isolation and increased risk for dementia and cognitive decline. Dr. Ishiyama says. Many elderly patients suffer needlessly, not realizing that treatment exists, and unaware that Medicare covers the cost of both cochlear-implant surgery and the device itself.

Poff’s procedure was performed under local anesthesia, eliminating the risk of putting a man his age under general anesthesia. Unlike a hearing aid, which amplifies speech, a cochlear implant electronically stimulates the auditory nerve, bypassing the damaged inner ear. A speech processor, attached by a magnet outside the skull, sends signals to the implant, enabling the brain to decode the input as sound.

Prior to the procedure, Poff was profoundly deaf and relied on a transcription device to understand conversations on phone calls. Now, he can discern 60% of words in conversation — a number that’s gradually increasing as he adjusts to the implant. “The first thing I noticed was my simple little electric clock,” Poff says. “I could hear the tick-tock real plain. I hadn’t heard it before.”

The world in which Poff now lives — one that includes the technology to restore his hearing — is very different from the one he grew up in. He was deliv- ered at home by a doctor who arrived in a horse-drawn buggy. He grew up without electricity or indoor plumbing, in a farm in Smithfield, Missouri, and attended a one-room schoolhouse through the eighth grade.

“Before the surgery, I couldn’t hear or understand people across the table at a restaurant. It made me feel left out, and it was embarrassing to speak up, so I quit talking. Now I can sit on my front porch and enter into a conversation with my neighbors across the street.”

Twice widowed, Poff lives independently and stays busy exercising, repairing his home, watching Western movies and enjoying neighborhood block parties. He encourages other seniors to explore how cochlear implants and hearing aids can help them lead fulfilling lives and remain active in their communities. “I appreciate everything that UCLA did to get it done for me,” he says.

—Elaine Schmidt
Discrimination Increases Risk for Mental Health Issues in Young Adults

Researchers examined a decade's worth of health data on 1,834 Americans who were between 18 and 28 years old when the study began. They found that the effects of discrimination may be cumulative—and the greater number of incidents of discrimination someone experiences, the more their risk for mental and behavioral problems increases.

“The study also suggests that the effects of discrimination in young adults are connected with disparities in care for mental health concerns and institutional discrimination in health care overall, including inequities in diagnoses, treatments and health outcomes. Previous studies have linked discrimination—whether due to biases against race, sex, age, physical appearance or other attributes—to increased risk for mental illness, psychological distress and drug use. This new study is the first to focus on the transition to adulthood and to follow the same group of individuals over time.”

“With 75% of all lifetime mental health disorders presenting by age 24, the transition to adulthood is a crucial time to prevent mental and behavioral health problems,” says Yvonne Lei, a medical student in the David Geffen School of Medicine at UCLA and the study’s corresponding author. “The COVID-19 pandemic has brought to the forefront new mental health challenges—particularly for vulnerable populations. We have the opportunity to rethink and improve mental health services to acknowledge the impact of discrimination, so we can better address it to provide more equitable care delivery.”

Researchers used data spanning 2007 to 2017 from the University of Michigan’s Transition to Adulthood Supplement of the Panel Study of Income Dynamics survey. Approximately 48% of the people in the study reported experiencing discrimination; the most common factors they cited were age (26%), sex (14%), race (13%) and sex (13%). The analysis showed that participants who experienced frequent discrimination, defined as a few times per month or more, were roughly 35% more likely to be diagnosed with a mental illness and twice as likely to develop severe psychological distress than those who had not experienced discrimination or had experienced it a few times per year or less. Overall, people who experienced any amount of discrimination had a 26% greater risk for poor health than people who said they did not experience discrimination.

During the 10-year period, young adults in the study who had experienced multiple successive years of high-frequency discrimination showed a much more pronounced, cumulative risk for mental illness, psychological distress, drug use and worse overall health. “The associations we found are likely also intertwined with mental health care service disparities—including inequities in care access, provider biases and structural and institutional discrimination in health care—leading to inequities in diagnoses, treatments and outcomes,” says Adam Schickendanz, MD (FEL ’16, ’18), assistant professor of pediatrics, the study’s senior author.

“In order to reach the most patients, we want cell therapies that can be mass-produced, frozen and shipped to hospitals around the world.”

Discrimination and Mental Health in Young Adults, Pediatrics, November 8, 2021

An ‘Off-the-Shelf’ Immunotherapy for Cancer

UCLA researchers are reporting a critical step forward in the development of an “off-the-shelf” cancer immunotherapy using rare but powerful immune cells that could potentially be produced in large quantities stored for extended periods and safely used to treat a wide range of patients with various cancers.

Immunotherapies, which harness the body’s natural defenses to combat disease, have revolutionized the treatment of aggressive and deadly cancers. But often, these therapies must be tailored to the individual patient, costing valuable time and pushing their price into the hundreds of thousands of dollars. “In order to reach the most patients, we want on-invariant natural killer T-cells, or iNKT cells. These are unique not only for their power and efficacy but also because they don’t carry the risk of graft-versus-host disease, which occurs when transplanted cells attack a recipient’s body, and which is the reason most cell-based immunotherapies must be created on a patient-specific basis.”

The researchers developed a new method for producing large numbers of these iNKT cells by genetically engineering blood-forming stem cells—which can self-replicate and produce all kinds of blood and immune cells—to make them more likely to develop into iNKT cells. Next, these stem cells were placed into artificial lymphoid organs, which mimic the environment of the thymus, a specialized organ in which T cells naturally mature in the body. After eight weeks in the organsoids, each stem cell produced, on average, 100,000 iNKT cells.

Dr. Yang and her collaborators tested the resulting cells, called hematopoietic stem cell–engineered iNKT cells, or HSC–iNKT cells, by comparing their cancer-fighting abilities with those of immune cells called natural killer cells, or NK cells. In a lab dish, the HSC–iNKT cells were significantly better at killing multiple types of human tumor cells—including leukemia, melanoma, lung cancer, prostate cancer and multiple myeloma cells—than the NK cells. More importantly, the HSC–iNKT cells sustained their tumor-killing efficacy after being frozen and thawed, an essential requirement for widespread distribution of an off-the-shelf cell therapy.

The researchers next equipped the HSC–iNKT cells with a chimeric antigen receptor (CAR) that targets a protein found on multiple myeloma cells, and then tested the cells’ ability to fight human multiple myeloma tumors that had been transplanted into mice. These CAR-equipped HSC–iNKT cells eliminated the multiple myeloma tumors, and the mice that underwent this treatment remained tumor-free and showed no signs of graft-versus-host disease throughout the study.

The researchers are now working to move to a system that eliminates the need for supportive cells—such as those used in the thymic organsoids—in producing iNKT cells. Dr. Yang says she hopes this will better enable mass-production of the therapy and, ultimately, its clinical and commercial development.

—Tiare Dunlap

 reports Medicine

Photo: iStock

An engineered HSC–iNKT cell (blue) attacking a human tumor cell.

Image: Lee, Y.; et al. Cell Reports Medicine, November 16, 2021

An engineered HSC–iNKT cell (blue) attacking a human tumor cell.
Study of Mouse Brain could Pave Way to New Treatments for Human Movement Disorders

A UCLA STUDY USING MICE reveals new insights into the wiring of a major circuit in the brain that is attacked by Parkinson's and Huntington's diseases. The findings, based on research conducted by UCLA scientists as part of the national BRAIN Initiative Cell Consensus Network, could shape future understanding of how diseases arise in the human brain and pinpoint new targets for treatment.

UCLA scientists have been conducting a comprehensive analysis of how the mouse brain is wired. Their research has thus far analyzed 600 pathways and catalogued nerve-cell connectivity to create a wiring diagram of critical brain circuits. “Like any explorer traveling deep into uncharted territory, we make maps to guide future visitors,” says Hong-Wei Dong, MD, PhD, professor of neurobiology. “My lab mapped out the intricate circuitry of the mouse brain to enable other scientists to conduct more accurate experiments in mouse models of diseases like Parkinson's or Huntington's disease.”

Using a green dye, the UCLA scientists labeled a small number of individual neurons and tracked their connections with other neurons through arm-like projections called axons and dendrites. Those connections, called circuits, process and communicate distinct types of sensory information in the brain. The researchers were particularly interested in the cortico-basal ganglia-thalamic loop, a crucial neural circuit that links regions in the brain that regulate movement, emotions and complex cognitive processes like learning and memory. The loop is affected by neurodegenerative disorders like Parkinson's and Huntington's diseases.

“We identified smaller circuits within the cortico-basal ganglia-thalamic loop that process information for specific functions,” says Nicholas Foster, PhD, a project scientist in Dr. Dong’s lab. “Some of these subcircuits enable the brain to control movement of the arms, legs and mouth. Other circuits process emotional input or complex cognitive processes, such as learning the consequences of actions.”

The research gives scientists a baseline for what normal brain wiring looks like and pinpoints smaller circuits that could go awry when neurological diseases progress. “These subcircuits could reveal new treatment targets and serve as physiological benchmarks to measure the effectiveness of new drug treatments in preclinical experiments,” Dr. Foster says. When researchers detect shortened axons and dendrites in the neurons of a particular circuit in a mouse with a certain disease, for example, they can observe where the disease is having an effect. And if scientists administer treatment to the mice and see axons and dendrites developing normally in that area, they can surmise that the treatment is effective.

“Our results illuminate clearer paths for future studies to follow by illustrating how different brain structures organize into networks and communicate with one another,” Dr. Dong says. “These findings will enable scientists to better understand how dysfunction in one small brain region can undermine the function of its larger neural circuit.” — Elaine Schmidt

Robin the Social Robot Brightens Hospitalized Children’s Experience

At the conclusion of the study period, children and their parents were interviewed about their experiences, and child-life specialists provided feedback in a focus group. Researchers then used a transcript of the discussion to identify recurrent and salient themes. Ninety percent of parents who had a visit with Robin indicated they were “extremely likely” to request another visit, compared to 60% of parents whose children interacted with the tablet.

Children experienced a 25% increase in positive affect — described as the tendency to experience the world in a positive way, including emotions, interactions with others and with life’s challenges — after a visit with Robin and a 35% decrease in negative affect. Children who had a tablet visit experienced a 43% decrease in positive affect and a 35% decrease in negative affect.

“Our team has demonstrated that a social-companion robot can go beyond video chats on a tablet to give us a more imaginative and profound way to make the hospital less stressful,” says pediatric surgeon Justin Wagner, MD (RES’17).

— Evelyn Tokuyama
Children Born with Deadly Immune Disorder Remain Healthy 10 Years Post-Gene Therapy

A DECADE AGO, UCLA physician-scientists began using a pioneering gene therapy they developed to treat children born with a rare and deadly immune system disorder. They now report that the effects of the therapy appear to be long-lasting, with 90% of patients who received the treatment still disease-free.

ADA-SCID, or adenosine deaminase–deficient severe combined immunodeficiency, is caused by mutations in the gene that creates the ADA enzyme, which is essential to a functioning immune system. For babies with the disease, exposure to everyday germs can be fatal. If untreated, most will die within the first two years of life. In the gene-therapy approach detailed in the new paper, Donald Kohn, MD, Distinguished Professor of Microbiology, Immunology & Molecular Genetics and Stem Cell Research at UCLA, and his colleagues removed blood-forming stem cells from each child’s bone marrow, then used a specially modified virus, originally isolated from mice, to insert healthy copies of the ADA gene into the stem cell’s DNA. Finally, they transplanted the cells back into the children’s bone marrow.

The therapy, when successful, enables the body to produce a continuous supply of healthy immune cells capable of fighting infections. Because the transplanted stem cells are the baby’s own, there is no risk of rejection.

Dr. Kohn and his team report that of the 10 children who received the therapy were babies. The one older child, who was 15 at the time, was the only participant whose immune function was not restored by the treatment. This suggests the therapy is most effective in younger children, Dr. Kohn says.

The researchers did find significant immune-system differences among the successfully treated children. Some had nearly 100 times more stem cells containing the corrected ADA gene than others, as well as more copies of the gene in each cell; those with more copies of the ADA gene in more cells appeared to have the best immune function.

“We hope someday we’ll be able to say that these results last for 80 years.”

—Sarah C.P. Williams

Women Receiving Inadequate Mental Health Care through California’s Public Programs

Researchers found that women who were eligible for Medi-Cal or other public-care programs had high degrees of unmet mental health needs across all levels of psychological distress.

AMONG WOMEN IN CALIFORNIA who have recently experienced mild- to-moderate psychological distress and are eligible for public health services, four-out-of-five said they received no treatment, a report published by the UCLA Center for Health Policy Research showed.

Those who qualify for these public services — a third of all women over the age of 18 — also were more likely than their privately insured counterparts to have experienced moderate or serious psychological distress (35% vs. 21%), according to an analysis of data from the center’s California Health Interview Survey from 2018 and 2019.

The findings, the researchers say, point to an urgent need to address the mental health needs of these women — particularly women of color, who reported the highest levels of unmet needs. If untreated, mild-to-moderate psychological distress has the potential to become progressively more severe and disabling. “A public-health-focused approach is vital because it may prevent more severe impacts on individuals’ lives,” says D. Imelda Padilla-Frausto, PhD, a research scientist at the center.

Researchers found that women who were eligible for Medi-Cal or other public-care programs had high degrees of unmet mental health needs across all levels of psychological distress. Roughly 90% of those with mild distress, 70% with moderate distress and 50% with serious distress reported that they hadn’t accessed professional care within the previous 12 months.

The study’s authors also sought to identify how socioeconomic factors may influence whether women are eligible for public insurance, and how these factors may present barriers to accessing needed mental health care. They found that women of color were two-to-four times as likely as white women to be eligible for public health coverage, and that those without a high school education were more than four times as likely as those with a graduate degree to be eligible. Of single women with children, 68% were eligible. Compared with 28% of U.S.-born citizens, 54% of noncitizen women with a green card were eligible.

The authors also discovered that many of the same social and economic determinants appeared to influence whether those experiencing distress had accessed treatment or support services.

Among women experiencing serious distress who have unmet needs, 66% were Asian, 53% were Latina, 52% were Black and 42% were white. Asian women experiencing mild psychological distress also had the highest overall percentage of unmet needs (95%). Noncitizen women without a green card were more likely to report unmet needs for mild and serious psychological distress than women who were born in the U.S., with a particularly large difference for serious distress (75% vs. 52%).

This information can aid in developing tailored approaches for specific populations, Dr. Padilla-Frausto says. The researchers recommended the implementation of national standards for culturally and linguistically appropriate health services, large-scale promotion of mental health literacy and outreach, supporting policies that reduce inequities in care for women and expanding screening services into settings such as “faith-based organizations, beauty salons, grocery stores, libraries and community resource centers,” she says.

—Elaiza Torralba

ACCESS: www.uknowledge.org
READY, WILLING AND ABEL

The new executive chair of medicine in the David Geffen School of Medicine at UCLA and executive medical director of the UCLA Health Department of Medicine steps into his role at a time when diversity, equity and inclusion are at the top of the agenda.

As a child growing up in post-colonial Jamaica, E. Dale Abel, MD, PhD, learned an important lesson from his parents, both of whom were teachers and the children of subsistence farmers who themselves had no more than six or seven years of schooling. “They were convinced that the way to make an impact in society and advance in life was to have a good education,” says the newly appointed executive chair of the Department of Medicine in the school of medicine and executive medical director of the Department of Medicine for UCLA Health. “We grew up being told that we would become a doctor or a lawyer or an engineer. I am one of five children, and, as it turns out, three of us are doctors and two are engineers. So, I guess we ended up listening to our parents.”

Dr. Abel joins UCLA at a time when it is expanding its commitment to health equity, diversity and inclusion, and as the leader of the school and health system’s largest department, he will play a significant role in shaping that journey. While chair of the Department of Internal Medicine at the University of Iowa, Dr. Abel was dedicated to broadening communication to build a greater sense of community; provide strategic direction; and address issues of diversity, equity and inclusion. He talked with UCLA Health interim chief of communications Judy Fortin about his background, thoughts on equity, diversity and inclusion in health care and the value of mentorship.
You grew up and earned your MD in Jamaica, and then went on to earn a doctorate at Oxford as a Rhodes Scholar and complete residency and fellowship training at Northwestern and Harvard. How did that early experience inform your attitudes about medicine and health care?

Dr. Abel: It is really a wonderful thing to be working to patients. Almost every time, the patient tells you something that is nuanced, that is not actually in the record. Something that may ultimately alter the course of how to manage his or her care. That has continued to flavor how I practice medicine today. Also, when you practice medicine in a place that is much more resource-constrained than the United States, there is, obviously, less access to the latest and greatest tests that could help you to diagnose a patient. So, you come to recognize that you sometimes must make life-or-death decisions in the face of diagnostic uncertainty based on your best judgment. This gave me a very clear perspective about the power that a physician has over the lives of their patients. When I started to train in the United States, I was struck by how many tests doctors order, and by the many contingencies that are put in place because there is concern that somebody might turn around and take you to court over a decision that you made. I think that is a fine line between practicing good, safe and cost-effective medicine that is high quality versus practicing defensive medicine. I am encouraged that in the U.S. medical establishment, we are now getting closer to a point where medicine is becoming somewhat more rational in asking questions about how we balance resources with what ultimately is proven to be effective.

What are your priorities for UCLA’s Department of Medicine, and where do you see opportunities for growth?

Dr. Abel: It is remarkable taking over a department that has been led by someone like Dr. Alan Fogelman, MD ’66, RES ’68, ’71, FEL ’73 who, over the nearly 30 years of his stewardship, has built a department organically that is the envy of the country. He bet on people and he bet on talent, and he told those individuals he brought to UCLA, “I’m going to give you the freedom and resources to excel in whatever way that you want to do that.” The result has been spectacular. Having said that, you can’t keep growing organically when you get to the size of the current Department of Medicine. Both on the clinical and research sides, we will have to identify those critically important priorities where we can really be the world leaders, and then invest to achieve that goal. UCLA is a tremendously collaborative place, but I think there are levels of additional collaboration that can amplify our impact. We can catalyze growth without necessarily having to bring in many more people by embracing points of synergy that just need to be realized for the department to continue to succeed.

UCLA has an incredibly strong clinical program, is a very strong financial position, and it has amazing researchers in very energized and motivated faculty. There are relatively few places that have all of those things together under the same roof. I would like to leverage that strength to expand the reach of our experts on the national stage. I believe that the quality of our faculty, the quality of our trainees and the quality of our entire enterprise deserves a greater level of national attention.

In your previous positions, you have been very focused on issues of diversity, equity and inclusion. How do you plan to carry on that work at UCLA?

Dr. Abel: We need to pay close attention to the people we recruit into the school of medicine, and ultimately into the department. And we need to have a really important conversation about how we, as an organization, serve the community of Greater Los Angeles in a much more meaningful way. UCLA is located on the Westside of Los Angeles, in an affluent area, yet within a few blocks there are the neighborhoods and communities that have third-world levels of mortality and sub-optimally managed chronic noncommunicable diseases, like hypertension and diabetes. I know there would be tremendous opportunities for us to broaden our engagement with these communities. Mentorship and paying it forward also is something that I am passionate about, and there, too, are opportunities to expand our conversations. UCLA has a tremendous talent pool, and I believe that we have a responsibility to ensure that we provide thoughtful and meaningful mentorship across the entire career spectrum.

A recent UCLA study found that the proportion of Black physicians, specifically men, who are being trained in the United States has not increased in 120 years. Do you feel there are new training opportunities that can be created through the Department of Medicine to increase those numbers?

Dr. Abel: First of all, I want to have more Black men into medical school. I have colleagues in other parts of the country who actively mentor young Black men ages 13 to 17 to show them that a career in medicine is very much within their grasp, and also to show them what it takes to become competitive for medical school. It really has to start early, and not just at the time of admission. The second point is that I really want the department to be a major player in national discussions, and particularly for Black physicians. Latino physicians and medical school graduates who are thinking of training in internal medicine. UCLA should be a member on that short list of places to apply. There is strong competition from a few other elite and premier programs across the country. A “holistic” review is an excellent approach to achieve this goal. I know that the training departments in the Department of Medicine at UCLA have been active in their recruitment of diverse trainees and do this, and Massachusetts General Hospital in Boston does this as well. With a holistic approach, there are independent “academic reviews” and “holistic reviews.” The individuals who are focusing on recruitment through the lens of diversity, equity and inclusion will pick up on things in the application that the folks doing the academic review may have missed because they are focused on test scores or more traditional academic metrics. As a result, both UCLA’s Department of Medicine and Mass General achieved among the most diverse and accomplished incoming residency classes in the country. I look forward to continuing our journey together to build on this progress in our quest to leverage UCLA’s incredible pipeline opportunity to increase diversity within our department. I believe that excellence and diversity go hand in hand.

As the leader of a very large department, how will you maintain the balance between your personal goals as a researcher and your responsibilities as an academic chair and administrator?

Dr. Abel: My research group has been with me for a fairly long time, and they are pretty mature independent investigators. A few people are relocating with me; I believe that they will rapidly size up opportunities on campus to continue scholarly work, but also they do their own work. At this stage in my career, it doesn’t have to be all about my own research anymore. I think that there are a lot of young people with great ideas — probably better ideas than mine — and I can just point them in appropriate directions, then they can run with things. One of my goals is to identify, nurture and encourage you and upcoming investigators and physician-scientists within the department, and to really ensure that we can develop a strong community of young people who are being supported and actively mentored to achieve their full potential.

You’ve mentioned mentoring several times. Who has had the biggest influence on you personally and professionally?

Dr. Abel: A critical mentor was my PhD supervisor at the University of Oxford, Professor John Ledingham. After we began working together, he asked me, “What do you want to do when you finish?” I said, “I want to go to the United States.” He marched me over to the chair of the department, Dr. David Weatherall, and introduced us. Sir Weatherall picked up the phone and called friends who were senior academics in the United States, and he said to them, “This young man from Jamaica who is sitting in my office is someone I think you should meet.” That opened doors, and it is how I met a significant career mentor, Lewis Landsberg, when he was a professor at Harvard before going to Northwestern, ultimately as my mentor. The chair of the department, Dr. Ledingham asked: “What do you want to do after residency?” I said, “I think I want to be an endocrinologist.” He said, “Okay, fine. You’ve got to go to Boston. Here are the people you want to train with.” He had a tremendously generous mentor. It didn’t matter who I was or where I came from; he just saw what the future could be like for me and then essentially facilitated that. At the end of the day, what makes me look good, or what makes anyone look good, is not how many papers I have published or how many honorific societies I’ve been a member of. It’s the people who you are touched and who would have your back. The success of others amplifies what your personal impact might be.

Now that you are working just a short skip from Hollywood, do you have a favorite movie that perhaps reflects on your own attitudes and/or style?

Dr. Abel: Dr. Zhivago. That is my favorite movie because it really takes you to imagine a tragic story of a time when Russia was undergoing convulsive upheavals. When I watch it, I reflect on how our life experiences are framed both by history and by circumstances over which we often have no control, and which can really shape the way that we ultimately interpret future events. I think that stories that really touch on a deeper aspect of life and humanity are the ones that tend to appeal to me the most.
The core question that concerns Dr. Stephanie Correa is how the brain regulates temperature and energy balance differently in males and females. “We want to know how estrogen”—the primary hormone produced by the ovaries—“acts on the hypothalamus to alter temperature homeostasis and metabolic health,” she says. “Why would something so crucial to biological function be sensitive to sex and sex hormones?” By using mouse models, she hopes to develop treatments. “We want to answer that question, she hopes to provide future scientists with broader knowledge to develop treatments.

**WHERE ARE YOU HAPPIEST?**

In my lab. When I was a post-doc, my husband was a post-doc at the same institution, and when he would come to visit me in my lab, it was such a joy. That was when I was happiest, when everything that I loved was in one room. Now, our two daughters sometimes come to spend time with me in my office. That makes me very happy.

**WHAT DO YOU CONSIDER TO BE YOUR FINEST ACHIEVEMENT?**

I think I’ve gotten there yet. I’ve been at UCLA six years, and I’ve had a lot of really amazing people come through my lab. I think my finest achievement will come when they go off and establish their own labs and do amazing things.

**WHAT ARE THE QUALITIES OF A GREAT SCIENTIST?**

Perseverance is very important because a lot of times things fail, and you have to be willing to go back and try again or try doing things a little differently. Coupled with that is optimism, because you can’t keep coming back after failures if you’re not optimistic. And there’s skepticism, too. You have to be willing to take a hard look at your own data or at other people’s data, and to recognize what the limitations are and how that might influence our understanding of what it is the mice are trying to tell us.

**WHAT IS YOUR MOST TREASURED POSSESSION?**

I try not to be very attached to possessions. I have nice things, but if I lost them, most would be replaceable. But if I ever lost my wedding rings—I think I would be crushed.

**WHAT IS YOUR MOST TREASURED GUEST?**

The Hulk. Bruce Banner is a scientist, he is an intellectual, but he has this other side of his personality that he tries to keep in control. I feel that other side, The Hulk, can be leveraged for strength. I think I have a little bit of that in the way that I try to mentor people, take them under my wing. I advocate for them. And if somebody crosses one of my people, I am not a happy camper.

**WHAT IS YOUR DEFINITION OF MISTERY?**

Ruminating on previous errors.

**WHAT MUSIC DO YOU LISTEN TO WHILE YOU WORK?**

I don’t listen to much music when I’m working because I like to focus. But when I need a pick-me-up, I listen to Latin music. I go back to the cumbias that I listened to as a child at family parties, and people would get up and start dancing. That really gives me a second wind.
The Stradivari of Westwood

By Veronique de Turenne
Photos by Ann Johansson

A neurosurgeon trades his scalpel for a plane and wood knife to craft exquisite violins.
There is a freedom for me in violin making that I find liberating,” Dr. Daniel Lu says of his transition from physician to luthier. “In my work as a surgeon, there are consequences for errors that are potentially severe. Making a violin is a way to hone my skills and not worry about the stakes because no one gets hurt.”

Today, Dr. Lu is at the shop to finalize the gift of one of his hand-crafted violins to a graduate student at UCLA’s Herb Alpert School of Music. It’s the first of many such donations he hopes to make. The form of this specific instrument is inspired by a storied violin made in 1735 known as the “Plowden.” It was crafted by Giuseppe Guarneri, an Italian luthier, whose surviving instruments are as sought after as those of Antonio Stradivari. Unlike many violins these days, which are mass produced, Dr. Lu’s are all bench-made. It means that, through an exacting process with roots in the Renaissance, he takes slabs of spruce, maple and ebony and, over the course of months, coaxes a violin into existence.

Many hobbyists take up violin making, but few of those instruments ever get much serious play. Building such an instrument is a notoriously exacting craft that treads a fine line between art, science and alchemy. Each stage of the process — making the templates, creating the mold, measuring, cutting and incrementally shaping — demands accuracy down to the millimeter. And still, once an instrument is fitted and glued, varnished and polished, each step perfectly rendered, its entrance to Angeles Violin Shop isn’t so much a door as it is a portal. It hides in plain sight between a dry cleaner and a minimart in a West L.A. strip mall. Gain entry, and the grit of Pico Boulevard falls away. It’s quiet inside, and gently lit. Workbenches are stacked high with a crazy quilt of tools and raw materials. Stringed instruments at all stages of construction scent the air with sweet notes of cut wood and the sting of glue and varnish. It’s in this workshop that a neurosurgeon from UCLA gets to shed his identity as Dr. Lu. To the musicians and craftsmen who gather here, he’s just plain Daniel, a skilled maker of fine violins.
“voice” remains a mystery until the first notes are played. “Two different violin makers can start with exactly the same form, use the same wood and follow the same steps, and yet each instrument will come out with its own distinctive sound,” Dr. Lu says. His copy of the Plowden is a beautiful instrument, feather-light, with sinuous curves and a dark, glowing finish. With its complex and powerful voice, it’s a violin that can launch a musician’s career. “That Daniel’s violins are on a par with a fulltime maker’s is unusual, if not unique,” says Phillip Levy. An acclaimed violinist with an international reputation—one other than Yehudi Menuhin called him “a most excellent violinist!”—Levy gives Dr. Lu the occasional violin lesson. More often these days, he visits Dr. Lu’s home to play the newly made violins. This allows both men to assess the instruments—and their maker’s progress—in his adopted craft. “At the level I play at, you can pick up an instrument and know right away if it’s of interest, if it’s worthy, which Daniel’s are,” Levy says. “He takes everything very seriously, always down to the micron, everything done perfectly, and that’s unique.”

It is the care with which Dr. Lu crafts his instruments that makes them desirable for a musician the caliber of Roberto Cani, concertmaster of the LA Opera orchestra. Among the three violins Cani owns are two built in Cremona, Italy, in the 18th century and one by Dr. Lu. “I’m very impressed by the violins he makes—he’s very talented,” Cani says. “I make violins myself, but not like his.” Cani has played Dr. Lu’s violins during rehearsals, as well as in performance. “His violins are very precise, and they sound quite good,” Cani says. “Modern violins can be quiet; his fill the room.”

THE SHIFT FROM PLAYING VIOLINS TO MAKING THEM came naturally to Dr. Lu. “I’ve always wanted to build things, always liked to tinker around and figure out how and why something works,” he says. “Building a violin is like taking something—in this case, music—back to its elements, reverse-engineering it, in a way, and that’s always been fascinating to me.”

In addition to his “day job” as a surgeon, Dr. Lu is a professor of neurosurgery and the principal investigator of UCLA’s Neuroplasticity and Repair Laboratory. He also serves as vice chair of research in the Department of Neurosurgery. He and his team are conducting National Institutes of Health-funded research into the mysteries of the spinal cord and ways to improve function after injury. “We’ve generally sorted out how the kidneys work, how the heart functions, how the GI tract works, how the muscles work, but the brain and the spinal cord—there are trillions of connections,” Dr. Lu says. “It’s as large as a universe, and we still haven’t figured out how it’s all put together.”

Dr. Lu is particularly interested in the concept of automaticity, or muscle memory, and the body’s ability to create alternative neural pathways. With a more-complete understanding of these mechanisms, and utilizing cutting-edge neural-stimulator implants, it could be possible to help someone with a paralyzing spinal-cord injury to regain function, he says. “It’s all part of a career path that echoes Dr. Lu’s earliest interests. “When I was a kid, I used to take things apart—dismantle a radio, the telephone, take apart some toys. Unfortunately, I wasn’t always quite as successful at putting them back together, and there was often a spare part or two left over,” he says, with a laugh. “It’s that same curiosity and that mystery that eventually drew me to neuroscience, and it still draws me to other creative pursuits.”

Among the earliest of those pursuits was music. Dr. Lu took his first violin lesson at the age of 12, several years after he moved with his family from Taiwan to Los Angeles. “I started playing the violin a little late,” he says. “We emigrated to the U.S. when I was 10, and at that time I didn’t speak any English and was working to learn the language. So, I didn’t start playing until around middle school.”

The violin is a demanding instrument. With four strings, no frets and an infinity of options for how to use the bow, the learning curve can be steep. But the mix of precision, daring and intuition the instrument requires is what appeals to the young teen, and violin became a passion. He continued his music studies throughout high school and played in the university orchestra as an undergraduate at Dartmouth College. While earning his PhD and MD degrees from UC San Diego, Dr. Lu performed with a small chamber music ensemble. But then came the intensive years of a neurosurgery residency in San Francisco, during which his violin rarely left its case. It wasn’t until 12 years ago, when he joined the Department of Neurosurgery at UCLA, that Dr. Lu found the breathing room to make music again. He unpacked his instruments, picked up a bow, and then serendipity came into play.

“It was in 2012, when I had some bows and violins that I needed to have worked on,” Dr. Lu recalls. He asked fellow musicians to recommend a good luthier, and they directed him to Angeles Violin Shop. The owner, Jeff Muller, is a second-generation violin maker renowned for his skill and knowledge. He began learning his craft as a boy, helping out after school in his father’s Sacramento violin shop. As a young man, Muller took his place alongside his father as a full-fledged luthier. His small Los Angeles shop, an exuberant study in organized chaos, leads Dr. Lu to refer to him with affection as “some kind of mad genius.” And, as...
Until that time, he continues to build a violin collection to share with promising music students at UCLA. The purchase price of a violin of such quality can range from $15,000 to more than $50,000. It’s a prohibitive sum for a student. And while it makes sense that someone like Dr. Lu would donate an instrument to the university’s violin program, the fact that he builds them himself makes the gifts all the more meaningful.

Arutyun Piloyan was both grateful and relieved to learn he would receive the gift of a violin. A graduate of the Tchaikovsky Moscow Conservatory, he’s an exceptional violinist on the cusp of establishing a professional career. Soon after arriving at UCLA to continue his studies, though, his teachers told him he would need a better instrument in order to progress. And while the news of the donated instrument was a godsend, the details of its origin struck Piloyan as less than promising. “When my professor told me that Dr. Lu is a neurosurgeon, and that he had built this violin himself, I thought it was a joke,” he says. “I know people who make violins as a hobby, and these are not instruments that you are going to want to play.”

But his teacher was serious, and Piloyan was intrigued. He tried out several of Dr. Lu’s instruments and was immediately impressed by their quality. And the moment he played the Plowden copy, he knew he had found his new violin. “I picked it up, and it sounded like a great violin, like an old violin, warm, with a bit of a sweet sound — but not too sweet — which I love,” Piloyan says. “I can play anything on this violin. I thought maybe it’s that way just for me, but my teacher played it as well, and he found the same thing.” In fact, Piloyan’s teacher compared Dr. Lu’s violin to ones often heard in a concert hall — the kind of Old World instruments that are considered to be the gold standard for violins and can cost upward of $750,000 — and found the sound of his Plowden to be superior.

Piloyan recently played Dr. Lu’s violin in an audition and won the position of concertmaster with the UCLA Philharmonia, the music school’s flagship orchestra. A few weeks later, when he performed in Schoenberg Hall, his new violin continued to exceed his expectations. Now, meeting with Dr. Lu at Angeles Violin Shop for a final consultation, Piloyan was jubilant. “It’s fantastic, this violin, beautiful, and so easy to play. And the sound — every day the sound gets better,” he says. “It’s so generous of Dr. Lu to help me like this because I arrived here, and music is everything for me.”

Piloyan played for a few moments, a bit of the buoyant brightness of Mozart’s Violin Concerto No. 4, then he peeked into the Sibelius Violin Concerto, dark and wistful. Dr. Lu and Muller exchanged glances as the sound spilled into the room and nodded, both of them satisfied. A new phase of Dr. Lu’s journey as a luthier had begun.

“You don’t just build a violin by yourself. There’s a lineage to it, and I’m honored to be a part of that,” Dr. Lu says. “It’s the same in neurosurgery, where the person you train with imprint their principles and their ideals onto you, and then you carry that torch.”

But the real satisfaction of learning the art and craft of a luthier is when an instrument reaches a musician’s hands. “The greatest amount of joy comes from listening to someone play one of my violins,” Dr. Lu says. “Seeing your violin out in the world, bringing music and happiness to other people — it’s indescribable, really. It’s above anything I felt as a performer, and the music students at UCLA. The values to build a violin collection are the true fulfillment of the instrument tray of the OR for a tool chest. It’s stocked with the chisels, knives, finger planes and rasps that he uses to cut, scoop and shave the delicate parts of a violin into existence. As the hours pass, curls of spruce pile up around him. Some are so thin they seem transparent. Often, it’s midnight before he interrupts his flow and finally heads to bed. “I’ve found a lot of similarities between surgery and this kind of work,” Dr. Lu says. “When I say to someone that I’ve been in surgery for eight hours, they’ll think that’s a long time, but it goes by in what feels like a second. It’s an out-of-body experience when you’re concentrating, and things go right.”

The impetus for his first violin, which has since been followed by eleven others, was Dr. Lu’s 7-year-old son, Sebastian. “I want him to learn to play, but like his mother, he plays the piano,” Dr. Lu says. “We’re hoping that his sister, Emmie, will take it up, but right now, she’s only 5. So, we’ll have to wait a few years and see.”
About nine months into the COVID-19 pandemic, Jane Fazio, MD, began to question her future in medicine. She was in her first year of a pulmonary-critical-care fellowship at UCLA when her chosen career path began to feel unsustainable, like it was taking more from her than she could give. After months spent in the hospital system’s ICUs caring for patients critically ill from COVID-19 — watching as many shared final words with family over Zoom and then died alone in their hospital beds — and working too long and sleeping too little, she was exhausted and depleted.

**THE PRICE**

COVID-19 has exacted a heavy emotional toll on the nation’s health care workforce on the frontlines of the pandemic. Many have left the profession, while others continue to shoulder the burden and carry on.

*By Sandy Cohen
Photos by Jessica Pons*
The stress of the pandemic has put additional pressure on an already strained national health care system that is short on medical professionals: The U.S. Bureau of Labor Statistics predicts a need for 1.1 million additional nurses in 2022 to meet health care demands, and the Association of American Medical Colleges forecasts a shortage of as many as 48,000 primary care physicians and 77,000 specialty physicians in the next dozen years.

From the start of the pandemic, the leadership of UCLA Health recognized the emotional toll the health crisis could take on its frontline physicians and staff. “This has been an unprecedented situation for health care providers nationwide,” says Johnese Spisso, MPA, president of UCLA Health and CEO of UCLA Hospital System. In an open letter to all staff written early in the pandemic, she said: “To get through it we must continue to care not just for our patients, but also for each other as well as for ourselves.”

In response, UCLA Health launched a number of initiatives, including counseling and wellness programs, to help staff deal with the daily stresses of the pandemic and the burdens, both professional and personal, that it was creating. “We support the health and well-being of our health care workers as they navigate through the pandemic and continue to provide exceptional patient care,” Spisso says. “We know that the last two years have taken a toll on our staff and their families, and we continue to be committed to offering ongoing support.”

Borrowing from a colleague’s vivid description of the pandemic, Karen Grimley, PhD, MBA, RN, chief nurse executive for UCLA Health, called it “the longest, slowest mass-casualty event in our history.” Hiring more health care workers has been a key priority; Dr. Grimley expects to have added nearly 500 nurses by January 2022. “If I don’t have the right number of people in the units and clinics caring for the patients, I can’t start offering nurses the time and resources they need to decompress and begin to care for themselves,” she says. “First, we have to have the foundation in place.”

As the pandemic has unfurled over the past two years, the stresses confronting health care workers have multiplied. She also was among the more than 910,000 health care workers in the United States to contract COVID-19.

Despite being young and healthy, Dr. Fazio worried that she, too, could die. “It felt like the only COVID patients I had ever seen were the ones who were dying,” she says. “The emotional impact of having COVID and going right back to the same thing, I think that was probably the worst. I started feeling like, I cannot do this anymore.”

Like so many health care workers, she was experiencing burnout — what the American Medical Association defines as a long-term stress reaction characterized by a sense of detachment, emotional exhaustion and negative feelings about work, patients and personal achievements.

“At one point, I was asking myself, ‘Why am I doing this?’ This is a choice. I don’t have to be a critical-care doctor,” Dr. Fazio recalls. “And I just started to think, I’m going to quit, and what will I do if I quit?”

Pandemic-related burnout among health care workers has become a national crisis, one that is receiving attention from the popular press, as well as academic journals, across the country. “U.S. Faces Crisis of Burned-Out Health Care Workers: Hospital leaders are sounding the alarm as health systems face an exodus of exhausted and demoralized doctors, nurses and other front-line workers,” shouts a headline in U.S. News & World Report. “Why Health-Care Workers Are Quitting In Droves,” reports The Atlantic. AAMCNews, the online magazine of the Association of American Medical Colleges, published an opinion piece titled, “Medical burnout: Breaking bad.”

Finding solutions to this problem now is a priority for such organizations as the National Academy of Medicine, the U.S. Centers for Disease Control and Prevention (CDC) and the Office of the Surgeon General.

Even before the pandemic intensified workloads and exacerbated stress levels in hospitals and health clinics across the country, 75% of physicians reported feeling burnout, according to the CDC. “The pandemic has really highlighted to us that if we do not take urgent action, then our health care workers will continue to suffer, and the entire health care system will be under threat,” said U.S. Surgeon General Vivek Murthy, MD, during a presentation last year about the emotional state of the nation’s health care workers.

“Depending on which survey you read, 60- to 75% of health care workers are experiencing symptoms of exhaustion, depression, anxiety, insomnia and even PTSD,” says Victor Dzau, MD, president of the National Academy of Medicine. “This was a problem to begin with, and COVID has made it much worse.”

Dr. Murthy’s concern is borne out in a survey conducted in October 2021 by the research firm Morning Consult, which reported that nearly one-in-five health care workers have left their jobs since the pandemic began. Another 31% have thought about leaving their employers, including 79% considering leaving health care altogether. (In an earlier Morning Consult survey, 46% of health care professionals said their mental health has deteriorated during the pandemic.)

Another study, by researchers at the University of Washington published in the Journal of General Internal Medicine, found that half of health care workers surveyed were reconsidering their occupation because of the pandemic.

“Despite on which survey you read, 60- to 75% of health care workers are experiencing symptoms of exhaustion, depression, anxiety, insomnia and even PTSD,” says Victor Dzau, MD, president of the National Academy of Medicine. “This was a problem to begin with, and COVID has made it much worse.”

The stress of the pandemic has put additional pressure on an already strained national health care system that is short on medical professionals: The U.S. Bureau of Labor Statistics predicts a need for 1.1 million additional nurses in 2022 to meet health care demands, and the Association of American Medical Colleges forecasts a shortage of as many as 48,000 primary care physicians and 77,000 specialty physicians in the next dozen years.

From the start of the pandemic, the leadership of UCLA Health recognized the emotional toll the health crisis could take on its frontline physicians and staff. “This has been an unprecedented situation for health care providers nationwide,” says Johnese Spisso, MPA, president of UCLA Health and CEO of UCLA Hospital System. In an open letter to all staff written early in the pandemic, she said: “To get through it we must continue to care not just for our patients, but also for each other as well as for ourselves.”

In response, UCLA Health launched a number of initiatives, including counseling and wellness programs, to help staff deal with the daily stresses of the pandemic and the burdens, both professional and personal, that it was creating. “We support the health and well-being of our health care workers as they navigate through the pandemic and continue to provide exceptional patient care,” Spisso says. “We know that the last two years have taken a toll on our staff and their families, and we continue to be committed to offering ongoing support.”

Borrowing from a colleague’s vivid description of the pandemic, Karen Grimley, PhD, MBA, RN, chief nurse executive for UCLA Health, called it “the longest, slowest mass-casualty event in our history.” Hiring more health care workers has been a key priority; Dr. Grimley expects to have added nearly 500 nurses by January 2022. “If I don’t have the right number of people in the units and clinics caring for the patients, I can’t start offering nurses the time and resources they need to decompress and begin to care for themselves,” she says. “First, we have to have the foundation in place.”

As the pandemic has unfurled over the past two years, the stresses confronting health care workers have multiplied.

“I was asking myself, ‘Why am I doing this?’ This is a choice. I don’t have to be a critical-care doctor. And I just started to think, I’m going to quit.”
Initially, there was widespread fear and uncertainty and global shortages of personal protective equipment. Patient intake soared by unprecedented numbers, and so, too, did deaths. Each patient lost to the pandemic further ate away at the morale of those working so hard to save them. Nathan Yee, MD (FEL ’11, a critical-care physician at UCLA–Harbor Medical Center, recalls a COVID-19 patient he cared for during the final year of his fellowship at UCLA who went home and was doing well after a long hospitalization in the ICU, only to suffer a cardiac arrest and die. “It was story after story like that for months,” Dr. Yee says. “These stories have taken a piece of my soul that I don’t think I’ll ever get back. Like many of us, I’m certain I’m going to emerge a different person when this is all said and done, hopefully for the better, but who knows.”

Around the country, staffing levels have been further stretched as workers, no longer able to bear it, resigned or retired, or got sick with COVID-19. Vaccines simultaneously offered a new measure of protection and a new sense of national division along political and philosophical fault lines.

The cumulative burden of the pandemic has been overwhelming: the fear that has permeated hospitals and the strain of isolation at home; the unfairness of the disease and the toll it has taken on communities of color that disproportionately have borne the brunt; the sheer volume of patients and deaths driven by each recurring surge and, now, the evolution of new variants; and the politicization of the virus that has led some people to distrust science and disregard common-sense protective measures to curb the spread.

It took nine months for that cumulative burden to break Tatiana Johnson, RN. It was more than the sadness of so many deaths witnessed in the COVID ICU, the daily stress of being an emotional bridge for family members who couldn’t be close to their loved ones and the fear of catching the virus and spreading it to her friends and roommates. “A huge part of how I’m able to be a good nurse is having the time to decompress by going out to eat with friends, hiking, socializing,” she says. “We are trained to adapt and cope and care for patients in the most difficult situations, but this felt different. Not only was there concern for our patients, there was also concern for ourselves and the potential personal risk we would be facing.”

“We are trained to adapt and cope and care for patients in the most difficult situations, but this felt different. Not only was there concern for our patients, there was also concern for ourselves and the potential personal risk we would be facing.”

TATIANA JOHNSON, RN

cleaning up your room so you can have a speedy recovery. And some did recover, but others died.”

No one was immune to the sadness. Thanh Neville, MD ’05 (RES ’08, FEL ’11), a seasoned critical-care specialist and ICU attending physician, cried many times after finishing her shifts. In one of her many social-media posts over the course of the pandemic, she wrote: “I just left the hospital after a 14-hour day, walked back to my hotel room, and I think I need a long, good cry tonight. I cry for the patient I just lost. I cry for the mother who is not allowed to be at the bedside of her disabled son. I cry for the patient who hasn’t seen her husband for nearly three months. I cry for the newly widowed husband. I think of all the reasons we have to cry right now, and I cry harder.”

The pandemic played havoc with the natural instincts of frontline health care professionals who are, as emergency-medicine physician Natasha B. Wheaton, MD, describes, trained “to run toward the fire, toward someone in need.” The tension in the ERs was palpable. “We are trained to adapt and cope and care for patients in the most difficult situations, but this felt different,” she says. “Not only was there concern
“The pandemic has really highlighted to us that if we do not take urgent action, then our health care workers will continue to suffer, and the entire health care system will be under threat.”

DURING HER FELLOWSHIP TRAINING, DR. FAZIO ROTATED ICU SHIFTS at Ronald Reagan UCLA Medical Center, UCLA Santa Monica Medical Center, the West Los Angeles VA Medical Center and Olive View-UCLA Medical Center. Each hospital serves its own communities and mix of patients, and has different levels of resources. Seeing up-close the disparities between the different patient populations contributed to her sense of distress. “As fellows, we were in a unique position to see what was and wasn’t able to be given to a patient based on where they happened to be,” she says. At Olive View, a Los Angeles County facility in Sylmar that is affiliated with UCLA as a teaching center, for example, the supply of ventilators and other critical resources was sometimes stretched thin by the patient load. “To see your decision-making change based on where you were was a very hard struggle,” Dr. Fazio says.

Such experiences also contributed, for many, to erosion of the professional detachment that is necessary for frontline health care workers to focus and do their jobs effectively in moments of urgency. “You try to disconnect when you can but sometimes you can’t and you feel everything, and it is awful,” Dr. Fazio says. “I am a very resilient person, but there are things that push even the most resilient people to seek help for their emotional well-being.”

Recognizing that one needs help — and then taking the steps to get it — has not had significant standing within the culture of medicine. But asking for help “is a sign of strength,” says Dr. Murthy, the U.S. Surgeon General. “It is a sign that we are human.”

Dr. Neville knew she needed help when her mood tanked and her level of stress soared during the pandemic. “The worst part were the surges,” she says. “That felt very, very different than my normal stresses. And most of that was the pure volume of work and the volume of tragedy.”

Sometimes when she got home at the end of a shift, she didn’t have enough energy left to cry. Even on days off, she couldn’t unwind. “It was hard because I was, like, ‘Why are people happy and doing normal things when there are a whole bunch of people on ventilators?’”

She also couldn’t ignore the physical manifestations of the emotional strain she was experiencing — the exhaustion, insomnia, nightmares when she did finally fall asleep, an inexplicable outbreak of severe hives. Dr. Neville took measures to address her stress and sought relief through acupuncture and breath work at the UCLA Center for East-West Medicine. And she wrote, sharing her experiences on social media and in editorials. “Writing about how I couldn’t save a patient who had just become engaged and was having a baby allowed me to make the experience of this pandemic much more real for people than just stating the number of deaths. It helps me to know that my words can help people who are not in my shoes understand the gravity and magnitude of this pandemic,” she says.

DURING THE PANDEMIC, ADDITIONAL DISCUSSION AND DROP-IN SESSIONS WERE ADDED to the already robust counseling and crisis-management services that UCLA Health offers its faculty and staff. Such services are necessary to counteract — or at least mitigate — the harm that prolonged stress can inflict. This is particularly true, says Robert Bilder, PhD, professor of psychiatry and biobehavioral science, when traditional coping mechanisms — gathering with friends, traveling, playing sports or taking exercise classes — aren’t available, as has been the case off and on for the past two years.

“People often can handle about one-to-three months of stress pretty well, although it of course depends on the severity of the stressors. What we call acute stress usually lasts less than a month, and our bodies, our brains, our physiology are pretty good at coping for those brief periods of time,” Dr. Bilder says. “But once we get beyond a month, the stressors become more overwhelming and it becomes more severe, and at that point we are in the realm of chronic stress.”

“People can cope with moderate stress for a while, but then the body strain begins to take its toll. People start to feel physically ill, with all sorts of symptoms that can range from increased blood pressure, to higher cholesterol levels, to depression, anxiety, and other mental health problems. We see this with people who are dealing with chronic stress, and it can be devastating,” Dr. Bilder says.

“Sometimes the stress is so overwhelming that people feel like they can’t cope anymore. They may feel hopeless, helpless, and may have a loss of interest in activities they once enjoyed. They may also experience changes in their appetite and sleeping patterns. These are all signs that someone may need help managing their stress.”

Dr. Bilder emphasizes the importance of seeking help when needed and encourages people to reach out to a trusted friend, family member, or mental health professional. “It’s important to remember that most people who are struggling with stress can benefit from professional help,” he says. “There are many resources available, including counseling and therapy, medication, and support groups.”

“People should also try to make time for self-care activities such as exercise, hobbies, and relaxation techniques like meditation or深呼吸. Finding ways to manage stress is crucial for maintaining good physical and mental health. By taking care of ourselves, we are able to better handle the challenges of daily life.”

Dr. Bilder concludes that “It’s important to recognize that stress is a normal part of life, and it’s okay to ask for help when you need it. Don’t be afraid to seek support from friends and family, and consider seeking professional help if you’re struggling to manage your stress.”

“Remember, you’re not alone. It’s important to know that there are resources available to help you through difficult times.”

---

GARRY KNIGHT, RT.

U Magazine Winter 2022
broadly embraced as health officials hoped and polarization over the pandemic has worsened. Through it all, health care workers who have remained on the job are still caring for COVID-19 patients while continuing to endure their own physical and mental fatigue.

For Trang Guzze, RN, the pandemic has altered the way she approaches her job as a nurse in the emergency department of UCLA Santa Monica Medical Center. She doesn’t volunteer for extra shifts, as she used to. Instead, she spends time on self-care activities, including exercise and rest. And rather than educating patients, she now, in the superheated political environment that surrounds the disease, often elects to keep quiet. “I signed up to help patients and educate patients, but it’s been so political that I can’t do that,” she says. “My approach now is, ‘I don’t want to fight with you.’”

That, to everyone’s detriment, undermines the traditional role of nurses, says Dr. Grimley. “Nurses engage in a ‘social contract’ with their patients, she says. They are patient advocates and approach each new encounter without judgment. But the COVID-19 pandemic has stretched frontline workers to their limit. “What we normally do with glee — patient to patient, day to day — is protracted and extremely difficult,” she says. “We’re tired, but we’re resilient. Nurses are fixers and doers, so we’ll come through it.” But in the face of this relentless disease, and too-often the naked hostility of patients and families, “we need space to heal,” Dr. Grimley says. “We need some time. And we need people to be patient and caring with us.”

Having patients second-guess their motivations or intentions has been particularly painful for caregivers. “It is important to me that I am viewed as a person who is trying to help, not hurt, people,” Dr. Neville says. “And in this era of misinformation, I can tell you this is a struggle.”

After unrelenting months of combating the illness on one hand and struggling against tides of misinformation and resistance on the other, many frontline workers caring for unvaccinated patients with COVID-19 feel betrayed by their problems are and finding the solutions to help support them. “The silver lining, he adds, is that “during the course of the pandemic, communication between everyone has improved greatly.”

Nearly a year has passed since Dr. Fazio first started to question her professional future. After spending some time in nature, soul-searching about what lay ahead, she chose to continue with her fellowship in pulmonary-critical-care medicine. But she also decided to add a research component to her work. Dr. Fazio is now pursuing a PhD in health policy and management “to try to figure out some of those tough questions about how COVID has played out in terms of disparities,” she says. “I think that’s going to be something that will sustain me longer term than being in the ICU all the time.”

Clearly, Dr. Fazio’s life has changed as a consequence of the pandemic. That is true for every health care worker on the frontlines. As Tisha Wang, MD, clinical chief of pulmonary critical care and director of Dr. Fazio’s fellowship program, concludes: “Our souls may never be the same.”

“Like many of us, I’m certain I’m going to emerge a different person when this is all said and done, hopefully for the better, but who knows.”
om Gillman has lived a long time with AIDS. He was 38 years old when he was diagnosed in 1984. Now he is 75. His journey with AIDS has taken up half of his life, and it has often been filled with obstacles and pain. “In my darkest days, I’ve felt like I was in a rowboat in the middle of a very rough ocean,” he says.

But it also has been a journey punctuated with hope. For that, Gillman credits Ronald T. Mitsuyasu, MD ’78 (FEL ’84), who has managed Gillman’s care for the past 37 years, and the clinical AIDS research and treatment program that Dr. Mitsuyasu founded at UCLA. “There’s no question about it, Dr. Mitsuyasu and his clinic saved my life,” Gillman says.

Dr. Mitsuyasu, a hematologist-oncologist who was starting his fellowship training when the first report of a group of young gay men with an unusual constellation of illnesses was published in 1981, was one of UCLA’s earliest clinicians treating patients with AIDS. The clinic Dr. Mitsuyasu established in 1983 has gone through numerous iterations over the years. Starting in a basement in UCLA’s Center for the Health Sciences to today’s bright and modern suite in a building on Pico Boulevard, where it operates as a multidisciplinary hub of state-of-the-art medical care, clinical trials, education and research, the program now known as the Clinical AIDS Research and Education (CARE) Center remained under his direction until Dr. Mitsuyasu announced his retirement in 2020.

But Dr. Mitsuyasu continued to see patients for a year after retiring, and when Gillman learned that he would be having a final clinic day this past June, he rushed to get on the calendar to be Dr. Mitsuyasu’s last patient.

Their journey together has been extraordinary. Gillman is among the few survivors from those earliest years. “My job has been to stay alive,” Gillman says. “In that regard, I’ve done pretty damn well.”

When Gillman first came to the clinic, with a diagnosis of Kaposi’s sarcoma (KS), Dr. Mitsuyasu started him in a study of interferon alpha, one of the first drugs tested for AIDS-related KS. Other trials followed over the years.
“It has been a hell of a journey,” Dr. Mitsuyasu says. That journey has encompassed almost the entirety of the history of AIDS to date, starting with its first identification by a young physician at UCLA 40 years ago. Throughout that time, UCLA has been at the forefront of research and clinical advances that have transformed AIDS from a near-certain death sentence to a treatable chronic illness, akin to diabetes.

Gillman is a living example of the progress that has been made.

Dr. Judith S. Currier, MD, was in medical school at Dartmouth when UCLA reported the first AIDS cases. She remembers a microbiology professor telling his students about the importance of reading the Morbidity and Mortality Weekly Report of the U.S. Centers for Disease Control and Prevention (CDC) to stay well-informed about the world of infectious diseases.

When her professor read the June 5, 1981 MMWR, with its three-page report by a young UCLA immunologist named Michael Gottlieb, MD, and four of his colleagues titled “Pneumocystis Pneumonia — Los Angeles,” he said, “Mark my words, this is going to be something,” Dr. Currier recalls.

In 1985, Dr. Currier moved to Boston for her training; since she was interested in both laboratory immunology and primary care, HIV seemed like the ideal way to combine the two. “We saw a lot of people admitted to the hospital who never got out,” Dr. Currier says. “Without any treatment, we tried to support them the best we could.”

But through her involvement with clinical trials, Dr. Currier saw the emergence of medications that helped patients, at least in the short term. That ignited her interest in HIV/AIDS research. She came to Los Angeles in 1993 as medical director of the L.A. County-USC Rand Schrader HIV clinic, then moved to UCLA in 1998 to focus on HIV/AIDS research — including studies that shed light on the unique health impacts for women living with HIV — and became associate director of the CARE Center. She serves as the national chair of the AIDS Clinical Trials Group (ACTG), an international network of centers evaluating trials of treatments for HIV, the virus that causes AIDS, and is chief of the UCLA Division of Infectious Diseases. She assumed the role of director of the CARE Center in June 2020.

From her vantage, Dr. Currier has had a front-row seat to the dramatic medical advances that have altered the landscape for patients with AIDS. An important breakthrough came in 1996, when research showed that the combination of three antiretroviral medications — the “cocktail” known as highly active antiretroviral therapy (HAART), and now more commonly known as antiretroviral therapy (ART) — could durably suppress the virus to the point that it was no longer detectable. UCLA was a site for many of the pivotal multicenter studies, with investigators whose work informed the treatments.

“It’s been stunning and spectacular to see people going from trying to survive from one birthday to the next to being able to live a full life.” Dr. Currier says. “Many times, it can take decades before scientific findings are translated into something that will impact patients. We’ve had the incredible privilege of moving developments from the laboratory into the clinic over just a few years.”

— Judith Currier, MD
hospital care for a patient with cerebral toxoplasmosis — a complication of advanced HIV/AIDS. Despite numerous clues of a progressive immunodeficiency, the patient hadn't been tested for HIV until well into his illness. When Dr. Landovitz asked the man's primary-care physician why not, the doctor responded disparagingly: "I don't do AIDS."

"This rattled to my core," Dr. Landovitz recalls. "What does that mean — that it's too complicated? Or that you don't want to care for people in the risk groups affected most by HIV? At that moment, I decided I was going to be the best physician who does HIV/AIDS that I could be." Dr. Landovitz was recruited in 2006 to join the UCLA CARE Center, where he now serves as co-director. He entered the field at an inflection point, not only for HIV therapeutics, but also for HIV prevention, his major interest. He is now a leader in research focusing on preventive approaches such as pre-exposure prophylaxis (PrEP), a daily pill that greatly reduces the risk of acquiring HIV, and post-exposure prophylaxis (PEP), medication that can lower the risk of becoming HIV-positive if started within three days of exposure. "It used to be that all we could offer were behavioral strategies, like 'use a condom,'" he says. "My arrival at UCLA coincided with an explosion in our understanding of what was possible and opportunities to develop and implement these strategies as part of our prevention tool kit."

While effective therapy has been a game changer, it is by no means free of concerns associated with the HIV/AIDS epidemic. As more patients live longer with the virus, it has become clear that HIV exacerbates the aging process — including an increased risk of heart attack, stroke, neuropathy, certain cancers and dementia — from both the virus and the long-term medications to keep it in check.

Beyond that, Dr. Currier says, "One of the biggest challenges is to implement the effective tools we have for both prevention and treatment." In 2016, the Joint United Nations Programme on HIV/AIDS established an ambitious goal for all countries to reach by 2020, known as 90-90-90: 90% of all people with HIV knowing their HIV status, 90% of those who know their HIV-positive status being on antiretroviral therapy and 90% of those receiving antiretroviral therapy experiencing viral suppression. All but 14 countries fell short of the goal, including the United States. In Los Angeles County, Dr. Landovitz notes, the overall number of people living with HIV who don't think they are infected is 9.0-to-9.10%. However, according to the latest statistics, that number is as high as 20-to-40% for marginalized groups and other marginalized groups in the United States. We're never going to encourage people who are most at risk and most disenfranchised from medical interventions to come forward and get tested so that we can move to the next step," he says.
Despite obvious differences, Dr. Landovitz can’t help but notice the echoes of HIV/AIDS in how the COVID-19 pandemic has unfolded in the U.S. “We’ve seen the science move so fast it’s dizzying, but also some of the stigma and inequities of care finding themselves out again,” he says. “It’s a sobering reminder that science can move things forward, but we’re not always so good at learning the lessons from previous pandemics.”

Adda Dr. Currier: “Both of these viral pandemics hold a mirror up to some of the huge cracks in our society in the way we treat each other, and in the disparities in our healthcare system.”

In 1984, U.S. Secretary of Health, Education and Welfare Margaret Heckler and Dr. Robert Gallo, the National Cancer Institute researcher who played a key role in the discovery of HIV as the cause of AIDS, announced that an HIV vaccine would come within two years. While effective COVID vaccines were developed in less than a year, 37 years after the announcement of an imminent HIV vaccine, it remains elusive.

It is not for lack of trying, says Irvin S.Y. Chen, PhD, founding director of the UCLA AIDS Institute. “From a scientific point of view, the AIDS virus is very different from the coronavirus,” he says. “With SARS-CoV-2, someone with the virus eventually will clear the infection and then have natural immunity. That hasn’t been the case with HIV — in which, in all but a few extraordinary circumstances, people stay infected for life, without ever developing natural immunity to clear the infection. HIV also becomes part and parcel of your DNA, which is why latency is such an issue. That’s not the case with SARS-CoV-2. And both viruses have a capability of mutating, but because there’s very little immunity to HIV, the virus tends to mutate more rapidly, which means that within any patient, there can be thousands of variants.”

Dr. Currier points out that COVID-vaccine researchers benefited greatly from the scientific advances that have come out of decades of HIV research — most notably, the use of messenger RNA technology, or mRNA, to induce cells to make a protein that triggers an immune response. Likewise, she and her colleagues are hopeful that the heavy investment in COVID research will bear fruit for HIV/AIDS researchers in their pursuit of an effective vaccine.

The search for a cure also looms large, particularly in light of the side effects of current long-term HIV treatments. UCLA researchers led by Jerome A. Zack, PhD, chair of the Department of Microbiology, Immunology & Molecular Genetics and co-chair of the UCLA AIDS Institute, have contributed key findings on the nature of HIV latency — the concept that even with antiretroviral treatment to the point of undetectability, the virus tends to hide in the body and will quickly rebound once the drugs are stopped.

A major current focus of the international ACTG network, led by Dr. Currier, is to achieve antiretroviral therapy-free remission through drugs capable of awakening and killing the latent virus. But before promising approaches can be tested in the clinical setting, studies need to be done in the laboratory. In fact, lab-based research led by scientists at UCLA that was reported in January in the journal *Nature Communications* has demonstrated significant advances on that front. The work amplified earlier developments into a treatment strategy called “kick and kill” to target HIV-infected cells and reduce, or even eliminate, the amount of virus in an infected individual. The approach utilizes a synthetic compound, administered in combination with antiretroviral drugs, to coax infected cells out of hiding and then kill them. “Our findings show proof-of-concept for a therapeutic strategy to potentially eliminate HIV from the body, a task that had been nearly insurmountable for many years,” says UCLA infectious-diseases specialist Jocelyn Kim, MD, the lead researcher. Such bench research lays the groundwork for future clinical studies.

Dr. Chen and others have actively pursued a second important approach, using gene therapy in an effort to permanently modify the immune system. The research builds on insights from the “Berlin patient,” a well-known case in which a previously HIV-positive man from Berlin, Germany, remained free of the virus without antiretroviral drugs following a bone-marrow transplant from a donor with a rare gene mutation that confers resistance to HIV infection.

“That was an amazing finding, and it set the stage for research to mimic that approach through gene therapy,” Dr. Chen says. In laboratory research that started in the early 2000s, Dr. Chen’s group and researchers at Caltech used a technology known as RNA interference to eliminate the production of CCR5, the protein expressed on the surface of T cells that allows HIV to gain entry. The approach is currently being tested in human clinical trials.

In the morning of his final appointment with Dr. Dr. Mitsuyasu, Tom Gillman arrives at the CARE Center wearing a checked shirt, dark slacks and a blue surgical mask. He comes bearing plates of cupcakes for the staff, along with a retinue of family and friends: Bill Akeli, his husband and partner of 35 years; Launa Romoff, the sister of a life partner who died from AIDS; and Bobbe Korbin, one of Gillman’s three older sisters. He is in an emotional visit, during which both doctor and patient reflect on their nearly four-decades-long relationship. “I dreaded this appointment,” Gillman says as he takes a seat on a table in one of the clinic’s examination rooms. “I was very sad and insecure, like a child being deprived of something familiar. When I come here, I don’t feel like I am going to the doctor; I feel like I am coming home,” says Tom Gillman during his final clinic visit with Dr. Ronald T. Mitsuyasu.

Don Gordon is a freelance writer and frequent contributor to U Magazine. UCLA Health senior writer Azeleila Apodaca Schlossberg contributed writing to this article.

For more information about the UCLA Clinical AIDS Research and Education (CARE) Center, go to: www.uclahealth.org/care-ctr.

PHOTO: CHANTAL ANDERSON

PHOTO: JOSHUA SUDOCK

PHOTO: JOSHUA SUDOCK

PHOTO: DAN GORDON

PHOTO: DAN GORDON

PHOTO: DAN GORDON
In Memoriam

Dr. Gary Gitnick, chief emeritus of the Vatche and Tamar Manoukian Division of Digestive Disease, died November 8, 2021. He was 82 years old. Dr. Gitnick joined the UCLA faculty in 1969, and he later became chief of staff of UCLA Medical Center, medical director of the UCLA Health Care Programs and chair of Digestive Diseases. Dr. Gitnick produced more than 300 publications and authored or edited seven books on gastrointestinal entology and hepatology. "Gary Gitnick’s leadership over more than two decades helped the Division of Digestive Diseases become the best in the world," said Dr. Alan Fogelman (MD ’63, RES ’65, ’71, FEL ’73), chief of surgery and co-director of UCLA Medical Center. He founded the Mark Taper Foundation Center for Health Education, Research at UCLA, the first university-based center for health promotion and disease prevention.

Dr. Ronald K. Tompkins, former chief of the Division of Otolaryngology, died August 17, 2021. He was 86 years old. He joined the UCLA faculty in 1969. In addition to serving as chief of general surgery and gastrointestinal surgery, Dr. Tompkins was director of the basic-surgical-training program, director of the general-surgery residency program and inaugural director of anesthesiology. In 2004, the Department of Surgery named the Ronald K. Tompkins Gold Apple Award, given to a surgical resident for outstanding student teaching.

AWARDS & HONORS

Dr. Karimian Backus, Alexander and Renee Kolfin Professor of Molecular Biology and Biophysics, received the New Innovator Award from the National Institutes of Health’s High-Risk, High-Gain Research Program.

Dr. Patricia Bath, the first female faculty member in ophthalmology and neurology, was posthumously inducted into the National Women’s Hall of Fame as one of the first two Black women to be honored by the organization.

Dr. Aparna Bhaduri, assistant professor of biological chemistry, received the Klingenstein-Simons Fellow Award in Neurobiology.

Dr. Alejandro Casillas, assistant professor in-residence of medicine, was named by the National Academy of Engineering for his research in aging.

Dr. Yi-Rong Peng, assistant professor of psychiatry and biobehavioral sciences at the Jane and Terry Semel Institute for Neuroscience and Human Behavior at UCLA, was elected to the National Academy of Medicine.

Dr. Lissy Jarvik, professor emerita of psychiatry and biobehavioral sciences, died October 1, 2021. She was 97 years old. Dr. Jarvik was one of the earliest researchers in the new field of neuro- psychogeriatrics. While a graduate student at Columbia University, she began con- ducting research that would ultimately demonstrate that mental decline was not a part of the normal aging process. Her study would help guide future research into Alzheimer’s disease. In the 1970s, she joined the UCLA faculty, where she established the first inpatient psychogeriatric unit.

Dr. Charles R. Kleeman, Factor Family Foundation Professor of Medicine and Nephrology emeritus, died August 15, 2021. He was 97 years old. Dr. Kleeman joined the UCLA faculty in 1965 as chief of metabolic diseases at the West Los Angeles Veterans Administration Medical Center. He founded the Mark Taper Center for Health Education, Research at UCLA, the first university-based center for health promotion and disease prevention.
How Far His Candle Throws Its Beam

By Nancy Sokoler Steiner

Soon after becoming involved with the JCCC, the Kibels conceived Lifeline Connection, a fund that provides seed grants to investigators new in their careers or who are pursuing a novel idea. These grants allow researchers to generate the preliminary data needed to secure funding from entities that look for studies further along in the process, including the National Institutes of Health and the National Cancer Institute. Kibel invited friends and associates to join Lifeline Connection, which requires an annual unrestricted contribution of $1,000 or more. As co-founder and president of the business consulting firm Kibel Green Inc., Kibel was a member of the Young Presidents’ Organization, a society for chief executive officers. He quickly focused on his peers. “I invited people I knew had the capacity to join and, even more important, who I thought would get further involved and contribute even more of their time and money,” he said. “Isabel kept literature in her car in case she encountered potential recruits.”

Lifeline Connection launched more than 35 years ago, and today it has more than 100 members who contribute annually and hear directly from JCCC scientists about advances in cancer care. Kibel continues to chair the group, which has collectively given nearly $20 million from its members and the major gifts that members made for leading-edge cancer research.

One of the early grant recipients was Dr. Dennis J. Slamon (FEL ’82), Bowyer Professor of Medical Oncology, director of Clinical/Translational Research and director of the Revlon/UCLA Women’s Cancer Research Program at the JCCC. “As a long-standing member of the UCLA Jonsson Comprehensive Cancer Center, I have witnessed the continuous and tremendous impact Lifeline Connection has made on research at the cancer center,” said Dr. Slamon. “Many of the JCCC’s now well-established physician-scientists, myself included, benefited from this unrestricted philanthropy early in our careers.”

Dr. Slamon’s work led to the development of the breast cancer drug Hercepincl, which targets a specific genetic alteration found in about 25% of breast cancer patients. “Without this assistance, people like him might have been bypassed in the beginning,” Kibel said.

Adds Dr. Slamon, “Isabel and Harvey’s visionary leadership and steadfast commitment to funding early-stage research at the JCCC has truly enabled our faculty to translate promising, leading-edge ideas into less toxic, more effective cancer treatments, which has improved the lives of countless patients facing these devastating diseases.”

From the start of his involvement, Kibel appreciated the proximity to the work his contributions supported. “In the case of the American Cancer Society, we were dealing with enormous amounts of money, but we were distant from the research,” he said. “What I like about the Jonsson Center is, first, the leadership, but also that we are hands-on in dealing with issues. A scientific committee shares the priorities and allows us to be much more connected. I also like that it is local. It is our community.”

The Kibels continued to expand their philanthropy, and in the early 2000s, they established the Isabel & Harvey Kibel Fellowship. The funding supports graduate students pursuing cancer research. According to Kibel, a lot of medical school graduates go into private practice or join a group practice. “We wanted some of those people to stay and do research,” said Isabel Kibel.

To date, 13 Kibel fellows have moved into successful careers at institutions including UCLA, Cedars-Sinai Medical Center and Memorial Sloan Kettering Cancer Center, as well as scientific firms such as Genentech and United Kingdom-based Mina Therapeutics. The Kibels continue to meet each year with the current fellows and remain in touch with many fellows.

Kibel has served on the board of the JCCC since 1985 and on the Board of Visitors for the David Geffen School of Medicine at UCLA since 2000. The Board of Visitors members help promote the medical school by providing advice and guidance to the leadership, and by serving as ambassadors and advocates to the public. When asked why he’s stayed involved with UCLA and the JCCC for such a long time, Kibel doesn’t hesitate to answer: “It’s not cured yet. To me, it’s that simple. Until cancer is cured, there’s a need for our help.” While survival rates have advanced significantly, “there’s still a way to go and a lot of work to be done,” he said.

Kibel is retired from his 40-year career in real estate development and executive management, as is Isabel from her profession as an occupational therapist. The couple remain active in the PLATO Society, a Westside-based organization devoted to lifelong learning through classes that members choose and teach themselves. And they are self-described “Shakespeare nuts.” Each year, they gather their two adult children and spouses, grandchildren and significant others for a family trip to the Oregon Shakespeare Festival in Ashland.

Just as Portia said in The Merchant of Venice, “How far that little candle throws his beams! So shines a good deed in a weary world,” so have the Kibels used their generosity and influence to amplify their impact on the cause of cancer research.
9th Annual Tour de Pier Logs Another Record-Breaking Event

Nonprofit cancer charities, including two that provide vital funding for UCLA cancer services—the Hirshberg Foundation for Pancreatic Cancer Research and the Uncle Tobi Foundation for brain cancer investigations. “The last time we gathered together was pre-pandemic, in May 2019, so the excitement of seeing each other again was certainly a highlight,” said Lisa Manheim, co-founder of Tour de Pier. “Cancer did not stop during the pandemic, so it was up to us to ensure that we continue the fight to help advance cancer research and finding a cure. The passion, dedication and determination of our cyclists and donors reminded us that the fight is not over.”

Nearly 250 stationary bikes (including adaptive bikes for people with physical disabilities) lined the Strand that overlooks the Pacific Ocean as the area’s best instructors and celebrity guests spun riders through five, 45-minute sessions with energizing music and live entertainment. In addition to cycling, the Tour de Pier hosted a free health and fitness expo.

Television stars and sports celebrities took center stage to inspire riders. Among them were actor Jacob Bertrand, from the Netflix show Cobra Kai; Mia Hamm, former United States Women’s National Soccer Team player and founding investor of Angel City FC; Alesi Lalas, Fox Sports commentator and a member of the National Soccer Hall of Fame; Dustin Brown, of the Los Angeles Kings; Cobi Jones, former soccer player and sports commentator; Rob Stone, emcee of Tour de Pier and Fox Sports commentator; Matt Leinart, former National Football League quarterback and Sports analyst; John Thorrington, co-president of the L.A. Football Club; Jake Olson, former University of Southern California football player and cancer survivor; Adam Krikorian, head coach of the gold medal-winning U.S. Women’s National Water Polo Team; and Allison Compton, paralympics bronze medalist.

Since debuting in 2013, Tour de Pier has raised more than $9 million for cancer research and support services. The event will return on May 22, 2022 to celebrate its 10th anniversary.

For more information, contact Elizabeth Naito at 310-206-6749

Generous Bequest Establishes Palumbo Chair in Hepatology Research and Education

“The Palumbo Trust’s bequest will ensure that our scientific and clinical advancements directly benefit the health and well-being of our patients living with liver conditions such as hepatitis, cirrhosis and cancer.” director of the Hepatology Clinical Research Center, assistant director of the UCLA Asian Liver Center and a senior clinician in the Vatche and Tamar Manoukian Division of Digestive Diseases, was named the inaugural chair holder in August 2021.

For more information, contact Laurel Zeno at 310-418-2364

“A bequest of $4.9 million through the Philip L. Palumbo Living Trust has established the Philip L. Palumbo Chair in Clinical Hepatology at the David Geffen School of Medicine at UCLA. Dr. Steven-Huy Han (FEL ’88), program director of the Transplant Hepatology Fellowship, has played an active role in the clinical training of medical students, medical residents and subspecialty fellows. Dr. Han serves as the principal investigator for clinical studies involving the treatment of chronic hepatitis B and C and acute liver failure. He recently initiated a program that aims to develop an effective blood-based method for the early detection of liver cancer that centers on tumor DNA circulating in the blood. He has authored many published articles in the area of hepatitis, liver transplantation and liver cancer, and he is a frequent speaker on the subjects. In addition to his research in hepatology and liver transplantation, Dr. Han plays an active role in the clinical training of medical students, medical residents and subspecialty fellows.

Palumbo, together with his family, owned and operated 34 McDonald’s franchises throughout San Diego County. During his time as a business leader in San Diego, he served on the Ronald McDonald House Board of Directors and supported local schools and sports teams throughout the county.

For more information, contact Laurel Zeno at 310-418-2364

Photo courtesy Tour de Pier

Dr. Steven-Huy Han.
Making a Personal Choice

Donald H. Volz and his wife, Kay.

PHOTO: JESSIE COWAN

In 2016, the California End of Life Option Act (ELOA) became law, allowing terminally ill adults to request aid-in-dying for a terminal illness to End of Life Option Act (EOLOA) what time is left? in pain? How of much “me” approach death. Will I be concerns for many is what it them. One of the biggest fears and questions that

“My dear father had ‘lived’ with Parkinson’s disease for over 20 years,” said Kathy Volz. “Courage and dignity were his trademark throughout an adventurous life. Upon

“My dear father had ‘lived’ with Parkinson’s disease for over 21 years. Courage and dignity were his trademark throughout an adventurous life. Upon learning of the California End of Life Option Act from a hospice worker, he proudly declared this was his desire. With the rest of the family in concert, I acted as his point guard in navigating the requirements in order to qualify the UCLA Health system,” she said. “It became evident to me that many patients might not have the information, or the support of loved ones around them. I am hopeful the Donald H. Volz Memorial Fund will help qualifying patients assess if this unique option is right for them.”

“At UCLA Health, we give our patients access to a wide variety of treatments to provide healing and comfort,” said Dr. Neil Wenger (MD ‘84, RES ‘87, ’90, FEL ‘98), medical director of the UCLA Advance Care Planning Program. “When a prognosis worsens, patients may shift their focus and change treatment goals. Most patients want to be in charge of their lives-unplus and they die: UCLA Health strives to ensure that all patients are fully informed and able to access all of their treatment options. For some patients, that means a choice to explore aid in dying.”

UCLA developed a process to ensure that this option will be available to eligible patients who wish to use it. Since ELOA went into effect, more than 300 UCLA patients have explored this option, while about half obtained a prescription for an aid-in-dying medication, not all have chosen to use it. The UCLA model for implementation of the ELOA includes a clinical consultant who works to inform and assist the patient in parallel with ensuring that UCLA is providing the best possible treatment and affording the patient maximal support for the best experience at the end of life. Most patients inquiring about the ELOA have advanced cancer, and these patients work with clinical consultants from the Simms/Mann-UCLA Center for Integrative Oncology. The health system also wants to ensure that no patient will ever request aid-in-dying due to inadequate support, while at the same time assuring access to the ELOA. UCLA trains clinical consultants and physicians in their roles to carry out the EOLOA, and the health system developed a set of materials to guide patients and their families, as well as clinicians, physicians and pharmacists. Despite the development of a comprehensive program, not all physicians and other clinicians are well-versed in the implementation of ELOA. In addition, patients and families may be unaware of this option, even though it could potentially fit with their goals.

“This generous fund will provide the resources to educate clinicians across the health system regarding the End of Life Option Act, including some of the upcoming changes to the law in 2022,” said Codie Liesto, clinical social worker for advance care planning and palliative care. “This gift also will provide funds for a clinical-consultant social worker who engages with noncancer patients who wish to consider aid in dying. These clinical consultants support the patient, their family and clinicians in navigating the EOLOA process.”

Currently, no medical center support is available to provide these vital services to patients without cancer. Thanks to the Volz funding, UCLA Health will be able to work with UCLA Health physicians, nurses and social workers to identify gaps in knowledge and implement education for groups of clinicians as needed. In addition, it will provide resources for a social work clinical consultant who will offer EOLOA guidance to patients and physicians. “Considering an aid-in-dying medication is a very personal choice,” said Mary Noil Pilkington, RN, senior director for care coordination and clinical social work. “Clinicians need a deep understanding of all aspects of performing this crucial support education, including the Volz funding, UCLA Health will be able to train our patients access to the EOLOA. In addition, patients and families may be unaware of this option, even though it could potentially fit with their goals.

“This generous fund will provide the resources to educate clinicians across the health system regarding the End of Life Option Act, including some of the upcoming changes to the law in 2022,” said Codie Liesto, clinical social worker for advance care planning and palliative care. “This gift also will provide funds for a clinical-consultant social worker who engages with noncancer patients who wish to consider aid in dying. These clinical consultants support the patient, their family and clinicians in navigating the EOLOA process.”

"Through his work and generosity, Dr. Calcaterra shaped our future, that of numerous mentees and innumerable patients.”

For more information, contact Ellen Haddigan-Stengel at: 310-206-3878

PHOTO: KATHY VOLZ

In October 2021, Kathy Volz contributed more than $100,000 to establish the Donald H. Volz Memorial Fund, in memory of her father, Donald Volz. The fund, administered by the UCLA Health Department of Care Coordination and Clinical Social Work, will support education and services that help foster awareness and understanding of the EOLOA.

“My dear father had ‘lived’ with Parkinson’s disease for over 20 years,” said Kathy Volz. “Courage and dignity were his trademark throughout an adventurous life. Upon learning of the California End of Life Option Act, including some of the upcoming changes to the law in 2022,” said Codie Liesto, clinical social worker for advance care planning and palliative care. “This gift also will provide funds for a clinical-consultant social worker who engages with noncancer patients who wish to consider aid in dying. These clinical consultants support the patient, their family and clinicians in navigating the EOLOA process.”

"Through his work and generosity, Dr. Calcaterra shaped our future, that of numerous mentees and innumerable patients.”

Currently, no medical center support is available to provide these vital services to patients without cancer. Thanks to the Volz funding, UCLA Health will be able to work with UCLA Health physicians, nurses and social workers to identify gaps in knowledge and implement education for groups of clinicians as needed. In addition, it will provide resources for a social work clinical consultant who will offer EOLOA guidance to patients and physicians. “Considering an aid-in-dying medication is a very personal choice,” said Mary Noil Pilkington, RN, senior director for care coordination and clinical social work. “Clinicians need a deep understanding of all aspects of performing this crucial support education, including the Volz funding, UCLA Health will be able to train our patients access to the EOLOA. In addition, patients and families may be unaware of this option, even though it could potentially fit with their goals.

“This generous fund will provide the resources to educate clinicians across the health system regarding the End of Life Option Act, including some of the upcoming changes to the law in 2022,” said Codie Liesto, clinical social worker for advance care planning and palliative care. “This gift also will provide funds for a clinical-consultant social worker who engages with noncancer patients who wish to consider aid in dying. These clinical consultants support the patient, their family and clinicians in navigating the EOLOA process.”

"Through his work and generosity, Dr. Calcaterra shaped our future, that of numerous mentees and innumerable patients.”
**BLENDING GIFTS FOR BLENDED HEALTH CARE**

Jessica Iclisoy and Beth Friedman have each given a $75,000 gift to support a fellow in the UCLA Center for East-West Medicine (CEWM), which blends the best of Western medicine with Traditional Chinese Medicine (TCM) to provide safe and effective health care. The fellowship, under the direction of Dr. Katie Hu (RES ’15, FEL ’17), “emphasizes practical clinical training and prepares physicians for board certification in integrative medicine utilizing TCM modalities,” said Friedman. “These evidence-based integrative therapies are key to wellness, and I am excited to see how the fellowship program develops,” said Iclisoy.

*For more information, contact Lori Grumet at: 310-869-2774*

**ADVANCING MEDICAL INNOVATION IN CARDIAC SURGERY**

A bequest of $995,000 from the Bert M. Dahl Trust, Patsy Weedon Charitable Remainder Trust, Lanny B. Clifton Charitable Remainder Trust and Mildred O’Neal Dahl Trust is enabling the UCLA Division of Cardiac Surgery to spearhead pioneering research under the direction of Dr. Richard J. Shemin, chief of the Division of Cardiac Surgery and Robert and Kelly Day Chair in Cardi thoracic Surgery. The funding will help ensure that UCLA remains at the forefront of medical innovations in cardiac surgery, where scientific discovery translates to lifesaving procedures for countless patients. “The future is bright for the development of groundbreaking treatments for cardiac diseases,” said Dr. Shemin. “We are grateful for the Dahl family’s shared commitment to advance innovations in the treatment of cardiac diseases.”

*For more information, contact Nicholas Middelsoen at: 310-206-2869*

---

**HELPING HEAL WOUNDED WARRIORS**

Lynn Booth has directed a gift of $500,000 from the Otis Booth Foundation to benefit the surgical and physical-injuries programs of Operation Mend. “Our young people put their lives on the line for us, and we should help them in any way we can,” she said. Established in 2007 as a partnership between UCLA Health and the United States military, Operation Mend continues to address ongoing complex reconstructive needs of service members injured in the Iraq and Afghan istan conflicts. “The livelihood of the program is the generous financial support we receive from our friends and partners across the nation,” said Dr. Christopher Crisera (RES ’03, FEL ’05), executive medical director of Operation Mend.

*For more information, contact Beth Friedman at: 310-364-4102*

---

**SUPPORTING LOW-VISION PATIENTS THROUGH ROBOTIC TECHNOLOGY**

Hana and Kelvin Davis have contributed $100,000 to UCLA Stein Eye Institute to establish the Hana and Kelvin Davis Low Vision Fund. The gift was made in honor of Dr. Jennie Kagayama (FEL ’00) for her dedication to the innovative programs of the Vision Rehabilitation Center. The fund will provide visual assistive devices not covered by insurance for those who cannot afford them, training physicians for board certification in integrative medicine utilizing TCM.

*For more information, contact Margaret Shive at: 310-980-0734*

---

**IMPROVING CARDIOVASCULAR CARE**

A $225,000 contribution, facilitated through the Lawrence and Annette Ades Unirtrust, has established the Heart Transplantation and Mechanical Circulatory Support Program. Under the direction of Dr. Ali Nasir (FEL ’10, FEL ’11), director of the UCLA Heart Transplantation and Mechanical Circulatory Support Program, the fund will advance groundbreaking research, innovative clinical care and training to improve cardiovascular outcomes for patients living with advanced heart failure. Dr. Nasir’s efforts in heart transplantation led UCLA to reach a milestone of 2,500 heart transplant surgeries, only the second heart transplant program in the United States to do so.

*For more information, contact Laurel Zeno at: 310-418-2364*

---

**PAYING IT FORWARD**

Alumni from the David Geffen School of Medicine at UCLA class of 1976 organized a mini reunion in October 2021 that raised $25,000 for their class scholarship fund. The alumni have set a grand goal of raising $1 million for their scholarship fund.

*For more information, contact Emily Meldau at: 310-364-4102*

---

**ADVANCING MEDICAL INNOVATION IN CARDIAC SURGERY**

A bequest of $995,000 from the Bert M. Dahl Trust, Patsy Weedon Charitable Remainder Trust, Lanny B. Clifton Charitable Remainder Trust and Mildred O’Neal Dahl Trust is enabling the UCLA Division of Cardiac Surgery to spearhead pioneering research under the direction of Dr. Richard J. Shemin, chief of the Division of Cardiac Surgery and Robert and Kelly Day Chair in Cardi thoracic Surgery. The funding will help ensure that UCLA remains at the forefront of medical innovations in cardiac surgery, where scientific discovery translates to lifesaving procedures for countless patients. “The future is bright for the development of groundbreaking treatments for cardiac diseases,” said Dr. Shemin. “We are grateful for the Dahl family’s shared commitment to advance innovations in the treatment of cardiac diseases.”

*For more information, contact Nicholas Middelsoen at: 310-206-2869*

---

**BLENDING GIFTS FOR BLENDED HEALTH CARE**

Jessica Iclisoy and Beth Friedman have each given a $75,000 gift to support a fellow in the UCLA Center for East-West Medicine (CEWM), which blends the best of Western medicine with Traditional Chinese Medicine (TCM) to provide safe and effective health care. The fellowship, under the direction of Dr. Katie Hu (RES ’15, FEL ’17), “emphasizes practical clinical training and prepares physicians for board certification in integrative medicine utilizing TCM modalities,” said Friedman. “These evidence-based integrative therapies are key to wellness, and I am excited to see how the fellowship program develops,” said Iclisoy.

*For more information, contact Lori Grumet at: 310-869-2774*

---

**ADVANCING MEDICAL INNOVATION IN CARDIAC SURGERY**

A bequest of $995,000 from the Bert M. Dahl Trust, Patsy Weedon Charitable Remainder Trust, Lanny B. Clifton Charitable Remainder Trust and Mildred O’Neal Dahl Trust is enabling the UCLA Division of Cardiac Surgery to spearhead pioneering research under the direction of Dr. Richard J. Shemin, chief of the Division of Cardiac Surgery and Robert and Kelly Day Chair in Cardi thoracic Surgery. The funding will help ensure that UCLA remains at the forefront of medical innovations in cardiac surgery, where scientific discovery translates to lifesaving procedures for countless patients. “The future is bright for the development of groundbreaking treatments for cardiac diseases,” said Dr. Shemin. “We are grateful for the Dahl family’s shared commitment to advance innovations in the treatment of cardiac diseases.”

*For more information, contact Nicholas Middelsoen at: 310-206-2869*
Disability is not Binary

By Zina Jawadi

NOT LONG AGO, A FRIEND ASKED ME HOW I, with hearing loss, have been able to actively engage in conversations when widespread use of face masks prevents utilization of reading lips or facial expressions. It is an excellent question, one that I have frequently received since the start of the COVID-19 pandemic. While I do have significant hearing loss, I am hard-of-hearing, not deaf, and I use my residual hearing to communicate with others. It is a process I have perfected over years of intense speech therapy, auditory verbal therapy and practice.

Nonetheless, my friend was surprised to learn that I could hear at all. Her response was not unusual. Most people, upon discovering my significant hearing loss, cannot understand how I navigate a world that is heavily based on hearing. Undoubtedly, such activities as speaking over the phone, paying attention in the classroom setting and enjoying music require intense effort on my part to listen and comprehend, relying on my residual hearing and my hearing aids and capitalizing on favorable acoustical settings.

But many people — perhaps nearly everyone, in fact — think of disability in binary terms, like an on-off switch. Either one can or cannot hear. They think of hearing loss as akin to switching off the audio of a video rather than playing the video with the sound turned way down so it is muffled, soft and difficult to discern.

Like many people with a disability, I fall somewhere in the middle of the spectrum. With my residual hearing, I am “too hearing” to be considered medically deaf but, at the same time, “too deaf” to be considered hearing. Yet, hearing loss is often perceived as a binary condition: A person either has the disability or does not. In reality, disability is highly complex, nuanced and diverse, with a wide range of experiences. It is anything but binary.

For example, like many people with hearing loss, I can hear some sounds better than others, depending on the frequency and volume of the sound and the level of background noise. In particular, I hear low-frequency sounds, bass, better than high-frequency sounds, treble. The sounds I am least able to hear are those within the range of speech.

All-or-nothing — binary — categorizations of disabilities hurt people with disability. This is especially true for those with "invisible" disabilities, such as hearing loss. One of the biggest challenges is trying to convince others that the disability exists. Any appearance of being "normal" by someone with a disability makes it all the more difficult for others to appreciate the wide prevalence of "ableism" — discrimination against people with disabilities — and the constant physical and attitudinal obstacles people with disabilities face. Sometimes "normal appearance" is perceived as a compliment along the lines of, “You don’t seem disabled.” Other times, it is meant to imply that we are exaggerating or faking our disabilities. I often am told that I “hear just fine.”

Regardless of where along the spectrum any of us with a disability fall, most of us require accessibility accommodations, which, in turn, necessitate disclosing our disability. What people fail to realize is that disclosing a disability and requesting accommodations involves divulging personal conditions, swallowing pride and expending a tremendous amount of time and effort. Even with accommodations, we almost always are still at a significant disadvantage since, at best, accessibility addresses access — equality, not equity. Having to constantly prove our disabilities often prevents us from securing the proper accommodations and support we desperately need.

“Many people — perhaps nearly everyone, in fact — think of disability in binary terms, like an on-off switch. Either one can or cannot hear. They think of hearing loss as akin to switching off the audio of a video rather than playing the video with the sound turned way down so it is muffled, soft and difficult to discern.”

A binary classification of disability suggests that disabilities and diagnoses within the middle of the spectrum are somehow less challenging. For example, the degrees of hearing loss are innocuously named mild, moderate, severe and profound. Whether we realize it or not, the language used to categorize disability influences the way patients are diagnosed and how they view their disabilities. Admittedly, specialists may have encountered thousands of people with a particular disability, but medical severity does not correlate with personal struggle. The experiences of people with moderate disabilities should not be relegated as less difficult; rather, they should be understood as different.

Treating disability as something that occurs along a spectrum will transform the way society understands and empowers people with disabilities. As the world begins to prioritize social justice, I hope that the public starts to include one of the largest minorities in America, people with disabilities, in conversations about justice, equity, diversity and inclusion.