



THE LONG HAUL

It is unclear why some patients who recover from COVID-19 continue to experience troubling symptoms.



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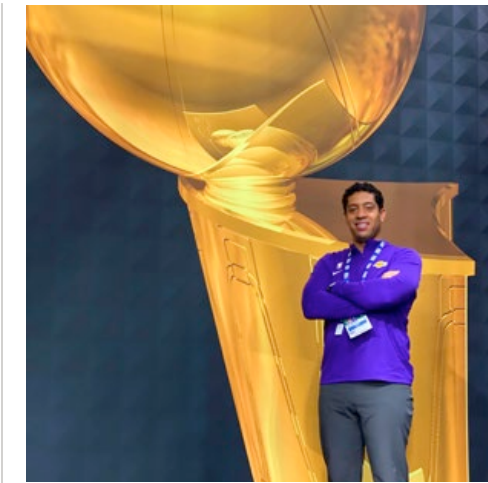


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Photo: Jessica Pons

The Year that Was

The intersection of the coronavirus pandemic and greater awareness of racial inequities in health care has propelled us to confront uncomfortable truths, both as a nation and as an institution.

“Challenges make you discover things about yourself that you never really knew.”

— Cicely Tyson

This past year has been extraordinary, one in which we lived through the confluence of two life-altering events. There has been the global pandemic of COVID-19 and the movement to address racial injustice in the wake of killings of unarmed Black — and now Asian, as well — men and women. These events together have brought into sharper focus the issue of racial inequities in health care.

For UCLA Health, it indeed has been a year of challenges, and uncertainty was a significant factor in the early months of the pandemic. While we regularly plan and train for epidemics such as Ebola, SARS and MERS, and for mass-casualty events like a plane crash, earthquake or fires, SARS-CoV-2 was different and presented unique challenges.

This past year has been like a slow-motion, mass-casualty event, but in reverse. In an event like a plane crash or an earthquake, the worst part is at the beginning, when the largest numbers of injured people arrive, and then it tails off and things get better as time passes. But with the coronavirus, there was a slow buildup in the beginning, with the worst of it hitting in the

middle of the pandemic, before starting to taper off, and then periodically flaring up again, usually following holidays with group gatherings.

That meant having to learn as we go. We got better at knowing how to care for people stricken with COVID-19, but then something totally unexpected would happen — like the supply chain collapsing and concerns about the prospect of limited amounts of PPE or oxygen or respirators, and we never knew if we were going to be in a situation where we might be overwhelmed with patients, like they were in New York City and northern Italy. That uncertainty made us have to plan on multiple levels to be ready for the worst-case scenarios.

To prepare ourselves, we reached out to learn everything we could from those who already had lived through a phase that we were about to face, connecting with our colleagues in China, for example, to hear directly from them about their experience. Our sister school in Zhejiang had sent 40 physicians to Wuhan during the first wave, and the understanding of the disease that they came back with and shared with us was invaluable.

We also learned that we couldn't count on others for anything, that we might have to make do on our own. When PPE was running short, we set up our own supply chains with contacts in Asia, rented warehouses and became an FDA-approved importer. And we tapped into our own resources closer to home. When we didn't have enough face shields, our medical school worked with UCLA's engineering school to make them, and when there

were not enough ventilators, we developed protocols for how to use one ventilator for two patients. We looked at every space in our hospitals and clinics and thought about how they could be used differently to manage many times the number of patients for which they'd originally been intended. We coordinated with other hospitals in Southern California to try to balance our patient loads and resources. We called upon our community partners — CEOs of companies and donors — to help us make wider connections to build new supply chains and find locations to do testing. No one said no.

It was an extraordinary effort at every level of our organization. I would see our health care workers outside of the hospitals, sitting on the curb taking a break, their faces marked by their goggles and masks, sweating, stressed, having spent hours treating patients who, in most cases, had no family with them, some of whom would die. Many of our health care workers have said that it felt like being in a war, but I could see in their faces that they were determined. It was incredible to see the grace, courage and conviction with which they did their work, and it felt very humbling to be in their presence.

“There can be no denying that communities of color are hardest hit, both in their daily lives and by global events such as the pandemic.”

At the same time as we were addressing the challenges of COVID-19, there was the escalation of the Black Lives Matter movement and the spotlight it has shone on racial disparities in health care that have made this pandemic so devastating for communities of color. It also has cast a harsh light on our own inequities as a health care system, and has forced us to look deeper within ourselves. That will be a process that will go on for many, many years. As individuals, and as an institution, we commit ourselves to the process of ongoing self-reflection aimed at ensuring equitable, high-quality health care for all.

There is so much work to be done on this front, for the United States as a nation to redress centuries of wrong and for UCLA Health as an institution to recognize and address our own culpability. That this has arisen at the same time as the pandemic has helped to

propel it to the forefront of our thinking. The urgency surrounding our fight against COVID-19 now is being directed to the issue of structural racism and social injustice. The pandemic has thrown back the curtain obscuring the intersection of health care and race. There can be no denying that communities of color are hardest hit, both in their daily lives and by global events such as the pandemic.

We could not just talk our way out of COVID; we had to take action. We cannot just talk our way out of addressing racial inequity in health care; we must take action, and there must be real outcomes that demonstrate progress. As with COVID, it will take a very disciplined, practical and consistent approach to achieve success.

In academics, we spend an enormous amount of time admiring a problem and then coming up with processes that often take many people and long periods of time to reach conclusions. But when you have a crisis, you have to solve it. We may not come up with the perfect solution the first time. And maybe not the second or the third time, either. But after several iterations, we will achieve a solution that is sound and workable. We've had a lot of decisions we've had to make over this past year when the data were incomplete and assumptions had to be made. Those decisions, however, could not be arbitrary. We had to listen to all points of view, and then we had to choose. We did not have the luxury of being able to wait. As with the pandemic — against which we harnessed the power of science and leveraged the fruits of decades of basic-science research, including studies on coronaviruses and the development of RNA vaccines, to create, test and bring forth vaccines in record time to protect our population — so, too, must we harness the power of our intellect and goodwill to address the plague of systemic racism.

That is what we need going forward, to be nimble and decisive. We don't have the luxury to wait. Progress must occur.

John C. Mazziotta, MD (RES '81, FEL '83), PhD
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Do We Really Want to Return to Normal?

By John Glaspy, MD '79 (RES '82, FEL '83), MPH

As a physician responsible for the care of cancer patients,

I have been engaged for more than a year now in efforts to protect some of the most vulnerable among us from the effects of COVID-19 infection. We are all familiar with what this virus has wrought on humanity in terms of death and suffering, and with the constrictions our responses to this threat have necessarily placed on our lives and livelihoods. Although vaccination promises to control COVID-19 in the United States in the not-too-distant future, it is important that, for now, we continue responsible mask-wearing and distancing to minimize the suffering and deaths that will still occur before COVID is contained. We are all exhausted. And we frequently say that we want to “return to normal.”

But, do we really? This intense pandemic experience has reacquainted us with some fundamental truths we had been neglecting. COVID-19 made clear our dependence upon each other as a people for our personal and environmental health and welfare. It has awakened in all of us an awareness of how many medically and economically vulnerable people share this city, this country and this earth, and in some of us it has stirred a renewed cognizance and sense of some responsibility for them. We have been vividly reminded that misfortune and fragility and opportunity are not equitably distributed in this world, and that social justice is imperfect and often elusive. Our common humanity has been laid bare for all to see and hopefully to profitably contemplate. As we continue to show our respect for life and for each other by masking and distancing, we are close enough to COVID control to begin asking ourselves where we want to go from here.

“I am intrigued by how much deeper and satisfying life could be with a little more brotherhood and a little less elbow throwing.”

Before the 1918 influenza pandemic, the only event in the United States that had a mortality of 600,000 souls was the Civil War. In 1863, an exhausted President Abraham Lincoln, speaking on a fresh battlefield of that war and trying to salvage something from the carnage, spoke of “unfinished work” and of dedication to a “great task remaining,” and he encouraged an “increased devotion” as the only way he could find to appropriately honor the souls lost. Ultimately, that painful American catastrophe resulted in advances in human equality and social justice in this country that otherwise would not have soon occurred. From suffering came improvement, and the lost souls were honored.

During the year since COVID-19 began, I have witnessed many humbling and inspiring examples of individuals and organizations generously, and sometimes

heroically, acting to help the vulnerable, weak and marginalized. Often enough, these actors were new to the work, moved to see and to act by the pandemic. In many cases, though, these individuals and organizations were already involved in their work before COVID-19 was a thing. The pandemic obviously disproportionately stressed the most fragile and increased their needs for assistance, but it also caused us to notice again what had always been there, obscured by the background white noise of injustice and suffering in our city, country and world. These human needs and our common humanity existed before, and they will remain after COVID.

I don't want to return exactly to my life before COVID. Looking back to that time, I believe we may have fallen prey to runaway individualism and mean-spiritedness in our government and public lives and to excessive materialism, self-absorption and intoxication with the trivial in our private lives. There were things unnoticed that, had I seen better, would have added meaning to my life. Certainly, I want my grandchildren back in school, to have large dinner parties with friends, to go to bars and restaurants, to travel for pleasure and to not need to wear a mask. But I am intrigued by how much deeper and satisfying life could be with a little more brotherhood and a little less elbow throwing, and how enriching it is to do some of the now-more-evident “unfinished work” that was obscured by pre-COVID scheming, bickering and indolence.

Cancer survivors looking back years later very often tell me that their lives have been richer and more fulfilling because they have that history. They come to understand, as Lincoln did, that this can be a final triumphant step in the human response to suffering: We harness it and get it to pull us to a better place. There is an incredible opportunity here; after all, there is clearly a “great task remaining” and so many souls to honor.

Dr. John Glaspy is holder of the Simms/Mann Family Foundation Endowed Chair in Integrative Oncology and a researcher at the UCLA Jonsson Comprehensive Cancer Center.



Some 130,000 people gathered in October for a Pride march in Taipei, the capital of Taiwan, which had mounted a successful public-health response to the pandemic that enabled it to reopen its economy.

Photo: Ritchie B. Tonga/EPA-EFE/Shutterstock

A Tale of Two COVIDs

By Jim Newton

COVID-19 is no different in Taiwan than in the United States. It infects people the same way and causes the same symptoms, regardless of climate or geography. Taiwan and the United States are modern, industrialized democracies with big cities and rural areas. The United States has recorded some 30 million cases of COVID-19, while Taiwan has had about 1,000. Why? Why has a single disease been so devastating in some places and so contained in others?

That is the question that has occupied the world for the past year, and it is one that Peter Baldwin, PhD, a UCLA history professor with experience in comparative politics and epidemic research, set out to answer. It is the subject of his new book: *Fighting the First Wave* (Cambridge University Press).

It is a grand and brightly written account of a bleak and confusing epoch, sweeping across the travails of Asia and Europe, the United States, Latin America and Africa. It finds and reveals stories of intelligent heroism alongside hubris and stupidity. It may help guide the remaining stages of this battle and could inform future responses to the pandemics that await.

The first step in Dr. Baldwin's analysis is the observation that COVID-19 represented a common threat to people and

nations around the world — that while governments responded differently to it, the underlying virus was indifferent to the societies across which it stampeded. That suggested the opportunity for a unified scientific response, and to a large degree, the scientific community has responded with force and purpose. As Dr. Baldwin writes: “Scientific cooperation was immediate, prolific and worldwide,” a response he describes as “one of the epidemic's few silver linings.”

The same cannot be said of the international political response. It was, as Dr. Baldwin illuminates, uneven, contradictory and, all too often, idiotic. Some countries sought guidance from scientists and scientific knowledge; others shunned both. Some countries headed down a path, only to reconsider or capitulate to contrary voices. Casualties steadily mounted.

But they mounted unevenly. The lessons of the international response would be simple if they followed conventional political lines, if all democracies did well and all command economies faltered — or the other way around. That is quite decidedly not the experience Dr. Baldwin documents.

Indeed, what is most striking about the successful and failed countries in the fight against COVID-19 is that the camps crossed

the usual lines. New Zealand, Australia, Taiwan, South Korea and China have been among the countries to mount the most successful public-health responses. Those nations include two Western-style democracies, two more regimented democracies and the world's largest autocracy. Failures include Brazil, the United States and Sweden, two federal republics then under the leadership of populist presidents and one of the world's leading social-democratic democracies, a darling of progressives.

Bottom line: Democracies were not all successful, nor did all fail. Some autocracies did well, others did not. Some democracies may have envied the power that autocracies had to clamp down on movement — China showed no qualms about locking people into their homes — and some authoritarian leaders no doubt pined for the cooperation that some democracies were able to enlist from their citizens, at least for a time.

In the final analysis — or, at least, the final analysis so far — countries and states that have fared best are those that enjoy one of two relationships with their populations: Either they enjoy the public's trust or they have power over their people. New Zealand and Australia command the confidence of their citizens (and have the benefit of being isolated island nations) and were able to impose strict measures without alienating the public. China imposed some of the world's most draconian restrictions, in part because its power over its citizens makes it relatively immune to backlash. South Korea, Taiwan and Singapore blended substantial authority with cooperative citizenries.

At the other end of the scale, sadly, is the United States, where, Dr. Baldwin writes, President Donald Trump was unwilling to mobilize his power and unable to muster trust. Instead, he and his government wobbled, first downplaying the threat, then declaring a national emergency but still declining to use the federal authority at his disposal to require stringent health measures, or even so much as to strongly encourage wearing masks. The result is that this country registered one of the world's most shameful public-health responses.

Of special note in all of this is Sweden, which boldly — stupidly, some would say — struck out on its own, pursuing herd immunity in defiance of almost all scientific guidance and singularly outside its community of Scandinavian neighbors. As Dr. Baldwin recounts, Sweden combined hubris with confusion to produce a policy that glaringly stood out. The government trusted its citizens to behave responsibly but assumed that they would not respond well to lockdowns. That, Dr. Baldwin

points out, left Sweden straddling a contradiction: “The Swedes could not be locked down because depriving them of their freedoms was asking too much. But at the same time, the Swedes were trained and conditioned to do the right thing without being compelled. So which was it: Could the government trust the Swedes to act correctly, or could it not rely on them to endure lockdown?”

Sweden opted for allowing its citizens to fend for themselves and hoped that herd immunity would stave off disaster, if not in the first wave then at least in the second. That won the social-democratic state admirers in strange places — “Sweden became the pet of conservatives globally,” Dr. Baldwin writes, but by the summer of 2020, it was lumped in among such unlikely cohorts as Armenia, North Macedonia and Azerbaijan as the nations with the most alarming infection rates. The resurgence of the virus in the fall hit Sweden hard again — still no herd immunity — to the point that its mortality rates have exceeded those in Norway and Finland by 10 times.

Sweden's only real rival in failure has been the United States. The difference is that the United States' failure was of confusion, poor leadership and division; Sweden's was by design.

Dr. Baldwin's account of the public-health response to COVID-19 ends before this newest phase, the vaccine rollout and its global impact on the virus' spread. Interviewed as vaccines became more widely available in the United States, he noted the curiously different alignment of nations in that phase of the pandemic. After their conspicuous failures to mount effective public-health responses, the United States and Britain have, by contrast, led the way in vaccine development and distribution — bringing welcome, if belated, relief to the citizens of those countries. “The biomedical solution,” Dr. Baldwin says, speaking from Britain, where he had been since December, “allows you to sidestep the public-health response.”

The final chapters of the world's confrontation with COVID-19 are still being written, and Dr. Baldwin is standing by. In the meantime, *Fighting the First Wave* is the most complete and useful account of the most important subject on earth.

Jim Newton is editor-in-chief of *Blueprint magazine* in the *UCLA Luskin School of Public Affairs* and a former columnist and editorial page editor for the *Los Angeles Times*.

Safe Harbor

By Sandy Cohen

When the U.S. Department of Health and Human Services announced in April that it would open an emergency-intake site in Long Beach for unaccompanied migrant children, it took UCLA Health just 24 hours to put together a pediatric clinic, urgent-care facility and COVID-19 isolation unit inside the city's sprawling convention center.

For UCLA Health and the physicians, nurses and child-life specialists who staff the site, “It is a chance to really extend our care to this highly vulnerable population and support them in many ways, both for their health care needs and their psychosocial development,” says Johnese Spisso, MPA, president of UCLA Health and CEO of the UCLA Hospital System.

The emergency-intake site at the Long Beach Convention Center was set up to accommodate as many as 1,000

children; it is one of more than a dozen temporary shelters opened this year to house migrant children who have arrived without their parents in the U.S. from Central America.

UCLA learned on April 21 that the site would open the following day, and a group of doctors, nurses, lab workers, radiologists and more than 50 information-technology professionals immediately went to the convention center to begin setting up a pop-up clinic with all the services and capabilities of any other UCLA Health pediatric office.

“It was an amazing team effort,” says William Dunne, administrative director for emergency preparedness, security and safety at UCLA Health.

Child-life specialist Tracy Reyes Serrano is among the UCLA Health staff at the site. For her, participating in the effort is, in part, personal. “Both my parents immigrated here with my older brother, so it’s something really close to my heart,” she says. “A generation back, or a generation forward, this easily could have been me.”

Upon arrival at the site, the children — from age 3 and up to 17 for girls and 12 for boys — are screened for COVID-19



Equipment to set up medical exam rooms was brought to the Long Beach Convention Center.

Photo: Associated Press/Pool Photo

and other potentially urgent concerns, and electronic health records are set up. Within 48 hours, each child receives a comprehensive checkup that includes a physical exam and medical history, assessment of childhood immunizations and any allergies or medications. Basic vaccinations are provided, and an urgent-care facility operates 24 hours a day on site to address any acute or sudden needs. X-rays, lab tests and routine prescriptions also can be handled on-site.

UCLA Health is working in partnership with UCI Health and Children’s Hospital Orange County to provide medical care to the unaccompanied migrant children. In addition, the Long Beach shelter offers clothing, education and indoor and outdoor recreation. Cheerful murals decorated with giraffes, elephants and undersea scenes add color and warmth to the expansive convention center space.

Many of the youngsters have been fascinated with Reyes Serrano’s UCLA Health ID badge, which, along with her name and photo, has the Millennium Falcon spaceship from *Star Wars* on it. They ask her name and examine the picture of her on her ID to see what she looks like without her face mask. “They’re so curious about this environment, and they feel safe enough to ask questions,” she says. “They’re very engaged, and that’s something I wasn’t expecting. The pictures we see

in the media are of kids just walking around all mopey and frightened. There’s definitely an element of that when they first come in, but once they see the space and our colorful UCLA Mattel Children’s Hospital logo on things and our cartoons, it makes a big difference.”

The change in the children’s demeanor is evident after just a few hours, Dunne says. “You see the stress reduced and more of a calmness in these children, a sense that they feel supported and cared for and are in a safe place.”

Seeing the children become more comfortable within the environment has been a moving experience for many among the UCLA Health staff. “It can be heartbreaking to see some of these kids,” Dunne says. “But I think when everybody goes home at the end of the day and looks in the mirror, they have tremendous pride in what they’re doing.”

Sandy Cohen is a senior writer in UCLA Health Communications and a former national writer for *The Associated Press*.

To learn more about UCLA Health’s engagement with unaccompanied children, go to: uclahealth.org/humanitarian-care-for-unaccompanied-children



New Therapy Shows Promise to Treat Deadly Brain Tumors

Researchers at the UCLA Jonsson Comprehensive Cancer Center have identified a new way to improve survival rates in treating glioblastoma, one of the deadliest and most difficult-to-treat brain tumors. The approach, tested on a mouse model, combined radiation with an antipsychotic drug and a statin used to lower high cholesterol levels, and it was found to extend the median survival of the mice four-fold compared to radiation alone.

Radiation therapy is part of the standard-of-care treatment regimen for glioblastoma, often helping prolong the survival of patients. However, survival times have not improved significantly over the past two decades. There have been attempts to improve the efficacy of radiotherapy through the use of pharmaceuticals; however, the treatments have been hampered by the normal tissue toxicity of the drugs, as well as their inability to penetrate the blood-brain barrier, which protects the central nervous system.

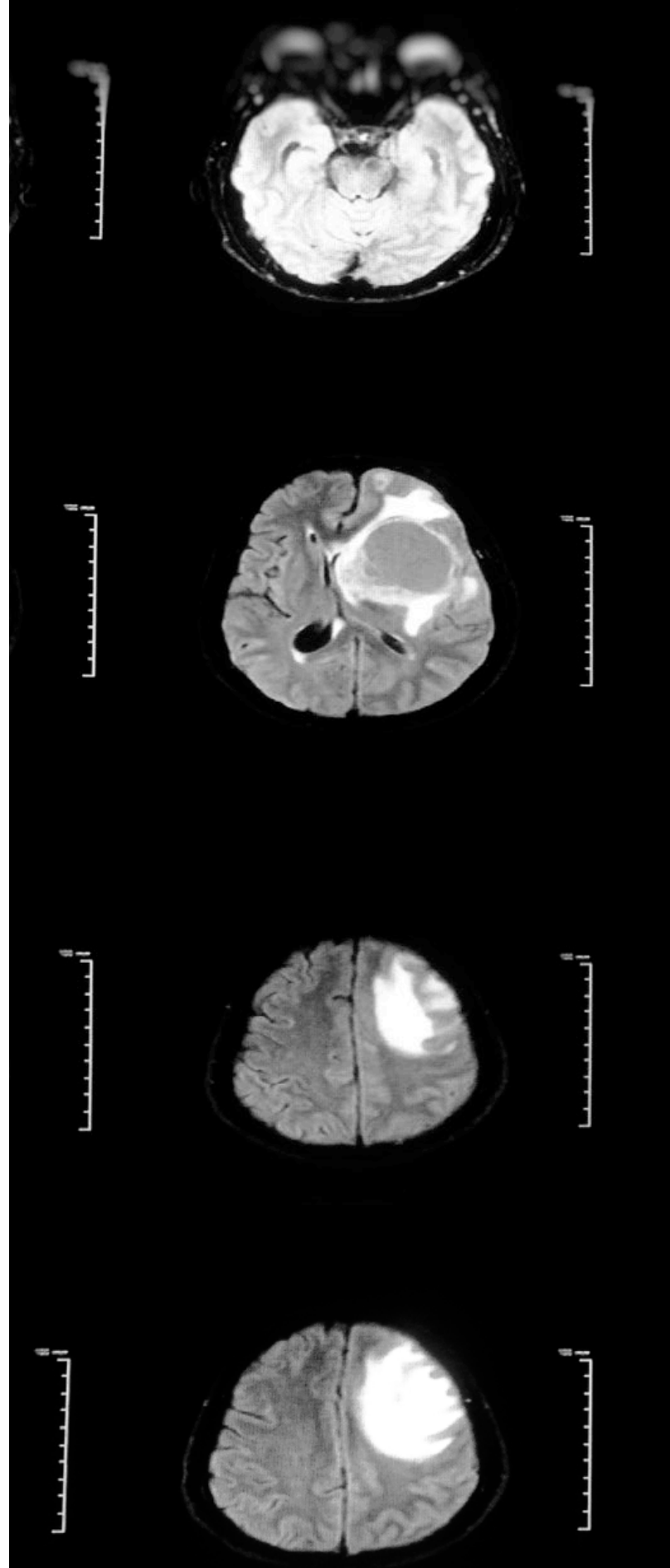
In this trial, the team in the lab of Frank Pajonk, MD, PhD, professor of radiation oncology and a member of the Jonsson Cancer Center, tested the approach using patient-derived glioblastoma lines provided by the Biospecimen and Pathology Core of the UCLA SPORE in Brain Cancer. They discovered that the antipsychotic drug quetiapine, which acts to block dopamine receptors and is able to rapidly cross the blood-brain barrier, enhanced the efficacy of radiotherapy in glioblastoma.

However, the combination of quetiapine and radiation also provoked a resistance mechanism; it induced the synthesis of cholesterol, which helps glioblastoma cells survive. The researchers used Atorvastatin (Lipitor), which is also able to cross the blood-brain barrier, to target and inhibit the cholesterol-biosynthesis pathway.

The results of the study provide evidence that using quetiapine in combination with Atorvastatin and radiation may help extend the survival for people with glioblastoma. The study authors also point out that this therapy includes FDA-approved drugs that can rapidly be translated into a clinical trial.

— Denise Heady

“Dopamine Receptor Antagonists, Radiation, and Cholesterol Biosynthesis in Mouse Models of Glioblastoma,” *Journal of the National Cancer Institute*, February 9, 2021



Glioblastoma at left-frontal lobe with brain metastasis.

Image: Shutterstock

High Percentage of California Youth Struggle with Mental Health Issues

Mirroring a national trend, 45% of California youth between the ages of 12 and 17 report having recently struggled with mental health issues, with nearly a third of them experiencing serious psychological distress that could interfere with their academic and social functioning, according to a brief from the UCLA Center for Health Policy Research.

The reporting rates are higher for certain segments of the adolescent population, including poor, multiracial, gender-nonconforming and foreign-born young people. “With almost half of California’s adolescents experiencing moderate to serious psychological distress, there is an urgent need to protect their psychological and emotional well-being by addressing the structural and social factors related to inequities in mental health,” says D. Imelda Padilla-Frausto, PhD, a research scientist at the center.

Using data from the center’s 2019 California Health Interview Survey, the study authors looked at social determinants of health — non-medical factors such as family income, insurance, race and ethnicity, and citizenship status — to determine which adolescents were most affected by mental health distress. They also examined the impact of adolescents’ physical health and behavior in areas such as eating habits, physical activity, social media use and substance use, including drinking and smoking.

They found that 58% of adolescents whose family incomes were below the federal poverty level reported moderate to serious psychological distress in the past year — the highest across all income groups. Adolescents between the ages of 15 and 17 were more likely to report serious psychological distress than 12-to-14-year-olds. Female adolescents were one-and-a-half times more likely than males to report experiencing serious psychological distress,

as were gender-nonconforming teens in comparison with gender-conforming teens.

Adolescents born outside the U.S. were more likely to report serious psychological distress than U.S.-born adolescents, and nearly 43% of adolescents who identified as multiracial said they had experienced serious psychological distress — the highest among all racial and ethnic groups.

If not treated early and properly, the researchers stress, mental health problems can seriously impair a youth’s progress socially and academically and have long-lasting negative consequences in adulthood. It is imperative, they say, to increase access to mental health treatments for all adolescents and to improve preventive measures for those groups at particularly high risk.

The study authors urge federal, state and local policymakers, and those who work with adolescents and their families, to address these

inequities and boost access to mental health services.

“Addressing these needs using a multifaceted approach enables service providers and other people in the adolescents’ networks to help prevent issues of psychological distress — not only through treatment, but by placing aid in the settings that adolescents are already present in,” says Blanche Wright, lead author of the study and a doctoral student in clinical psychology.

— Elaiza Torralba

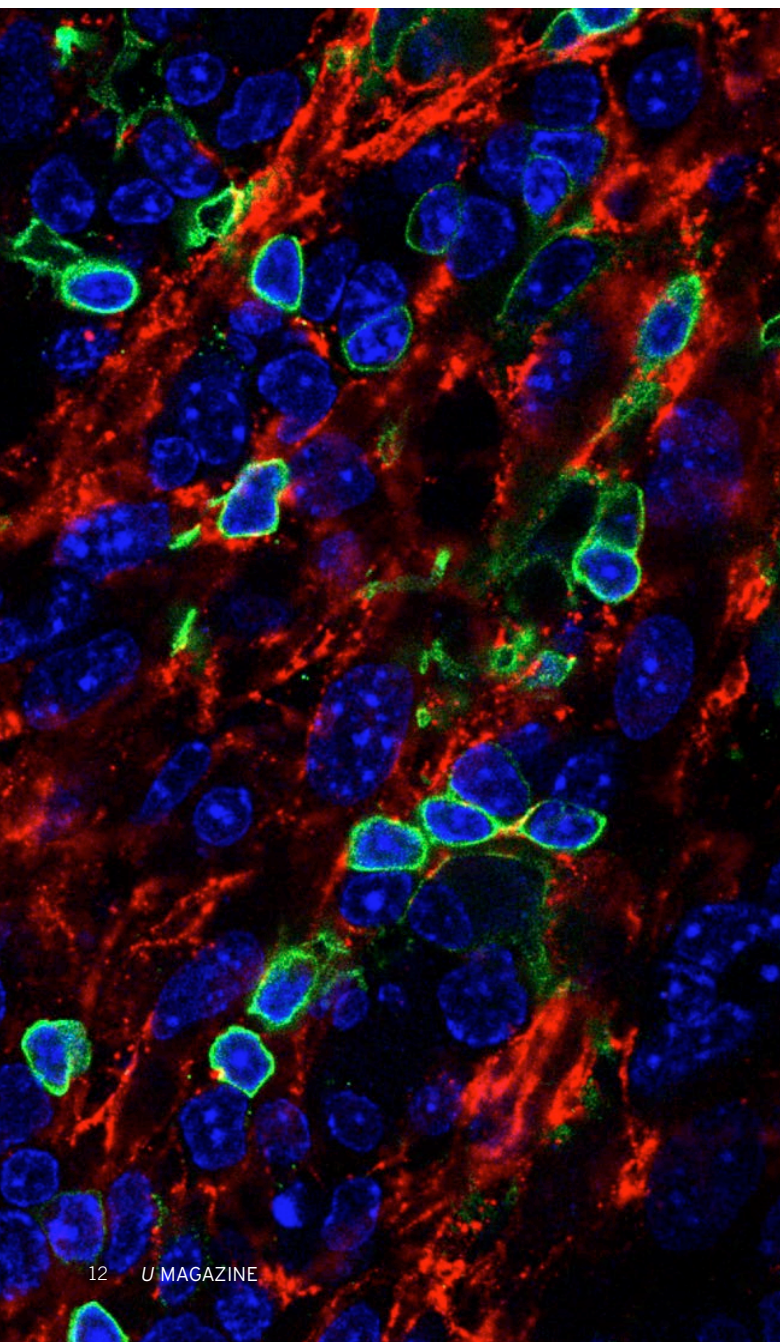


Illustration: Jason C. Walker

From a Single Blood Stem Cell, Millions of Diverse T Cells

A section of an artificial thymic organoid showing T cells (outlined in green) created from blood stem cells.

Image: UCLA Broad Stem Cell Research Center/Cell Reports



UCLA scientists have managed to generate a large number of T cells of different subtypes and with different functions from just a single blood cell using a novel approach: lab-grown mouse thymus organoids. Their research furthers the understanding of how T cells arise, which is critical to their potential use in future therapies for certain diseases.

“You need T cells to be able to respond to vaccines, to fight viruses and to control cancerous changes in the body, so there’s a lot of interest in understanding how T cells are made,” says Gay Crooks, MBBS, co-director of the Eli and Edythe Broad Center of Regenerative Medicine and Stem Cell Research and Rebecca Smith Professor of Pathology and Laboratory Medicine. “This is a great system to help us study that basic biology.”

All T cells are formed from blood stem cells in the thymus. However, research into how blood stem cells differentiate into T cells has been stymied, because the cells rely on complex chemical signals from the thymus, a process that cannot be replicated easily in a lab dish or in isolated stem cells. After successfully creating lab-grown human thymus organoids — clusters of cells that mimic the thymus — in 2017, Dr. Crooks and her team adapted their work to also make mouse thymus organoids in the lab. This allows a different set of observations on T-cell formation than previously possible, since some types of experiments are possible in mice but not humans.

“The main novelty with this mouse system is that we could start with one single stem cell,” says Amélie Montel-Hagen, PhD, associate project scientist in Dr. Crooks’ lab. “It’s amazing that from just one cell you can generate millions of diverse T cells.”

The researchers, who include UCLA MD/PhD candidate Victoria Sun, envision future experiments in which researchers remove or change genes thought to be important for generating T cells and use the thymus organoid to study the effect on mature T cells. While such experiments currently are possible inside genetically engineered mice, following the precise developmental paths of distinct groups of T cells is easier in an isolated laboratory system than in a living animal.

“For us to be healthy, the exquisite balance of immune cells and molecules in our bodies has to be just right,” says Dr. Crooks, who also is director of the Cancer and Stem Cell Biology Program at the UCLA Jonsson Comprehensive Cancer Center. “This will let us study how that balance is regulated.”

— Tiare Dunlap

“In Vitro Recapitulation of Murine Thymopoiesis from Single Hematopoietic Stem Cells,” *Cell Reports*, October 27, 2020

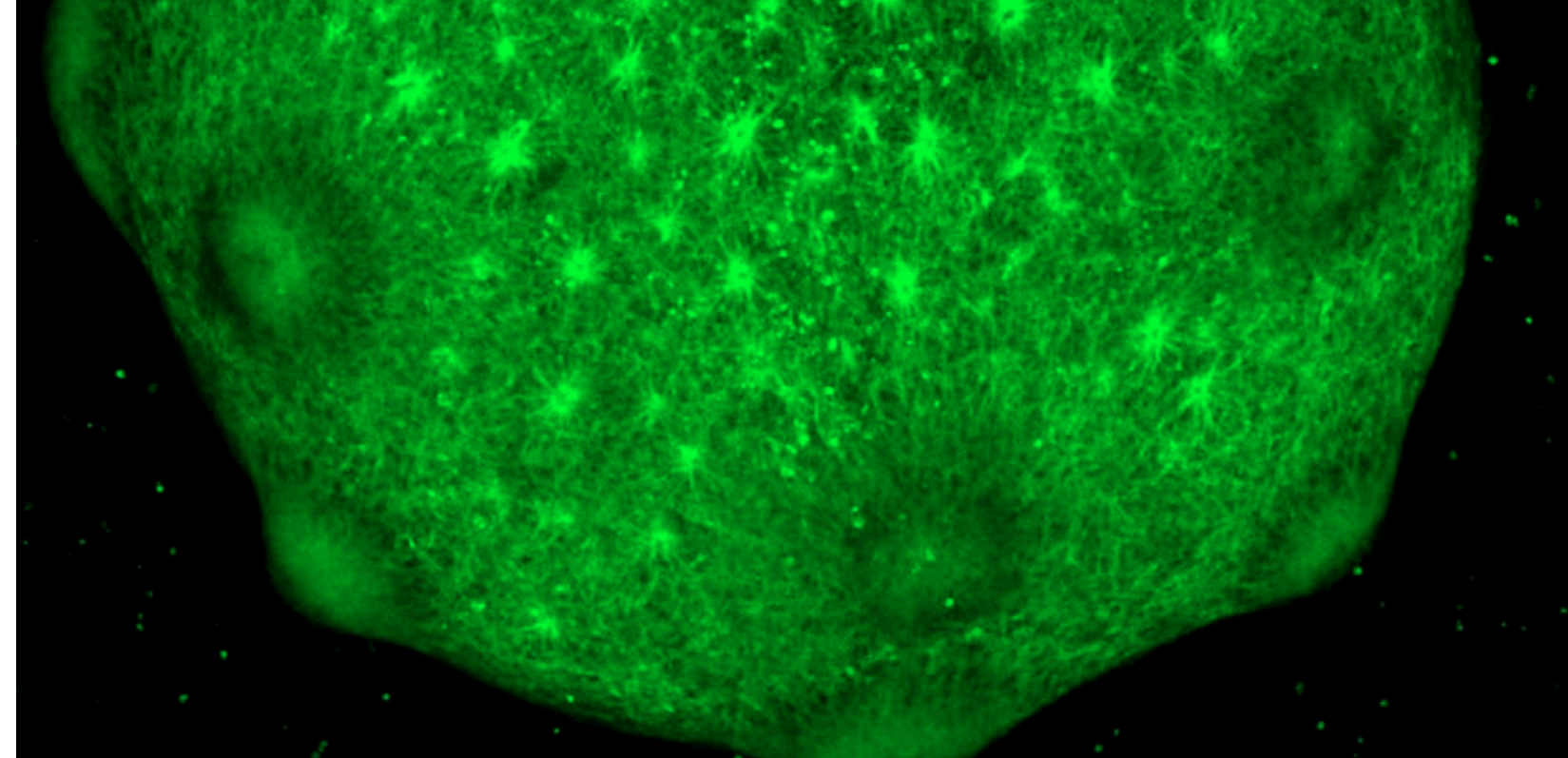


Image: Courtesy of Dr. Sergiu Pasca

Brain Organoids Grown in Lab Mature on Human Timelines

The use of human stem cell-derived organoids to study disorders has been hindered by the widespread belief that the cells that make up these self-organized three-dimensional tissue cultures remain stuck in a developmental state analogous to the cells seen in fetal development. But a new study from UCLA and Stanford University researchers finds that brain organoids can in fact mature in a manner that is strikingly similar to human brain development. The findings indicate that it may be possible to grow the organoid cells to a maturity that will allow scientists to better study adult-onset diseases such as schizophrenia or dementia.

Daniel Geschwind, MD (RES '95, FEL '97), PhD, Gordon and Virginia MacDonald Distinguished Professor in Human Genetics and director of the Institute for Precision Health at UCLA, and collaborators at Stanford conducted an extensive genetic analysis of organoids that had been grown for up to 20 months in a lab dish. They found that these 3D organoids follow an internal clock that guides their maturation in sync with the timeline of human development.

“This is novel,” Dr. Geschwind says. “Until now, nobody has grown and characterized these organoids for this amount of time, nor shown they will recapitulate human brain development in a laboratory environment, for the most part.”

Human brain organoids are created using induced pluripotent stem cells, also known as iPS cells, which are derived from skin or blood cells that have been reprogrammed back to an embryonic stem cell-like state. These iPS cells are then exposed to a specialized mix of chemicals that

influences them to create the cell of a certain region of the brain. With time and the right conditions, the cells self-organize to create 3D structures that faithfully replicate several aspects of human brain development.

Human stem cell-derived organoids have the potential to revolutionize the practice of medicine by giving researchers unprecedented insights into how complex organs — including the brain — develop and respond to disease. For several years, researchers have been growing human brain organoids to study human neurological and neurodevelopmental disorders, such as epilepsy, autism and schizophrenia.

The study reveals “that these 3D brain organoids follow an internal clock, which progresses in a laboratory environment in parallel to what occurs inside a living organism,” says Aaron Gordon, PhD, a post doc in Dr. Geschwind’s lab. “We’ve shown that these organoids can mature and replicate many aspects of normal human development,” Dr. Geschwind says, “making them a good model for studying human disease in a dish.”

— Marrecca Fiore

“Long-term Maturation of Human Cortical Organoids Matches Key Early Postnatal Transition,” *Nature Neuroscience*, February 22, 2021

A Method to More Efficiently Isolate and Identify Rare T Cells

Researchers around the world are exploring methods to collect T cells with receptors targeting cancer or other illnesses like the SARS-CoV-2 virus from patients, expand those cells in the lab and then return this larger population of targeted T cells to patients to boost their immune response. Now scientists from the Eli and Edythe Broad Center of Regenerative Medicine and Stem Cell Research at UCLA have developed a technique that will enable researchers to more efficiently isolate and identify rare T cells that are capable of targeting viruses, cancer and other diseases.

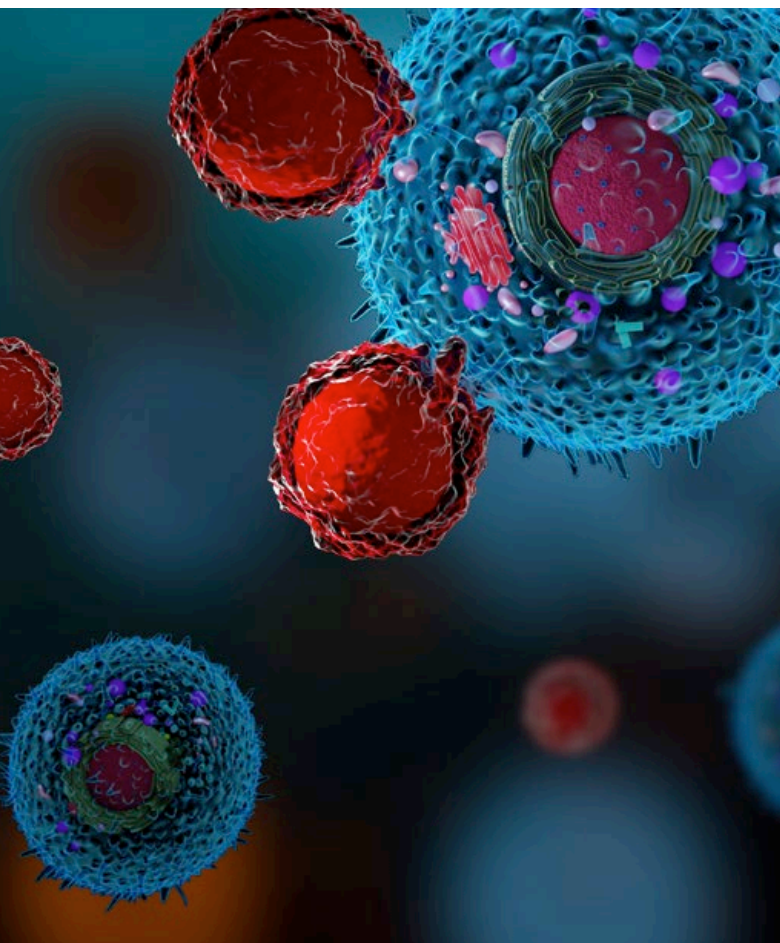


Image: iStock

The approach could increase scientists' understanding of how these critical immune cells respond to a wide range of illnesses and advance the development of T-cell therapies. This includes immunotherapies that aim to boost the function and quantity of cancer or virus-targeting T cells and therapies intended to regulate the activity of T cells that are overactive in autoimmune diseases such as diabetes and multiple sclerosis.

"This addresses challenges at the heart of finding T-cell receptors for treating cancer and other diseases, as well as viral infections — from acute viruses like the virus that causes COVID-19 to chronic viruses like Epstein Barr or herpes," says Owen Witte, MD, founding director of the UCLA Broad Stem Cell Research Center.

The study describes how the new method, called CLInt-Seq, combines and improves upon existing techniques to collect and genetically sequence rare T cells. "T cells are critical for protecting the body against both infections and cancers," says Pavlo Nesterenko, a graduate student in Dr. Witte's lab. "They're both the effectors and organizers of the body's adaptive immune response, which means they can be used as therapeutics. Studying their dynamics can shed light on overall immune activity."

T cells stand out from other immune cells, because they are equipped with molecules on their surfaces called T-cell receptors. Every T-cell receptor is capable of recognizing one specific antigen. For example, one T-cell receptor might recognize an antigen from the virus that causes the common cold, while another might recognize an antigen from breast cancer.

When researchers attempt to isolate T cells with specific receptors using traditional methods, they end up capturing bystander cells. CLInt-Seq alleviates this problem by incorporating a technique that enables researchers to distinguish T cells with receptors of interest from most bystander cells. Additionally, the process of isolating T cells with specific receptors, known as cross-linking, degrades the T cells' RNA and makes mRNA sequencing for analysis very challenging. CLInt-Seq overcomes this hurdle by utilizing a method of cross-linking that is reversible and thus preserves the T cells' RNA.

Moving forward, Dr. Witte is utilizing this technology to address a number of scientific questions, including identifying T-cell receptors that react to the SARS-CoV-2 virus and developing T-cell therapies for prostate cancer.

— Tiare Dunlap

 "Droplet-based mRNA Sequencing of Fixed and Permeabilized Cells by CLInt-seq Allows for Antigen-specific TCR Cloning," *PNAS*, January 19, 2021

More Women Embrace "Going Flat" after Mastectomy

A growing number of women forgoing reconstruction after a mastectomy say they're satisfied with their choice, even as some did not feel supported by their physician, according to a study led by researchers at the UCLA Jonsson Comprehensive Cancer Center. The study surveyed 931 women who had a unilateral or bilateral mastectomy without current breast-mound reconstruction to assess the motivating factors for forgoing the procedure and to measure whether surgeons provided adequate information and support for "going flat."

Out of the women surveyed, 74% were satisfied with their outcome and 22% experienced "flat denial," where the procedure was not initially offered, or the surgeon did not support the patient's decision or intentionally left additional skin in case the patient changed her mind.

The team also explored reasons given for the choice and found women pointed to a desire for a faster recovery, avoidance of a foreign-body placement and the belief that breast-mound reconstruction was not important for their body image. "Undergoing a mastectomy with or without reconstruction is often a very personal choice," says Deanna Attai, MD, assistant clinical professor of surgery. "We found that for a subset of women, 'going flat' is a desired and intentional option, which should be supported by the treatment team and should not imply that women who forgo reconstruction are not concerned with their postoperative appearance."

The results challenge past studies showing that patients who chose not to undergo breast reconstruction tend to have a poorer quality of life compared with those who do have the surgery.

Dr. Attai and her team found that a majority of patients who elected to go

PATIENT-REPORTED OUTCOMES BY ONLINE SURVEY

931 RESPONDENTS



TOP 2 REASONS:

- Fewer complications •
- No foreign body •

22% EXPERIENCED FLAT DENIAL



DUE TO:

- Not offered flat option •
- Surgeon not supportive •
- Surgeon left additional skin •

74% SATISFIED WITH OUTCOME



PREDICTORS:


- Surgeon support •
- Adequate information •

flat were, in fact, satisfied with their surgical outcome. The authors believe the survey tool commonly used to assess outcomes was biased toward reconstruction. To avoid that bias, Dr. Attai partnered with patient advocates to develop a unique survey to assess the respondents' reasons for going flat, the satisfaction with their decision, and the factors associated with their satisfaction. They also identified concerns unique to these patients not captured by other validated surveys.

While a majority of the women surveyed reported they were satisfied with their surgical outcomes, 27% of the patients surveyed reported not being satisfied with the appearance of their chest wall. "Some patients were told that excess skin was intentionally left — despite a preoperative agreement to perform a flat chest-wall closure — for use in future reconstruction, in case the patient changed her mind," Dr. Attai says. "We were surprised that some women had to struggle to receive the procedure that they desired."

Surgeons may hesitate to recommend mastectomy without reconstruction due to being less confident that they can provide a cosmetically acceptable result for patients who desire a flat chest wall, Dr. Attai notes. "We hope that the results of this study will serve to inform general and breast surgeons that going flat is a valid option for patients, and one that needs to be offered as an option. We also hope the results may help inform patients that going flat is an option, and to empower them to seek out surgeons who offer this option and respect their decision," she says.

— Denise Heady

 "Going Flat' After Mastectomy: Patient-reported Outcomes by Online Survey," *Annals of Surgical Oncology*, January 3, 2021

How COVID-19 Punished Latinos for Their Hard Work

The coronavirus was tailor-made to target those who work blue-collar jobs that are impossible to carry out at home, belong to deep social networks and live in multigenerational households.

David E. Hayes-Bautista, PhD
Director, Center for the Study of Latino Health and Culture
Professor, public health and medicine

When America's largest minority coughs, David E. Hayes-Bautista, PhD, is there to document it. The director of UCLA's Center for the Study of Latino Health and Culture in the David Geffen School of Medicine at UCLA is a prolific writer, author and guest on radio and television, all while training the next generation of Latino medical professionals to think of their work as simultaneously academic and advocacy based. So Dr. Hayes-Bautista was ready to chronicle coronavirus from the start. But his job and worldview became even more crucial as COVID-19 disproportionately affected Latinos, who account for about 39% of California's population but 55% of its coronavirus cases and nearly half of its coronavirus deaths. He was a proverbial lone voice pushing back against a prevailing media narrative that Latinos have been among the hardest-hit groups because, well, they are Latinos. Dr. Hayes-Bautista and his team, via a torrent of policy papers, interviews and even a podcast, not only explained that systemic inequities were at the core of Latino suffering, but cast the community in heroic terms as a group that did the jobs that had to be done. He spoke with *Los Angeles Times* columnist Gustavo Arellano.

There's no other way to put it: Why have Latinos suffered so much during this pandemic?

Dr. David Hayes-Bautista: If Latinos had not been doing their jobs, the rest of us Californians would not have eaten. If you remember the first month or so of the pandemic, people in the grocery stores were fighting over paper towels and toilet paper. If it hadn't been for farm workers exposing themselves daily, we would have been fighting over the last sack of potatoes in the store — and that would have been some serious fighting. Part of the problem also is that the formal medical institutions of the state have, for 170 years, largely turned their backs on Latino health, then now they wonder, "Gee, why aren't they showing up to get vaccines?" There aren't sufficient physicians practicing [where Latinos live]. Often, Latinos are not offered the chance to acquire health insurance.

When did you realize that coronavirus would hit Latinos as hard as it did?

Dr. Hayes-Bautista: Very early on. We began writing our series of COVID reports way back in April [2020], to make sure people understood that

we have a population here that is essential, but who got left off the essential list. But without them, the state does not run. And we were not supplying them with personal protective equipment. They didn't have access to a physician to get the permission to get tested to see if they were COVID-positive. I mean, all these things were stacked against them, yet they continue showing up for work.

In your work, and that of your colleagues, you didn't just talk about Latinos as victims of this pandemic; you also gave Latinos agency.

Dr. Hayes-Bautista: There have been two narratives about Latinos and COVID. One is sort of the narrative of Latino dysfunction. What are Latinos doing wrong? Oh, they're overweight. They have diabetes. That's why they're getting it. Or, as I look at it, it is just the opposite. Actually, Latinos are quite functional. They're showing up. They're doing their jobs. But it has been, by and large, without the protections that we award people in [wealthier areas], without the access to care, without the personal protective equipment and, now, without the vaccinations. So, it's no wonder, quite frankly, that this pandemic has

had a disproportionate impact on Latinos. But it's because Latinos are doing their jobs, keeping the state running, that Latinos have been the ones who have been most impacted.

You have talked about how some of the very strengths of Latinos — multigenerational households, working-class mentality and working-class jobs — ended up proving to be their Achilles heel during this pandemic.

Dr. Hayes-Bautista: What normally would be a strength — a very strong work ethic, people bundling up to save money because housing is so expensive and wages are so low, children being present in the household — proved to be a vulnerability in this situation. Coronavirus is very opportunistic. Coronavirus does not discriminate. It just likes a lot of people gathered together who are exposed for a long time, and then coronavirus goes to work.

One of the things I have been writing about a lot is what I call *pandejos* — people who not only don't wear masks or socially distance, but who happily go out and party. Obviously, it's not a Latino-only phenomenon, but I

"If it hadn't been for farm workers exposing themselves daily, we would have been fighting over the last sack of potatoes in the store — and that would have been some serious fighting."



Dr. David E. Hayes-Bautista.
Photos: UCLA Health

“There was no national leadership trying to prevent the spread of the coronavirus, just this very loud, persistent drumbeat narrative coming from people in power that coronavirus was a hoax, that control measures were socialist, that the disease would disappear.”

“COVID has shone a really harsh light on all these inequities in health care delivery to the Latino community that had been festering for 170 years.”

believe that Latinos should know better. How fair is this assessment?

Dr. Hayes-Bautista: From the national level, this pandemic has been politicized, so in many communities the act of taking protective measures, such as wearing a mask, such as social distancing, were seen as a political statement. And that really created a lot of confusion for a lot of people. There was no national leadership trying to prevent the spread of the coronavirus, just this very loud, persistent drumbeat narrative coming from people in power that coronavirus was a hoax, that control measures were socialist, that the disease would disappear. It got people confused. I heard stories from my students that their parents who are doing their jobs — they’re a clerk in a large big-box store, for example, and they try to ask a customer who comes in to please wear a mask, and people scream at them, breathe on them, spit on them and everything else, and they’re just doing their job. People were not behaving like that with Ebola and [the] H1N1 [virus]. With these [pandemics], we tended to have more controlled messaging, and people were willing to respond appropriately. This time, it’s been a mess. And from Memorial Day to Fourth of July, things just took off in California once we took our foot off the brake pedal of protective measures.

What are some of the lessons that we can take from the pandemic to better address Latino health concerns in general and for future pandemics?

Dr. Hayes-Bautista: We need to learn lessons because there will be another pandemic, probably within five-to-10 years. Will we have learned enough from this one? We’re not dealing with a

short-term issue. For 170 years, Latino health has basically been ignored by the health care institutions of the State of California. So, we need to turn that around — and it won’t turn around in 10 weeks, and it won’t turn around completely in 10 months. Maybe in 10 years, we can start to get that tide slowly to shift. But that will take a lot of effort. It’ll take a lot of leadership. Do we have that in this state? That’s what we’ll have to see.

How has coronavirus affected you personally?

Dr. Hayes-Bautista: Besides the fact that I had to shelter because I fit the old-age profile, I realized when the UCLA campus shut down and I started hearing these strange stories — that coronavirus was going to be a disease of the wealthy and they’ve got it under control and everything else — that we needed to get our data out. So, actually, we shifted our research. We shifted our work in the center to focus the majority of our effort — I would say 70, 80% — on helping people understand COVID and its impacts upon Latinos. We also tied it to larger policy issues such as medical education, graduate medical education, the nursing supply, the community clinics. COVID has shone a really harsh light on all these inequities in health care delivery to the Latino community that had been festering for 170 years.

What has coronavirus revealed about where Latinos stand in the United States?

Dr. Hayes-Bautista: It has revealed, unfortunately, that attitudes haven’t changed much in 170 years. You have to remember when the U.S. took over California back in 1848, that was the last time that Latinos were actually anywhere close



to proportionately represented in what was the state Constitutional Convention. Since then, the narrative about Latinos is that we are the eternal foreigner or the stranger or the criminal. We are the bearers of disease. We are the problems that need to be controlled. We need to be policed. We need to be jailed. That has been going on for 170 years. It hasn’t changed yet.

How will history remember this moment in regard to Latinos and the coronavirus?

Dr. Hayes-Bautista: Well, history is written by the winners. So we need to, in essence, rewrite the narrative, make sure we understand the role that Latinos have played historically in California. When I talk about the need for health care services in Spanish, and there are people who tell me, “Oh, you know, you guys are all just going to assimilate, and in another 10 years, nobody is going to speak Spanish,” that’s not a new thing. It’s been here all along. And now, when something like this happens

and they want to talk to a farm worker about the importance of being protected and they can’t, well, that just tells us there should have been more physicians who speak Spanish being educated. So, it’s a matter of narratives. It’s a matter of history. Who will write that history? That depends. I have a group of researchers I work with that includes doctoral students, postdoctoral students, post-residency fellows and young faculty. We’re trying to at least get the data out so that, hopefully, some historians will use it in the future to write the history of COVID. I would like to have that history say Latinos did their job, but the social system let them down.



For more information about the UCLA Center for the Study of Latino Health and Culture, go to: uclahealth.org/ceslac

The Natural

WEIZHE HONG, PHD

Associate Professor of Neurobiology and Biological Chemistry

Dr. Weizhe Hong studies the fundamental question of how the brain controls complex behaviors — essentially, how our brains work — with a particular focus on the brain's relationship to social behaviors that take place among individuals. By studying those processes, he hopes to increase our understanding of how impairment of those functions may lead to mental disorders. His work has led to a number of prestigious recognitions over the past year, including the Young Investigator Award from the Society of Neuroscience.

Dr. Hong steps into the U Magazine spotlight.

When did you first start to think about science?

Both of my parents are scientists, and I spent a good deal of my childhood in their labs. So I got to know what science is about and to think about it from a very young age. It feels very natural for me to be around science.

What was your first experiment?

It wasn't an experiment, exactly, but I caused some trouble when I was 4 or 5 years old. There was a large cooling system in the lab, and I saw that the water was on, and I had always been told at home that when there is running water, I should turn it off. So, I turned it off — and I guess I turned off the entire cooling system. It triggered a warning, and someone reacted quickly to turn the water back on, so it didn't really cause any damage, but it was a little bit traumatic for me at the time. My first serious experiments were in high school, in a biochemistry lab. Before that, biology was just something that you memorized, and it was boring. Working in the biochemistry lab completely changed my view of biology and biomedical research, learning that science is not just something you observe and describe, but it involves actually designing ways to look deeper into the nature and the underlying, often hidden, processes inside a problem.

What has been your greatest challenge?

The brain is the most complex organ, and we are only scratching the surface of our understanding of it. Every day we think about new ways to try to reduce the complexity so we can begin to understand the underlying process, how brain cells or neurons communicate with each other, how they work together to service a particular function so that we can think, we can memorize things. Those amazing functions are just interactions between brain cells, but that's such a complex process.

Who is your science hero?

I have many mentors and advisors, and those people are all my heroes. There are many great scientists in history who are so

inspirational. I particularly admire people who persevere in a difficult situation, and who make the impossible possible.

Where are you happiest?

In the lab. I like to work, and in the lab I am surrounded by smart and talented people who share the same passion.

What has been your biggest "aha!" moment?

In scientific research, there are so many moments of incremental progress. Maybe there is some "aha!" moment in there, but I can't think of a particular one.

What has been your finest achievement?

I think it has been creating a lab of amazing people and an intellectually stimulating environment for them to work in. There have been specific findings that are important, but that is secondary, I think, to creating a platform where we can work together to continue to make progress.

What are the qualities of a great scientist?

Being humble and having humility and perseverance in difficult situations. It is important to be open-minded, not just to ideas, but also to criticism. And creativity is important. But perseverance and open-mindedness are, to me, the most important qualities.

What is your greatest fault?

I'm impatient. I'm eager to get things done and to know the answer to a question. I'm definitely impatient.

What is your motto?

Chance favors the prepared mind. And, hope for the best; prepare for the worst.

What do you value most in your colleagues?

I really like their honest and constructive feedback and criticism. The only way we can make real progress is to hear criticism from other



Illustration: Patrick Morales-Lee

people. We have to be open to that, and I think I really value that from other people, no matter how negative it is.

When don't you think about science?

I have two young children, so there are many occasions when I can't think about science. During COVID, for half a year we didn't have any child care, so I was at home with them during that time, and that was amazing. Playing with my kids and seeing them grow, that was very inspirational.

If not a scientist, what would you be?

I think I would be an entrepreneur. I don't want my time to be wasted, and if I can do something really unique in my life, I'll do that. I think that is the reason I love being a scientist — having the freedom to explore and to potentially make a unique contribution to humanity. I probably would be an entrepreneur for the same reason, because it comes with a substantial amount of freedom to do whatever one is passionate about.

What's your most treasured possession?

Time. One's work career is about 30-to-40 years, which sounds like a lot, but it is only about 10,000-to-15,000 days, including weekends and holidays. The total time for us to make a real contribution in our work is, really, very limited, and that makes it precious.

What are you most compulsive about?

To look into the nature of something and to know the truth.

How do you want to change the world?

I believe that knowing how we understand ourselves, how we process information and how we make decisions can change how we think about the world. We now see the emergence of artificial intelligence, yet we haven't even scratched the surface of understanding the human mind. So, I think it is critically important for us to have a greater understanding of the human mind before we move on to artificial intelligence. As a neuroscientist, it is a little bit of an urgent moment.

What is your definition of happiness?

Having a sense of purpose and the freedom to pursue it.

What is your definition of misery?

The opposite of my definition of happiness, not having a sense of purpose or not being able to pursue it.

What music do you listen to while you work?

I like classical music. I love that it pushes you to think deeply about the purpose of your life. But I usually don't listen to music while I work. Listening to music is something that I want to focus and spend time on. I don't do other things when I listen to music.



The

LONG

HAUL

By Sandy Cohen

It is unclear why some patients who recover from COVID-19 continue to experience troubling symptoms that can include emotional disturbances and blurry thinking. Now, scientists are searching for answers to what has become known as “long COVID.”



Before he got sick in June 2020, Ruben Salazar was a happy, easygoing guy. The 43-year-old father of two took pleasure in playing with his kids in the park near their home in Los Angeles, working out and his job at a health-supplement company. “I’m a Cancer, a water sign, so I just go with the flow,” Salazar says.

Then he caught COVID-19 and became a “long-hauler” — a member of an unfortunate club that includes countless people around the globe who have gotten the coronavirus and recovered from their acute infection but who still suffer lingering health issues in the aftermath of the virus.

Salazar was hospitalized for 10 days, including four that he spent in the ICU in a medically induced coma on a ventilator. Now, nearly a year later, he struggles with anxiety, mood swings and the impaired concentration, forgetfulness and blurry thinking commonly called “brain fog.” He suffers from recurrent nightmares, says he’s more aggressive than ever before — “I speak what I need to speak out,” he says — and has been diagnosed with anxiety and post-traumatic stress.

“Now, I’m talking to a psychiatrist,” he says.

The fatigue that left him winded from even the slightest physical activity when he was first

discharged from the hospital has mostly subsided. He feels a bit more energetic but still has trouble breathing when he exerts himself. Doctors cleared him to return to work, but only part-time, because of his ongoing cognitive and psychological issues, which Salazar says only compounds the stress that he feels as the family breadwinner. “I do find myself more frustrated nowadays than before I was sick,” he says. “I was a more patient guy, but now I get mood swings, and I fall into depression, and then I kind of exclude myself from people.” He stops for a moment, quiet. “I’m not the Ruben I used to be,” he says.

AS THE EXPANDED ROLLOUT OF VACCINES POINTS TOWARD THE HOPED-FOR END OF THE PANDEMIC,

scientists are increasingly focused on understanding and treating long-hauler patients like Salazar. Multiple studies are underway at UCLA and other institutions across the country to determine the range of symptoms that constitute what has been termed “long COVID,” how long they might persist and what, potentially, can be done to prevent or alleviate them.

“This is a phenomenon that is really quite

“I’m not the Ruben I used to be,” says Ruben Salazar (right, with children Mila, age 8, and August, age 5, and wife Marianne) of his ongoing struggle with long COVID.

Photo: Ann Johansson

real and quite extensive,” Anthony Fauci, MD, director of the U.S. National Institute of Allergy and Infectious Diseases, said in December 2020 at a national workshop about the condition. Given the more than 115 million confirmed COVID cases around the globe and the nearly 30 million in the United States, “Even a small proportion with post-acute sequelae are going to represent a significant public health issue,” Dr. Fauci said.

“I do find myself more frustrated nowadays than before I was sick,” he says. “I was a more patient guy, but now I get mood swings, and I fall into depression, and then I kind of exclude myself from people. I’m not the Ruben I used to be.”

Physicians and researchers are turning to patients to find answers. COVID-19 survivors with continued symptoms are the ones who coined the terms “long-hauler” and “long COVID” in online support groups early in the pandemic.

A preprint study released in December surveyed nearly 3,800 members, from 56 countries, of a COVID-19-survivor group called Body Politic to better understand the range, frequency and duration of their symptoms. It found that 85% of those surveyed experienced cognitive dysfunction, and 77% reported memory problems. Emotion and mood changes affected 88% of respondents. Fatigue was the most common symptom, affecting more than 98% of survey respondents. Only 27% of respondents had returned to their pre-illness work schedules. Researchers estimate that at least 10% of people infected with COVID-19 could become long-haulers, with symptoms that continue for three months or more.

An article this past summer in *The Atlantic* cited similar studies around the world that reached equally disturbing conclusions: An Italian study found that 87% of hospitalized patients still had symptoms after two months; a British study found similar trends; a German study that included many patients who recovered at home found that 78% had heart abnormalities after two or three months.

A more recent study published in *The Lancet* in April 2021 found that a third of more than

236,000 coronavirus patients surveyed received a neurologic or psychiatric diagnosis within six months of recovery from COVID-19. The number was even higher — 42% — for COVID-19 patients who were treated in intensive care.

The U.S. Centers for Disease Control and Prevention is trying to learn more through its nationwide, multisite INSPIRE (Innovative Support for Patients with SARS-CoV-2 Infection Registry) study that launched in December. The effort, which is led at UCLA by Joann Elmore, MD, MPH, professor of medicine in the David Geffen School of Medicine at UCLA, aims to collect health records from thousands of Americans who have been tested for COVID-19 infection and survey them quarterly for 18 months to look for clues about lingering symptoms.

In a recent article in *The Washington Post*, Dr. Elmore addressed the impact of the condition on women in particular. “I hope going forward that physicians will treat symptoms of both male and female patients with respect,” she said. “Historically, there have been both gender and racial biases. I worry that patients with real disease may not be taken seriously.”

Many questions remain to be answered. “We don’t yet know how common it is for individuals to experience long-term health issues after COVID-19 infection, which makes it harder to look out for specific signs and symptoms,” Dr. Elmore says. There are those who think that long COVID only affects patients like Salazar who have been seriously ill and intubated in an ICU. But, Dr. Elmore says, ongoing symptoms also are showing up in patients who are young and otherwise healthy and have had only mild cases of COVID-19. “I have to admit, as a physician, that scares me,” she says. “If we want to be able to prevent and treat long-haul symptoms, we need more data.”

The symptoms of long COVID are as varied as the people who are afflicted. Some long-haulers were hospitalized during their acute infection; others, as Dr. Elmore notes, had milder illness but never fully recovered. A preprint study released in March found that asymptomatic infection can also result in lingering symptoms. An analysis of medical records from 1,400 University of

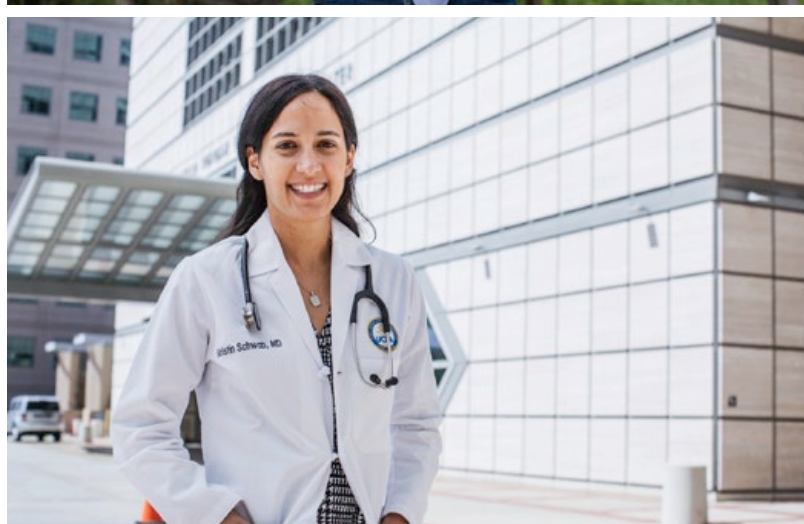
California patients who tested positive for coronavirus revealed post-COVID complaints of shortness of breath and chest pain that persisted for at least two months, even among those who had never felt sick during acute infection. The range of post-COVID experiences also includes prolonged anosmia (loss of sense of smell), heart palpitations, cough, fatigue, hair loss and the depression and brain fog Salazar is still facing.

The brain fog and other neurological symptoms Salazar has been experiencing may be associated with post-traumatic stress, says Andrew Levine, PhD, clinical professor of neurology. He recently coauthored a paper that found similar symptoms in survivors of SARS and MERS, two previous coronavirus infections. “Individuals who suffer serious COVID-19 often are put in the ICU on mechanical ventilators and experience delirium,” Dr. Levine says. “Those conditions and treatments themselves, even outside the context of COVID, can lead to post-traumatic stress.”

That stress can be exacerbated by the barrage of news coverage about the disease. “There’s certainly a kind of neurosis that arises from everyone’s knowledge about this illness and all the reports of long-haulers having lasting symptoms,” Dr. Levine says.

SINCE HE WAS DISCHARGED FROM UCLA IN JULY, Salazar has been under the care of multiple physicians. He was first treated after being discharged at UCLA’s Post-ICU Recovery Clinic, which opened in February 2020 and quickly became a de-facto post-COVID-19 clinic. Staffed by multidisciplinary experts — including critical-care doctors, pulmonologists, occupational therapists, physical therapists and social workers — the clinic was created to help patients transition from the ICU to home recovery. “They get such intensive care in the hospital and have this near-death experience, and then they’re discharged — usually with many new diagnoses, including new pulmonary conditions, significant weakness, cognitive dysfunction and the risk of other psychiatric conditions — and are often left to fend for themselves at home,” says Kristin Schwab, MD (RES ’16, FEL ’20), a founder of the Post-ICU Recovery Clinic. “We really envision this clinic as a way to bridge them back to their primary care doctor and their normal lives.”

Salazar is still waiting for normal life to resume. Physically, he says he’s getting there. On top of COVID-19, he came out of the hospital with



diagnoses of hypertension and diabetes, and has since improved his diet significantly. “Before I got sick, I was feeling the symptoms of being diabetic, but I was in denial. I didn’t want to believe it,” he says. “But you know what? It almost cost me my life to understand it, so now I take that as most important in my life. It’s my chance to get myself back to being healthy.”

Psychologically, though, Salazar is still in unfamiliar territory. “Sometimes I forget things. And before, that was never an issue. I was always, always sharp on my memory. But now, even when I test my blood, I see the number and forget instantly,” he says. “And, sometimes, I just lose concentration and my mind wanders off.”

He finds himself newly short-tempered. But most troubling is the depression and anxiety that cause him to isolate and withdraw from his wife and children.

“For me to go through these emotions that I’ve been going through, it’s like a roller coaster, and it’s something I’ve been dealing with since I’ve been sick,” Salazar says. “And it’s just like, when is it going to be right again? When am I going to be back to normal?”

Helen Lavretsky, MD (RES ’95, FEL ’96), professor-in-residence in the Department of Psychiatry and Biobehavioral Sciences in the Jane and Terry Semel Institute for Neuroscience and Human Behavior at UCLA and an integrative geriatric psychiatrist at the Stewart and Lynda Resnick Neuropsychiatric Hospital at UCLA, hopes that she can help long-haulers with their cognitive and psychiatric symptoms. She established a new clinic that is working in concert with the Post-ICU Recovery Clinic to treat long-COVID patients with therapies that have been found in her research on geriatric depression to be effective.

“Neuropsychiatric symptoms are a big part of the picture post-COVID and include chronic fatigue, depression, anxiety, PTSD, insomnia and brain fog,” Dr. Lavretsky says, adding that research shows that the inflammatory and vascular response to the virus affects multiple organs. “A lot of these changes are vascular and inflammatory in nature.

“The brain is one of many organs that are damaged by COVID-19 infection, with resulting vascular and inflammatory changes,” Dr. Lavretsky says. “After the virus is no longer found in tissues, the inflammatory reaction persists and leads to cognitive and neuropsychiatric symptoms.”

Even before the pandemic, scientists hypothesized that neuroinflammation might contribute to depression, fatigue and cognitive dysfunction. “These symptoms lead to disability. And the worst thing is, nobody really knows how to treat it, or whether or not it’s time-limited,” Dr. Lavretsky says. “Symptoms such as anxiety and depression can be the product of COVID — of this inflammatory response and brain changes — but it also could be a reaction to this new disability and uncertain future.”

Dr. Lavretsky’s research with older adults with treatment-resistant depression has included trials using Ritalin, the drug often prescribed for attention-deficit hyperactivity disorder, and memantine, a medication used to treat symptoms of Alzheimer’s disease, as well as mind-body therapies such as yoga, meditation and Tai Chi. These interventions have “neuroplastic, neuroprotective effects on symptoms of apathy, anxiety and depression, as well as cognitive impairment,” she says, making them potentially effective treatments for the psychiatric and cognitive symptoms experienced by long-haulers.

“I’m motivated to try these therapies that have been proven in older adults for post-COVID patients,” she says. “Society globally will be dealing with this disabling condition for years to come, and that’s my motivation to have this clinic. Long COVID is a real thing. It’s very disabling, and countries will be dealing with the financial fallout from millions of people being disabled like this.”

Salazar, despite his ongoing challenges, is motivated, too. “I’m going to try to beat this and overcome all my anxieties and try to overcome everything,” he says. “That’s one of my strong goals right now.”

He is hopeful that science will provide solutions for the condition that continues to plague him and millions of other COVID-19 survivors months after their original illness.


“If I have issues,” Salazar says, “I hope they have answers for them.”

Sandy Cohen is a senior writer in UCLA Health Communications and a former national writer for *The Associated Press*.

UCLA scientists (from top) Dr. Joann Elmore, Dr. Helen Lavretsky, Dr. Andrew Lavine and Dr. Kristin Schwab are working to understand and address the mysteries of long COVID.

Photos: (Elmore, Lavretsky, Schwab) Christina Gandolfo; (Levine) Leon Villagomez

 For more information and to enroll in the INSPIRE study, go to: inspirecovidstudy.med.ucla.edu

 For more information about the UCLA Post-ICU Recovery Clinic, go to: uclahealth.org/micu/post-icu-recovery-clinic



BRICK- BY- BRICK

The work of rebuilding UCLA Health as an edifice of anti-racism starts from the ground up.

BY **Jocelyn Apodaca Schlossberg**
PHOTOGRAPHY **Jessica Pons**



Change-makers at UCLA Health are working toward creating a culture of equity, justice, diversity and inclusion. Among them are (top, from left) Johnese Spisso, Vernon Goodwin and Dr. Lovelee Brown; (middle, from left) Dr. Christina Harris, Dr. Medell Briggs-Malonson and Dr. John C. Mazziotta; and (bottom, from left) Dr. Keith Norris and Jerome Crawford.

Opposite page: (top, from left) Dr. Michael Mensah, Dr. Kelsey C. Martin and Dr. Clarence Braddock; (middle) Dr. Lynn Gordon; and (bottom) Dr. Kathleen Brown.



DURING THE FREEDOM SUMMER PROJECT OF 1964 TO REGISTER BLACK VOTERS IN MISSISSIPPI, THE CIVIL RIGHTS ACTIVIST ELLA BAKER PROCLAIMED: “UNTIL THE KILLING OF BLACK MEN, BLACK MOTHERS’ SONS, BECOMES AS IMPORTANT TO THE REST OF THE COUNTRY AS THE KILLING OF A WHITE MOTHER’S SON, WE WHO BELIEVE IN FREEDOM CANNOT REST UNTIL THIS HAPPENS.”

It is now nearly six decades later, and a year-long pandemic that has wracked the U.S. — and the world — starkly reveals the stubborn endurance of inequity and racism within America and the American health care system. This is clearly evident in the disproportionate rate at which Black, Indigenous, Latino and other marginalized communities have suffered poor health outcomes at the hands of COVID-19.

The data points over this past year are telling: Life expectancy for all groups in the U.S. has decreased due to the pandemic, but the rate of decline is double among Black and Latino people. Black women are three times more likely than White women in America to die in childbirth, even after adjusting for access to care and socioeconomic status. Middle-age Black adults are more likely to have higher incidence of chronic conditions and develop comorbidities at an earlier age, and live in medically underserved areas and in communities that are less likely to have sufficient primary care physicians to serve the population.

There is much work that needs to be done to right such historic health care inequities, with their origins in America’s history of slavery and experimentation on enslaved people and continuing through the 20th century’s 40-year-long Tuskegee experiment on Black men with syphilis, and beyond.

In an article this past August in *The Lancet*, authors from the National Birth Equity Collaborative and local chapters of the American Medical Association wrote that to reduce and eliminate health disparities, health care institutions must move beyond declarative advocacy, acknowledge their role in complacency and take a robust approach to addressing and dismantling structural racism from the inside out.

That is now the task being undertaken by UCLA Hospital System and the David Geffen School of Medicine at UCLA. The two entities together are referred to as UCLA Health, which is laying the foundation for several policies and

practices to address implicit bias and structural racism and the ways in which they continue to hold us back. Simultaneously, several individuals and groups across UCLA Health are creating pathways to a culture that is centered on health equity, justice, diversity and inclusion.

ON AUGUST 31, 2020, UCLA HEALTH LAUNCHED ITS FIRST “CONVERSATIONS WITH LEADERSHIP,”

a series of online town halls to address and acknowledge steps to advance racial equity. Kelsey C. Martin, MD, PhD, dean of the David Geffen School of Medicine at UCLA, noted that she and other organizational leaders had spent the past months reflecting on how the institution has fallen short and what it must do to improve, with a goal of increasing diversity across the board “to truly change the face of academic medicine.” To which, Johnese Spisso, MPA, president of UCLA Health and CEO of UCLA Hospital System, added, “I hear your concerns, and we must do better on all fronts.” Her goal, Spisso said, is for the organization to become one that upholds the culture of anti-racism and demands equity for employees and patients alike.

The leaders of UCLA Health are working hand-in-hand with members of the UCLA Black Leadership Coalition. Following the killing of George Floyd in Minneapolis and the protests against police violence that erupted across the country this past summer, members of the coalition turned to each other to share in emotional conversations and seek support. Those talks became the foundation for a plan that, ultimately, would evolve into the current health equity, diversity and inclusion (HEDI) framework.

Jerome Crawford, director of performance excellence and interim chief of staff for quality at UCLA Health, says what began as a way for Black leaders to support each other quickly became “us asking how can we give back to UCLA and spur the changes that have been on people’s minds, but never realized.”

Like Crawford, Vernon Goodwin, security director at UCLA Health, has been with the hospital system for more than 20 years. “Sometimes, I’m the only dark face in a room full of leaders making decisions,” Goodwin says. “It’s been that way for years.”

Despite being in a leadership role, making his voice heard has been a challenge, Goodwin says. In some cases, it has taken him presenting his ideas through a “White voice” — having his words put



Dr. Medell Briggs-Malonson: “There has been a history of patients using inappropriate language and behavior toward health care professionals for various reasons, whether it is based on race and ethnicity, gender, language or others. Ignoring discriminatory conduct, no matter who commits it, is harmful and must be addressed.”

forward by a White colleague — to get the visibility he desires.

During his time at UCLA Health, he says he has experienced and witnessed many microaggressions, the everyday subtle — and often unintentional, but sometimes not — insults and offhand comments posed to historically marginalized groups that too often go unaddressed by managers and human resources personnel. “There was really no way to express how you felt” when something like that happens, Goodwin says. “We did not want to be looked at as the ‘angry Black person’ — mischaracterized as hostile, an implicit bias that is all-too-common in the U.S. workplace.

With the HEDI framework, Goodwin, Crawford and the other members of the coalition sought to create changes that are rooted in accountability and transparency to the culture and practices of UCLA Health. The framework consists of an ambitious plan to address past harms and improve UCLA Health’s cultural climate and the health outcomes for patients. Plan action items are monitored by the UCLA Health Equity Council, an accountability and oversight arm comprised of diverse and interprofessional leaders, clinicians and staff.

The council reports to Medell Briggs-Malonson, MD (RES ’09, FEL ’12), MPH, associate clinical professor of emergency medicine and chief of Health Equity, Diversity and Inclusion for the hospital and clinic system, and CEO Spisso.

At the start of this year, the UCLA Hospital System Office of Health Equity, Diversity and Inclusion launched a small-group leadership program called Courageous Civility Training to deepen awareness and understanding of HEDI and anti-racism principles and teach UCLA Health leaders how to mitigate implicit bias and microaggressions to build an inclusive workplace rooted in cultural humility and respect.

Dr. Briggs-Malonson has been working with several groups of faculty, staff and trainees “to create a greater sense of a community within our large organization that is centered around specific identities and/or experiences.” The groups will establish their own ideas and develop initiatives to improve the culture of the health system. Additionally, the Office of Health Equity, Diversity and Inclusion has put an emphasis on new policies and expectations for reporting patient and personnel discrimination.

“There has been a history of patients using inappropriate language and behavior toward

health care professionals for various reasons, whether it is based on race and ethnicity, gender, language or others,” Dr. Briggs-Malonson says. “Ignoring discriminatory conduct, no matter who commits it, is harmful and must be addressed.”

A broader ambition of UCLA Health is for the organization to earn designation as an anchor institution, a place-based and mission-driven entity that leverages its economic and social capital to invest in the community. Dr. Briggs-Malonson says such a designation will further allow the health system to provide clinical care and education through the lens of equity and justice, and it will help to recruit and retain a more diverse workforce. It also will encourage a more thorough review of expenditures, including choices of vendors and community partnerships, and also a deeper focus on climate and environmental justice. “We want to show that we really are an institution that embodies health equity, and to be a beacon in better supporting our communities,” she says.

AS UCLA HEALTH AIMS TO IMPROVE HEALTH DISPARITIES IN LOS ANGELES, the Hospital and Clinic System and the David Geffen School of Medicine at UCLA are finding ways to collaborate through an Anti-Racism Roadmap, the Office of Equity, Diversity and Inclusion, and the Office of Health Equity, Diversity and Inclusion leadership collective. The Office of HEDI partners with the medical school to inform the greater community through webinars such as the inaugural Martin Luther King, Jr. Health Symposium, COVID-related community communications and ongoing townhall discussions with UCLA Health leadership.

Together, they also have created a joint research theme, the Health Equity Translational Social Science Research theme. Led by Rochelle Dicker, MD, professor of surgery and anesthesia, and Helena Hansen, MD, PhD, professor of psychiatry and biobehavioral sciences, the theme promotes equitable care by studying and developing new models to address the impact of social determinants of health, such as education, employment, housing and criminal justice. The intention is to form collaborations among social scientists, life scientists, clinicians and clinical researchers to study the integration of social interventions with medical care — hospital-based violence-intervention programs, for example.

Medical students and residents have been among the most-vocal champions for health care



Dr. Michael Mensah: “Learning about why my uncle died, and about why he wasn’t really engaged with medical care, made it clear to me that there is structural racism that contributed to his early death.”

equity, urging the health system to broaden its access to Medi-Cal patients, for example, and the medical school to adjust its admissions metrics to open the doors wider for patients and students from underrepresented communities.

During the August town hall, Michael Mensah, MD, MPH, co-chief resident in the UCLA Department of Psychiatry and Biobehavioral Sciences, shared his motivation to pursue medicine. When his uncle — a father figure to him — died of a heart attack at the age of 35, leaving

“Sometimes I sensed racism, and sometimes I sensed that people are treated poorly and unfairly but couldn’t really tell if the unfairness qualified as racism. Learning about why my uncle died, and about why he wasn’t really engaged with medical care, made it clear to me that there is structural racism that contributed to his early death.”

behind three young children, Dr. Mensah says making sense of his death revealed to him the reality of structural racism. “Sometimes I sensed racism, and sometimes I sensed that people are treated poorly and unfairly but couldn’t really tell if the unfairness qualified as racism. Learning about why my uncle died, and about why he wasn’t really engaged with medical care, made it clear to me that there is structural racism that contributed to his early death.”

Dr. Mensah pressed UCLA Health’s leaders on the importance of hiring more underrepresented minority staff and providers who are familiar with the harmful rhetoric of health care exclusion, as well as for protections for staff and providers who may face racially abusive behavior, and for support of a minority house staff organization

to engage resident providers interested in racial justice, something on which he has been working alongside Dr. Lovelee Brown (RES ’20) and other trainees underrepresented in medicine with the Office of Graduate Medical Education.

“There are many efforts going on right now, both formal and informal,” he says. “We’ve been organizing minority trainees into the Minority Housestaff Organization. We want to give residents the platform to tell their stories and have their voices reach leadership’s ears, minds and hearts, so that policy can actually change.”

Medical students, too, have been engaged on many fronts, creating student-led initiatives to promote equity and inclusion in the medical school.

Kathleen Brown, MD (FEL ’86), and Daniel Kozman, MD (RES ’17, FEL ’18), assistant deans for equity and diversity inclusion, credit students and trainees for holding up a mirror to UCLA Health as an organization. “They could be silent, but they’re not. Their voices are important in everything we do,” Dr. Brown says. “We’re looking for ways to infuse this EDI lens throughout every decision and every office.”

To address such concerns, the medical school launched its Anti-Racism Roadmap in July 2020 to serve as a living “scaffolding” for EDI-related efforts, and to hold the institution accountable. The Roadmap builds upon the decade-long work set in motion by Lynn Gordon, MD (RES ’88, FEL ’89), PhD, emeritus senior associate dean for equity, diversity and inclusion. “We have concentrated on education, sponsorship and mentorship, and we have also done a lot of talking. But without the accountability piece,” she says, “there’s no comprehensive and significant change.”

Clarence H. Braddock III, MD, MPH, vice dean for education in the David Geffen School of Medicine at UCLA, is executive director of the Roadmap. An essential part of his role, he says, is to “delve more deeply into what things we actually should be doing to move the needle on recruitment, retention, climate, minority tax, and a number of other issues.”

Similar to the HEDI strategic plan, the Anti-Racism Roadmap has priority areas that have been created in collaboration with the medical school’s Faculty Equity and Diversity Inclusion Committee, the Staff Racial Justice Task Force, the Black, Latinx, and Native American Faculty Collective and the broader community of trainees, staff and faculty. From data accountability, recruitment and retention, and curriculum

enhancement to admissions selection and research, the Roadmap spans every area of the school.

“In this Roadmap, we’re trying to reimagine how we think about change,” Dr. Braddock said during the medical school’s inaugural “Leadership Dialogue on Anti-Racism” town hall in August 2020. Dr. Braddock says the medical school seeks to create change in a more organic and collaborative way, rather than following a hierarchical structure, which, as he says, “can sometimes represent barriers to real change, particularly in the area of racism.”

“The old rules of society, they’re changing, and they’re melting away, which is, to me, a wonderful thing.”

The Roadmap has emphasized five areas that will be the focus for 2021 and beyond: anti-racism training; a suite of tools such as book recommendations to continue conversations outside of training; sessions with current medical students to uncover racism and inequality in the learning environment, called “Driving Real Change in the Learning Environment Initiative”; transparency in metrics on diversity, culture and climate; and fundraising initiatives to further support these efforts.

Getting the entire institution involved has been key, Dr. Gordon says. “It’s not just our colleagues who come from under-represented groups; it’s everybody’s responsibility to fix the problem,” she says.

When it comes to trainee recruitment, “We were struggling to figure out what success looked like,” says Christina Harris, MD, assistant designated institutional official for equity and diversity inclusion in Graduate Medical Education, associate program director of the Internal Medicine Residency Program and associate professor of clinical medicine. Students, she says, were “voting with their feet” and not applying to the program. Then “a light bulb went off,” and she realized it was impossible to engage in residency, diversity, education and recruitment in a vacuum; they were so intertwined that they had to be addressed together, she says.

To recruit students from diverse backgrounds, the school first needed to create a space for them

to feel “valued and recognized,” Dr. Harris says. She and her colleagues Keith C. Norris, MD (FEL ’85), PhD, professor of medicine, and Teresa Seeman, PhD, professor of medicine and epidemiology, got together to develop a broader proposal to address the infrastructure of EDI and amplify recruitment efforts.

Elizabeth Asfaw, MD (RES ’21), and Dr. Lovelee E. Brown, inaugural chief resident of equity, diversity and inclusion for the Department of Internal Medicine, together developed microaggressions training for residents and implicit-bias training for faculty. The Department of Medicine Office of Equity, Diversity and Inclusion launched a number of new fellowship programs and created a health-equity pathway for underrepresented first-year medical students to receive specialized education and be involved with research. Other initiatives include a health-equity curriculum focus for residents, a LGBTQ+ health series and a mentorship network connecting residents with medical students.

In 2019, Dr. Brown and Farah Abdi, MD (RES ’20), founded the Road to Residency Conference, an event for underrepresented medical students preparing for residency match. The event provided an opportunity for students to network with faculty and residents of color; learn tips for interviewing and how to excel in both school and clinically with patients; and receive advice on how to develop research projects. As she took part in the screening process, Dr. Brown says that she “noticed student names from institutions we typically don’t get applicants from.” Later, she saw their names on the attendee list for the Road to Residency. “It was refreshing to see the event make a positive impact for our underrepresented student community in that way,” she says.

WITH EVERYTHING THAT HAS TAKEN PLACE OVER THIS PAST YEAR, there is a “seismic shift” happening within the school of medicine, UCLA Health and culture at large, Dean Martin says. “The old rules of society, they’re changing, and they’re melting away, which is, to me, a wonderful thing.”

But while the pandemic and the display of numerous social injustices have helped to catalyze this work and bring together people who care about issues of equity, diversity and inclusion, “some things have changed, but a lot has not,” Dr. Norris says. “There are more conversations taking place here, and elsewhere, than ever before.



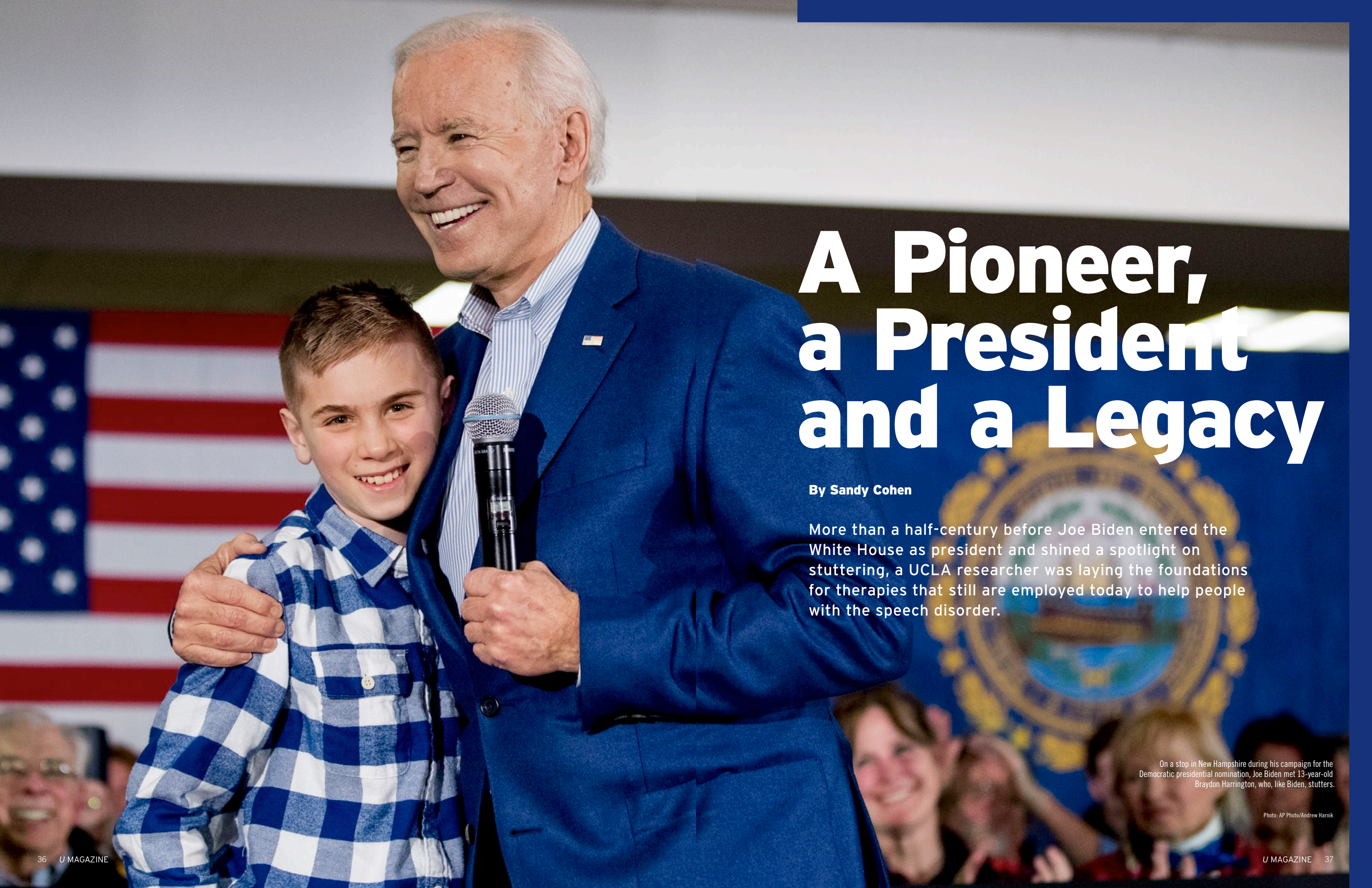
Dr. Lynn Gordon: “We have concentrated on education, sponsorship and mentorship, and we have also done a lot of talking. But without the accountability piece, there’s no comprehensive and significant change.”

I would say that suggests there is the potential for change, but I also think there is a naivety around how deeply entrenched structural racism is, how clever the narratives have evolved and how clever the ideology is.”

Dr. Braddock agrees. “People are in the process of trying to reimagine what the word ‘racist’ means, and to distinguish it from ‘bias’ and ‘discrimination,’” he says. “There is a very important new understanding of racism as something that everyone is consciously or unconsciously supporting, and of being racist unless they’re consciously trying to dismantle it and be anti-racist.”

Such conversations are taking place at every level of the institution — driven in some cases from the bottom up, and in others flowing from the top down. From whichever direction change is initiated, one thing remains clear: “We need to change the overall culture,” says John C. Mazziotta, MD (RES ’81, FEL ’83), PhD, vice chancellor for UCLA Health Sciences and CEO of UCLA Health. “Today we listen. Tomorrow we listen. And each day going forward, we take what we hear and move into action together.”

Jocelyn Apodaca Schlossberg is a senior writer for *UCLA Health Communications*.

A photograph of Joe Biden, an older man with white hair, wearing a blue suit and a striped shirt, smiling warmly. He has his arm around the shoulder of a young boy with short brown hair, who is wearing a blue and white checkered shirt. Biden is holding a microphone. They are on a stage with an American flag in the background and a crowd of people visible in the foreground. The scene is brightly lit, suggesting a public event or campaign stop.

A Pioneer, a President and a Legacy

By **Sandy Cohen**

More than a half-century before Joe Biden entered the White House as president and shined a spotlight on stuttering, a UCLA researcher was laying the foundations for therapies that still are employed today to help people with the speech disorder.

On a stop in New Hampshire during his campaign for the Democratic presidential nomination, Joe Biden met 13-year-old Braydon Harrington, who, like Biden, stutters.

Photo: AP Photo/Andrew Harnik

AS A CHILD, PRESIDENT JOE BIDEN STUTTERED SO SEVERELY THAT HIS MOTHER WOULD GIVE HIM A PEP TALK EACH DAY BEFORE HE LEFT FOR SCHOOL, WHERE HE FACED RELENTLESS BULLYING. "REMEMBER, NOBODY IS BETTER THAN YOU, JOEY," SHE WOULD SAY. "REMEMBER, YOU ARE A GOOD PERSON, JOEY."

Even the teachers made fun of how he said his name, repeating his initials like a scratched record: J-J-J-Joe B-B-B-Biden. "I remember to this day how stuttering felt," he shared during a speech in 2016 at the American Institute for Stuttering. "How dehumanizing. How embarrassing. How much it put into question — in my own mind, as well — my capabilities."

Biden served in the Senate for 32 years before he was willing to publicly acknowledge his speech disorder. He finally addressed it in 2004, before an audience at the National Stuttering Association. "I've avoided coming to speak to you," he told them. "Although all those who know me knew that I stuttered, I was reluctant to be nationally identified with it, because there are still people assigning rationales for why we stutter in the first place that are so insidious."

Lack of intelligence. Lack of confidence. Weakness. Disability. Those are the characteristics that many people attribute to those who stutter, he said.

"I was afraid that if people knew I stuttered, they would have thought something was wrong with me," Biden says. "I, too, thought I was handicapped."

Overcoming that shame and fear associated with stuttering is at the heart of most therapies employed today to treat the speech disorder in adolescents and adults. The foundations of that approach were laid at UCLA in the 1950s by a pioneering psychologist, Joseph Sheehan, PhD.

Like Biden, Dr. Sheehan stuttered as a child. His difficulty speaking belied his love of socializing and his playful sense of humor. It kept him from pursuing a career in chemistry — his first love — because he could not keep a job. After he found help from a therapist at UCLA in the 1940s, he went back to school to earn a doctorate in clinical psychology and devoted his career to understanding and treating what is known as childhood-onset fluency disorder.

Dr. Sheehan joined the UCLA faculty in 1949, and he spent the next 34 years conducting groundbreaking research and speech-saving therapies for people who stutter. Perhaps Dr. Sheehan's greatest insight — still cited by speech therapists today — is the iceberg analogy he developed to explain the challenges of stuttering, which affects more than 3 million people in the United States and 70 million worldwide.

The speech difficulties associated with the disorder — sound and word repetitions, prolongations and blocks that prevent any sound from emerging at all — are the hallmarks of stuttering that are apparent to others. But they are just the tip of the iceberg, Dr. Sheehan said. The bulk of the underlying issues — self-image and identity — are much deeper, submerged below the surface.



Dr. Joseph Sheehan.
Photo: Courtesy of Marian Sheehan

"The stuttering behaviors, and what we are able to observe on the surface, are really just 10-to-15% of what stuttering really is," says Nicole Schussel, MS, a pediatric speech-language pathologist at UCLA Health. "Below the surface, we may see fear, shame, guilt, anxiety, isolation, denial, hopelessness — all of the things that really impact and exacerbate stuttering."

Or, as Dr. Sheehan put it: "All those other feelings that we have when we try to speak a simple sentence and can't."

The 1950s were a golden age of research and treatment for stuttering in the U.S. Dr. Sheehan was part of a community of psychologists — predating the field of speech pathology — working to understand stuttering, its origins and how it might be overcome. Among Dr. Sheehan's contemporaries were Oliver Bloodstein, who published the *Handbook on Stuttering* in 1959, and Charles Van Riper, who grew up with a severe stutter, gained international renown for his work on the disorder and is credited as a pioneer of speech pathology.

"I was afraid that if people knew I stuttered, they would have thought something was wrong with me. I, too, thought I was handicapped."

Scientists today still don't fully understand stuttering, which has neurological, psychological, physical and genetic elements. But Dr. Sheehan and his fellow trailblazers were among the first to develop workable, promising therapies that could restore spoken expression to those who suffered in stilted silence.

Stuttering typically emerges in children around age 3 as their vocabulary is developing. Most children naturally outgrow stuttering behaviors, Schussel says, which are more common in boys than girls. Kids who begin stuttering before age 3½ are most likely to outgrow it, she says, while those who start later or stutter for longer than six-to-12 months are at greater risk of continuing. Having a relative who stutters is also considered a risk factor. Biden says he had an uncle who stuttered throughout his life.

Continuing to stutter into adolescence and adulthood is what creates the kinds of conditions Dr. Sheehan described in his iceberg analogy: the shame, guilt and fear associated with speaking. This generates what he described as an "approach-avoidance conflict," a desire to speak that is hampered by a simultaneous desire to remain silent for fear of fumbling during speech. People who stutter also suffer a conflict of self-concept, Dr. Sheehan wrote. Because those who stutter also experience periods of fluency, there's a tendency to embrace the self who speaks fluently and reject the self who stutters, he said.

He described stuttering as "a disorder of the social presentation of the self."

"Basically, stuttering is not a speech disorder, but a conflict revolving around self and role — an identity problem," Dr. Sheehan said.

"Your fear of stuttering is based largely on your shame and hatred of the way you speak," he wrote in an essay, "Message to a Stutterer." "The fear is also based on playing the phony role, pretending you do not stutter. You can do something about this fear if

you have the courage. ... You can learn to go ahead and speak anyway, to go forward in the face of fear. In short, you can be yourself."

Dr. Sheehan was joined in his work by his wife Vivian Sheehan, a speech pathologist. Together, they conducted group therapy sessions at UCLA to help people who stutter shed their fears and learn to speak more comfortably. The Sheehans encouraged their patients to accept themselves and how they speak, regardless of how it sounds. They advised clients to stutter openly and to maintain eye contact no matter what, even during blocks and halting speech.

Their work was so groundbreaking that Dr. Sheehan was a guest on such television talk shows of the day hosted by Art Linkletter, Merv Griffin and Dinah Shore, as well as *That's Incredible*, bringing with him a group of regulars from his clinic to demonstrate his methods. He and his wife even brought clients into their home to reinforce their therapeutic approach. "My dad would use us kids as somebody for stutterers to introduce themselves too," recalls Marian Sheehan, the eldest of the Sheehans' three children and a speech pathologist who specializes in autism. "We were instructed to maintain eye contact with the person while they are stuttering, and they had to say their name first. And I was fine with it. We waited patiently for them to get through the block."

The Sheehans counseled that stutterers should even tell others up-front that they stutter, so they're less tempted to try to hide their speech issues with camouflaging tactics, such as word substitutions, errant "ums" and "uhs" or pretending to forget what they wanted to say.

"If you bring your iceberg up out of the water, it can melt," Vivian Sheehan would say.

Videos of these sessions are alternately heartbreaking and triumphant. For many people who stutter,

“I’ve had adults who stutter tell me they’ve introduced themselves with a completely different name, because they were so afraid of stuttering. There’s just so much fear, anxiety and shame around speaking.”



Dr. Joseph Sheehan with students in his conference room/lab in UCLA's Franz Hall, where he taught graduate seminars and small upper-division classes.

Photo: Courtesy of Marian Sheehan

saying their own name is one of the hardest things to do smoothly. Clinic participants, seated in a circle, look intently at a speaker as he struggles to simply say “Peter is my name.” They all maintain eye contact. Peter is at first silent, then tentative. When he finally introduces himself, his face softens and his shoulders relax.

“Your name is so personal to you. It’s representative of you,” Schussel says. “I’ve had adults who stutter tell me they’ve introduced themselves with a completely different name, because they were so afraid of stuttering. There’s just so much fear, anxiety and shame around speaking.”

VIVIAN SHEEHAN CONTINUED DR. SHEEHAN'S GROUNDBREAKING THERAPY

for another two decades after his death from pancreatic cancer in 1983, first at UCLA and later at the Sheehan Stuttering Clinic in Santa Monica. By the time filmmaker Allan Holzman found her, he was desperate. His stutter emerged at age 6 and, as a teenager and young man, he did everything he could think of to overcome it. He tried therapy. He ran for class president. He enrolled in a Dale Carnegie public-speaking course. He took acting classes. He changed jobs and moved

to different cities, each time attempting to reinvent himself and outrun his speech disorder.

“I was in the habit of changing my life every three years, but failing at changing my stuttering. And when you move and fail, you fail really deeply, because it’s such a disappointment and you put so much into the dream of losing your stutter,” says Holzman, now 73. “I was burnt out on all the tricks to lose your stuttering. I wanted to be natural and real and not stutter.”

He’d read about the Sheehans’ approach and wondered if it might work for him. At the time, Holzman was a burgeoning filmmaker living in Los Angeles. Because he often froze up on the phone, he asked his wife to contact Vivian Sheehan on his behalf. Sheehan refused the call. “She said, ‘He has to call me himself,’” Holzman recalls, “which was a very Vivian thing to do: Make the stutterer talk.”

Holzman went on to spend a year as Sheehan’s patient — “or student, as she liked to call it” — and 10 more as a role model for other clinic participants. He also made two documentaries about the Sheehans’ work: a portrait of Dr. Sheehan’s contributions at UCLA titled for Dr. Sheehan’s essay, *Message to a Stutterer*, and *No Words to Say*, an intimate look



Dr. Sheehan, in 1970, talks about stuttering with Art Linkletter on the *Life With Linkletter* television show.

Images: Courtesy of Allan Holzman/Message to a Stutterer

at Vivian Sheehan's stuttering clinics. Both films reveal the painful struggles those who stutter encounter anytime they want to speak: the mental tightrope walk around potentially troublesome sounds, the frantic search for substitute words, the paralyzing fear of a silent block that leaves a meaningful thought unexpressed.

Because the Sheehans advocated that those who stutter accept this fact about themselves and address it openly with others, Holzman recalls that

one of his earliest assignments in therapy was to talk about his stuttering with his parents. "Of course, your reaction is, 'My parents know I stutter,'" he says. "But at that point, I had only talked to them three times about it." Holzman was then 33 years old.

The Sheehans encouraged their students to simply speak, and even to stutter intentionally. At the heart of their approach was fostering an idea of acceptance among those who stutter — acceptance of themselves and how they talk.

MOST MODERN SPEECH THERAPIES FOR STUTTERING, except those aimed at very young children, include a major element of self-acceptance. One of Dr. Sheehan's university students in the 1970s, Vivian Sisskin, has carried on the Sheehans' work in her own private practice and as a clinical professor in the Department of Hearing and Speech Sciences at the University of Maryland.

Sisskin hadn't intended to make stuttering her career until she met Dr. Sheehan. As an undergraduate at UCLA, she took his class on a whim as an elective. "I can't tell you how fascinated I was. It was the first time I was truly fascinated with a topic," Sisskin says. "Joe — in those days, Dr. Sheehan — was a very funny man who stuttered, who explained stuttering in a way that made it look so incredibly interesting to me. He talked about the paradoxical nature of stuttering and that the harder you try to be fluent, the more you stutter."

Sisskin became an apprentice of Dr. Sheehan, working with him in the speech psychology lab and sitting beside him as he conducted his therapy clinics. She went on to develop a treatment approach called Avoidance Reduction Therapy for Stuttering (ARTS), which is now taught all over the world. ARTS calls for accepting one's identity as a person who stutters and becoming aware of "avoidance behaviors" — those personal tricks adopted to escape or outwit blocks and sound repetitions — to gently release them. It encourages stuttering openly and self-disclosing the speech issue as a form of self-advocacy. The goal is forward-moving speech, without behind-the-scenes mental maneuvering, no matter how it sounds.

There are various approaches to speech therapy for people who stutter, she says, including "fluency shaping," which focuses on eliminating sound and word repetitions so speech sounds smoother. But acceptance-based therapy has endured for decades. "I think because times are changing right now, the therapy is even more popular and more interesting to people, because it resonates with the way our society is going in terms of general acceptance and inclusion," Sisskin says.

But speech therapy isn't cheap, and it isn't always covered by insurance. Nathan Mallipeddi, a UCLA graduate and now a first-year medical student at Stanford University who grew up with a severe stutter, didn't have access to private speech therapy as a child. Beyond the expense of such treatment, there was a cultural barrier in his South Asian community, he says. "There's a more pronounced cultural stigma. So when you have a stutter, the automatic reaction is hide it and stop it, not go out and get help."

He received some therapy at his public elementary school, where fewer than 5% of speech therapists are specifically trained in stuttering, but, otherwise, was on his own to overcome the impediment, which he did through sheer determination and consistent practice. "In high school, I kind of forced myself to stop letting it really dominate my life," Mallipeddi says.

He volunteered to give presentations. He got involved with student council. He talked to anyone he could. And he eventually identified strategies that allow him to speak more smoothly. "It's called 'covert stuttering,' and some days are better than others," he says. "I can still feel the stutter coming, but, through hours of practice growing up, I kind of developed a way similar to how Biden does it, where he'll stop talking, he'll take a pause, he'll switch his words."

Mallipeddi calls stuttering an "invisible disability," and he still feels the sting of humiliation when he stumbles on a word. "Every time I slip up — and I still do, a lot — then it's automatically: 'He's not smart. He's nervous,'" he says. "That is the most debilitating part for people who stutter."

Though he hasn't undergone acceptance therapy, Mallipeddi is such a proponent of the approach that he created a nonprofit organization to provide the treatment to young people who stutter who otherwise wouldn't have access. While pursuing a double-major in biology and political science during his undergraduate studies at UCLA, Mallipeddi founded the Southern California Stuttering Service in 2017. The organization is sponsoring speech therapy for 100 economically disadvantaged children a year and providing low-cost therapy for scores more in the U.S. and Canada.

Most speech-language pathologists work in private practice, and a course of therapy can cost upwards of \$15,000 a year, Mallipeddi says. "There are people from severely financially disadvantaged backgrounds who might be struggling to make ends meet, let alone afford therapy. There's this whole community whose potential is being hindered," he says. "And when you provide them with a voice — once you provide that opportunity, we can create so much change in the world."

Like Dr. Sheehan, Mallipeddi's academic and professional paths have been shaped by his experiences with stuttering as he envisions a career dedicated to improving the lives of people with disabilities. "If you ask people who stutter if they could take a magic pill and make it go away, would they? For me, I wouldn't do it, because it's brought me so much," Mallipeddi says. "Honestly, I'm not sure where I would be without stuttering. It's been everything."

“We say to our young clients, ‘You can stutter and be anything you want. You can stutter and be a teacher. You can stutter and be a police officer.’ And now we can say, ‘You can stutter and be president of the United States.’”

MALLIPEDDI MIGHT DECLINE A MAGIC PILL, but Gerald Maguire, MD, believes that others could make a different choice. Dr. Maguire, a psychiatrist and neuroscientist and former chair of the National Stuttering Association, is one of the foremost researchers on the condition. He currently is leading a clinical trial at the UC Riverside School of Medicine to study if a drug called ecopipam might help adults who have stuttered since childhood to speak more smoothly. He also published a study in February 2021 in *Frontiers in Neuroscience* that examined the effects of risperidone, a drug generally prescribed for schizophrenia or bipolar disorder, on the brains of people who stutter. No medications to treat stuttering have been approved to date by the U.S. Food and Drug Administration.

Like Mallipeddi and Dr. Sheehan, Dr. Maguire was inspired by his own experiences with stuttering to devote his career to alleviating the emotional pain associated with the condition. He recognized at age 5, as a kindergartener who had to give an oral presentation about his family in class, that he had trouble making certain sounds — words starting with “B” were difficult — but also that he could substitute words. “What 5-year-old uses the word ‘sibling?’” he jokes. This experience showed him that his stutter wasn’t reflective of his intelligence. By the time he was in high school, he knew he wanted to study the brain to discover the origins of stuttering.

His uncles stuttered. So did his older brother, who took his own life in 2003. “I think a lot of that related to his stuttering,” Dr. Maguire says. “So that emboldened me even further.”

He’s spent decades researching and treating the disorder, and publishing cutting-edge brain-imaging studies seeking to identify where speech processing goes awry. He recently launched a project with

UCLA’s Human Brain and Spinal Fluid Resource Center, a brain bank where he plans to study human tissue from a recently deceased 94-year-old donor who stuttered throughout his life. “No one has ever looked at the human brains of stutterers,” Dr. Maguire says. “I hope to go into the tissue mechanism underlying how we’re connecting the dots from the various understandings of stuttering.”

Dr. Maguire experimented with medication for stuttering long before the ecopipam study, *Speak Freely*, sponsored by Emalex Biosciences, got underway in December 2020. “I’m my first candidate,” he says, adding that he has been under the care of a prescribing doctor since 1993 and is not taking ecopipam, the study medication.

Ultimately, he hopes to develop, in partnership with the National Institutes of Health and researchers in the U.S. and abroad, a “unified theory of stuttering.” He believes it’s a multifactorial genetic and neurological condition. For those who continue to stutter beyond childhood, it’s a lifelong issue, he says, but an individual’s ability to speak fluently can be significantly improved with tailored combinations of speech therapy, psychotherapy and medication. “You can overcome stuttering in many respects, but it’s like diabetes,” he says. “Even when it’s under control, you’re still diabetic.”

Dr. Maguire still repeats certain sounds from time to time, but speaks with comfort and ease. “Once a stutterer becomes fluent, you can’t shut us up,” he says, with a laugh. “We’ve been pent up our whole lives.”

He and other experts interviewed for this story say that Biden still stutters. As Mallipeddi notes, the president is a covert stutterer. Sisskin and Dr. Maguire, neither of whom has worked with Biden, agree. “My husband and I watch him stutter all the time on TV,”



Filmmaker Allan Holzman (first row, second from left in this photo from 1988) was among the students of Vivian Sheehan (second row, fourth from left) when she conducted her clinic in UCLA’s Macgowan Hall. During breaks, she would serve juice and cookies to students in a room across the hall. Photo: Courtesy of Allan Holzman

Sisskin says. It may not sound like syllable repetition, she says, but it comes across in substituted words and “closing his eyes during a disfluency.”

“Regardless of experts picking apart his stuttering, I think the fact that there’s a person who stutters in the White House right now is the best thing ever for young people who stutter,” Sisskin says. “We say to our young clients, ‘You can stutter and be anything you want. You can stutter and be a teacher. You can stutter and be a police officer.’ And now we can say, ‘You can stutter and be president of the United States.’”

Beyond that, people who stutter grow up with greater empathy and humility, Dr. Maguire says. “It breeds a lack of narcissism,” he says. “You realize that other people are better than I am at some things. You say to yourself, ‘I have some limitations and I need some help here.’”

Biden is hardly the first high-profile person who stutters — from Moses in the Old Testament to King George VI, dramatized in the film *The King’s Speech*, to such actors as Nicole Kidman and James Earl Jones — but he is, perhaps, the first to publicly characterize it as a strength. “People talk about him going through adversity. His first obstacle was stuttering, and that, I think, helped him when he was going through the other tragic events that happened in his life,” Mallipeddi says. “There are a lot of us who

go through this without anyone ever knowing. So, seeing that highlighted [at the Democratic National Convention], I had chills for, like, a month.”

The president himself says stuttering has made him a better person. “I learned so much from having to deal with stuttering,” he said. “It gave me insight into other people’s pain, other people’s suffering. It made me understand that everyone — everyone — has something they’re fighting to overcome and, sometimes, trying to hide.

“It taught me,” Biden said, “that there isn’t anything you can’t overcome.”

Sandy Cohen is a senior writer in UCLA Health Communications and a former national writer for *The Associated Press*.



To view the documentary *Message to a Stutterer*, go to tinyurl.com/message-to-a-stutterer

Team Player

By Lyndon Stambler



When the COVID-19 pandemic hit the U.S. in 2020, UCLA orthopaedic surgeon and Los Angeles Lakers head team physician Kristofer J. Jones, MD, felt like he suddenly was living in a science fiction movie. “We hear about outbreaks in different countries, but I never saw it becoming an issue in the U.S. — until it did,” he says.

This new reality became very tangible on March 10, 2020, during a game between the Lakers and the Brooklyn Nets at Staples Center. In the visitor’s locker room, Dr. Jones was examining two Nets players with injuries when the team’s trainer mentioned that some players were ill. The next day — the same day the NBA temporarily shut down — Dr. Jones learned four Nets players had tested positive for COVID-19.

With that disturbing news in mind, Dr. Jones and the consulting medical staff decided to test all the players on the Lakers. According to a statement from the team shortly after, two players, though asymptomatic, tested positive and went

into quarantine. Dr. Jones followed up with contact tracing, and he launched an education program to give members of the team the information they needed to protect themselves from the illness. “We wanted to make sure they knew the consequences of getting it, and how that could affect their families, as well,” he says.

As a former college football player, Dr. Jones can speak in a mutual language with athletes, and he was well equipped to deal with the challenges of managing the health care needs of one of the greatest professional sports franchises in history in the midst of a pandemic. When the NBA announced it would create a “bubble” at Walt Disney World, in Orlando, Florida, to continue the season, Dr. Jones and the other members of the Lakers medical team, including Daniel V. Vigil, MD (FEL ’98), a UCLA family and sports-medicine physician and associate head team doctor, got to work preparing the team. His experience as an athlete helped him relate to the players. “Being able to see these guys get back to compete and possibly win a 17th championship was important to everyone in the organization, especially after the tragic passing of Kobe Bryant. But, first and foremost, I needed to make sure they grasped what it meant to continue to play in such uncertainty, and how we would make it as safe as possible for them,” Dr. Jones says.

“First and foremost, I needed to make sure they grasped what it meant to continue to play in such uncertainty, and how we would make it as safe as possible for them.”

The son of an electrical engineer and a public-school German and French teacher, Dr. Jones grew up in Chicago. He loved science, sports and fixing things. One Christmas, his grandfather, a handyman, gave him a tool belt. “That was my introduction to using a hammer, nails and screwdrivers,” he says. “Now, lo and behold, that’s what I do [as an orthopaedic surgeon] in the operating room.”

After high school, Dr. Jones, who ran a 4.4-second 40-yard dash, received offers to play football for several Division 1 schools, but, instead, he accepted a scholarship to play tailback for the University of Chicago, where he won all-conference honors. Influenced by an older brother, who went on to become chair of anesthesiology at the University of Alabama at Birmingham, his dream was to combine sports and medicine. He earned his MD at the University of Pennsylvania and completed his residency and fellowship training at the



Dr. Kristofer Jones (opposite page) spent 40 days in the “bubble” with the Los Angeles Lakers during the NBA season, and celebrated with LeBron James (left) after the team won the NBA championship. As a student (right), he played tailback for the University of Chicago.

Photos: Courtesy of Kristofer J. Jones

Hospital for Special Surgery, in New York City. (While training in New York, he served as assistant team physician for the Brooklyn Nets, the New York Red Bulls of Major League Soccer and Iona College Athletics, as well as an orthopaedic consultant to the United States Tennis Association and the U.S. Open Tennis Tournament.) He joined the UCLA faculty in 2013, and he also currently is a team physician for UCLA Athletics.

When the Lakers entered the “bubble” in July, the players were tested daily. They wore electronic devices to regulate their contacts, and masks all the time, except when they were eating, sleeping or playing in a game. If they didn’t comply, the NBA’s “COVID Police” made them mask up. “These are young guys,” Dr. Jones says. “They do not like wearing masks, but they did it. There was not a single Lakers player who tested positive while in the bubble.”

The NBA set up practice courts, weight rooms and a small urgent care facility. “Everything was available,” Dr. Jones says. “MRIs within 10 minutes of an injury happening, which is unheard of in regular play.” The Lakers thrived and went on to win the NBA championship against the Miami Heat on October 9.

Dr. Jones spent 40 days with the team in the “bubble.” “My wife loved it,” Dr. Jones jokes. “I left her with two rambunctious toddlers. I owe a lot of thanks to her for allowing me to do what I consider to be an important part of my job.”

COVID-19 also allowed Dr. Jones to develop a greater understanding of the players and his UCLA patients. Before, he would only see players when they had a medical problem. Living with the players for 40 days changed that. “It was a lively environment, watching LeBron ride his bicycle up and down the hallway, blasting music,” Dr. Jones says. “I relived what seemed like a college-dorm experience with a bunch of the most prominent NBA athletes that we’ve ever seen. That translates into a more personal relationship and a lot more trust.”

Lyndon Stambler is a freelance writer and associate professor of journalism at Santa Monica College.

Awards and Honors

Anne Andrews, professor of psychiatry and biobehavioral sciences and senior research scientist at the Hatos Center for Neuropharmacology in the Jane and Terry Semel Institute for Neuroscience and Human Behavior at UCLA, received the 2021 International Union of Pure and Applied Chemistry’s Distinguished Women in Chemistry and Chemical Engineering Award.

Dr. Paul Boutros, director of cancer data science for the UCLA Jonsson Comprehensive Cancer Center, received the 2020 Prostate Cancer Foundation Special Challenge Award.

Dr. Jeremie Calais, assistant professor of nuclear medicine and theranostics in the UCLA Department of Molecular and Medical Pharmacology and a member of the UCLA Jonsson Comprehensive Cancer Center, was named a 2020 Young Investigator by the Prostate Cancer Foundation.

Dr. Edward De Robertis, Norman F. Sprague Professor of Molecular Oncology and Distinguished Professor of Biological Chemistry in the David Geffen School of Medicine at UCLA, received the 2020 Alexander Kowalevsky Medal in recognition of his fundamental contributions to the scientific understanding of evolutionary developmental biology.

Dr. Peter Goadsby, professor of neurology in the David Geffen School of Medicine at UCLA, received the Brain Prize 2021 from the Lundbeck Foundation in Denmark for outstanding achievement in neuroscience research.

Dr. Elizabeth Lord (RES ’18), assistant professor of orthopaedic surgery and neurosurgery, received the 2020 North American Spine Society’s 20 Under 40 award.

Dr. Robert Reiter, chief of the UCLA Division of Urologic Oncology and co-director of the Genitourinary Oncology Program in UCLA’s Jonsson Comprehensive Cancer Center, received the 2020 Prostate Cancer Foundation Special Challenge Award.

Dr. Jeffrey Saver, director of the UCLA Comprehensive Stroke and Vascular Neurology Program, joined the executive committee for the Heartline Study, a nationwide clinical trial to examine if the heart-monitoring features on the Apple Watch, used in combination with an iPhone app, can reduce the risk of stroke.

Dr. Huihui Ye, chief of genitourinary pathology in the UCLA Department of Pathology and Laboratory Medicine and a member of UCLA’s Jonsson Comprehensive Cancer Center, received the 2020 Prostate Cancer Foundation Special Challenge Award.

A Special Connection Leads to \$29 Million Gift to Advance Genomic Medicine

Charlotte and Dr. Allen Ginsburg (RES '63) have a deep-seated inspiration for their philanthropy. “We’ve always been interested in alleviating human suffering,” says Dr. Ginsburg, a retired ophthalmologist-turned-real-estate-entrepreneur. “We’re trying to get people infected, if you will, with the desire to pursue a scientific career for the purpose of improving the human condition.”

In February, the couple donated \$29 million to UCLA in hopes of doing just that by establishing the Dr. Allen and Charlotte Ginsburg Center for Precision Genomic Medicine in the UCLA Institute for Precision Health. The new center will use innovative genomic technologies to improve diagnosis and to develop new therapies and personalized treatments for a wide variety of genetic disorders. In addition, the gift includes support for a new multidisciplinary clinic on campus near Ronald Reagan UCLA Medical Center and other UCLA Health specialty clinics.

The couple researched several institutions across the country, but soon decided on UCLA. “We have this special connection to UCLA and wanted to create something in the community,” says Charlotte Ginsburg. “And our desire to address the human condition fit with what UCLA wanted to do.”

Established in 2016, the UCLA Institute for Precision Health in the David Geffen School of Medicine at UCLA was created to revolutionize health and how diseases — from cardiovascular disease and cancer to diseases of the eye and neurological disorders — are treated. The new Ginsburg Center will draw upon physicians and researchers from the institute, as well as from human genetics, medical genetics, rare diseases, computational medicine and other disciplines.

The gift also creates the Ginsburg Research Fellowship and an annual symposium that will explore population

genetics research and ethics. “Having seminars, targeting young people who are coming along, and encouraging them to go forward and ignite them with a passion, is important to us,” Charlotte Ginsburg says.

The couple’s philanthropy is driven by a continued quest for knowledge and a desire to empower future physicians and scientists. “The most important thing is to pass on the innovation, the capability and sense of excitement to the younger generation,” Dr. Ginsburg says. “No matter how good you do in life, if you can’t innovate for the younger people who are going to carry the torch, you haven’t done your job.”

The married couple have been inseparable for 41 years, ever since a friend introduced them at a party. Dr. Ginsburg, who completed his residency at UCLA in 1963, maintained offices in Wilmington and Redondo Beach, until stepping away from practice in 1990. The Ginsburgs then turned their attention to real estate development and philanthropy. Over the years, the couple has supported the performing arts, engineering, medicine and research, among other causes. “But we’re really interested in the future,” Charlotte Ginsburg says, “and alleviating pain and suffering — that’s our number-one priority.”

Dr. Ginsburg recalls as a physician having had many difficult conversations with patients during which he had to inform them they were losing their eyesight. “It’s a very unfortunate and dismal aspect of ophthalmology,” he says. “So in my lifetime to be able to come back 20 or 30 years later and realize that we may soon have a capability of working with macular degeneration and making it possible for these people to retain their vision is enchanting.”

The Ginsburgs are particularly excited about CRISPR technology, which uses enzymes acting much like a



Dr. Allen and Charlotte Ginsburg.

Photo: Jessie Cowan

word processor’s search-and-replace function to take an undesirable trait from DNA and remove or substitute it to affect the expressivity of the gene. (The 2020 Nobel Prize in Chemistry was awarded to two scientists, including one from UC Berkeley, who developed the technology.) “We are just on the border of being able to do some really great things,” Dr. Ginsburg says, “and we’re the type of people who want things done yesterday, just like this COVID-19 vaccine that was prioritized. We have this feeling with this too: Let’s get it started, let’s get some other donors and move things along and do some good.”

The couple’s philanthropy is propelled by a variety of influences, including such mentors as UCLA benefactors Doris and Dr. Jules Stein (a fellow ophthalmologist) and Lew Wasserman.

“Jules and Doris Stein’s perception as to how important it is to donate money to a thing that involves vision had an impact,” Dr. Ginsburg says. “Lew Wasserman had the unique capability of seeing the future — seeing what was happening in society, where research was going and what the value would be. He would provoke me, or anybody in his presence, into doing as well as you can.”

Charlotte Ginsburg, who has been involved with several nonprofits, also works to inspire others to give in whatever way they can. “With my fundraising experience, I am often approached by individuals who ask, ‘We don’t have a lot of money, but how can we get involved?’ I say: ‘Volunteer, have a party at your home, bring some inner-city kids to the symphony or aquarium — whatever you can do, it will be really appreciated if it comes from your heart, whether it’s a donation or sharing of your time.’ People really respond to that.

“For us,” she adds, “the donation is really an expression of who we are and what we can pass on to others.”



For more information, contact Jamie Lynn at: 310-983-3033

Medical Student Commits to Increasing Opportunities for Minority Students



Richard Morgan.

Photo: Reed Hutchinson

Richard Morgan feels grateful. This June, Morgan will graduate with combined MD/PhD degrees from the UCLA-Caltech Medical Scientist Training Program (MSTP) in the David Geffen School of Medicine at UCLA. While most graduates grapple with how to pay their student loans, Morgan is looking to the future of medical education and health care by making a personal commitment to pave the way for promising students to have the educational and research opportunities he has had.

“Los Angeles is one of the most diverse cities in the world, and I think everyone can agree that in order for medicine to deliver the best care possible, our health care workforce should reflect our diversity,” Morgan said. “Underrepresented minority students with stellar grades and wonderful potential are struggling to gain access to research experiences in top-tier labs. I feel so lucky to have had research experiences that have laid the foundation for me to excel in science and medicine.”

Scientific investigation opportunities are a crucial component to the education of future physician-scientists, but all too often these opportunities are out of reach for minority students. Physician-scientists lead the way in discoveries that address such

medical challenges as COVID-19, and evidence demonstrates that diversity in the workplace correlates with improved innovation. However, according to a recent report, graduates of MD-PhD programs are actually less diverse than the population as a whole.

To increase opportunities for students at UCLA to become involved in research and receive the one-on-one mentorship essential for successfully applying to MD-PhD programs, Morgan joined forces with university leadership to plan and launch the UCLA MD-PhD Summer Research Fellowship Program, which will provide access and support for UCLA undergraduate students to conduct research in some of the most competitive laboratories at UCLA.

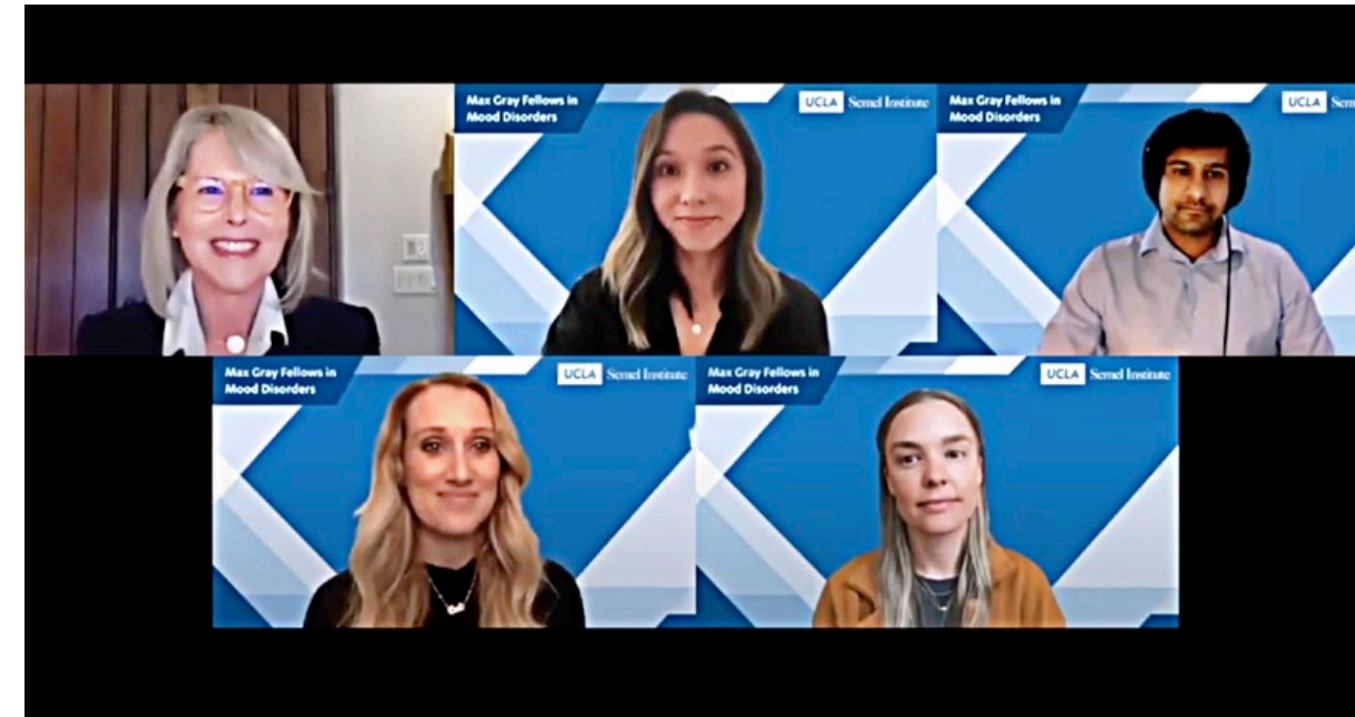
“The main reason to launch this summer research fellowship is to help college students fall in love with scientific research and feel that they are supported by our amazing UCLA faculty as they consider the combined MD-PhD-training pathway,” said Dr. Carlos Portera-Cailliau, Steven C. Gordon Family Chair in Parkinson’s Disease Research and co-director of MSTP. “This is particularly important for students who come from traditionally underrepresented groups in science and medicine.”

Morgan is passionate about reducing barriers for fellow students of color who are interested in research, and he applauded the UCLA MD-PhD Summer Research Fellowship Program endeavor by making the first gift to the new program. “I asked myself, ‘How can I make a difference?’” he said. “Investing in the minds of incredible students with remarkable talent and potential who have the desire to realize a brighter future for themselves and their loved ones is one way I can think of to make a huge difference in this world.”

Four UCLA students have entered the inaugural summer program. They will complete an eight-week research program with individualized mentorship and receive a stipend for living expenses. After completion of the program, participating students will continue to receive faculty mentorship and guidance as they apply for MD-PhD programs. As the fellowship program receives more funding, it will expand to include more students and continue diversifying the pipeline of future leaders in biomedical research.

 For more information, contact Katherine Van Story at: 310-903-9721

Max Gray Salon Offers Timely Mental Health Tips



(Clockwise from top left) Laurie Gordon, Dr. Megan Ichinose, Dr. Keerthan Somanath, Dr. Glenna Smith and Dr. Cassidy Zanko.

The social isolation brought on by COVID-19 has created a surge in mental health challenges. To address these concerns, the sixth annual Max Gray Fellows in Mood Disorders Salon, held via webinar on March 10, 2021, focused on mental health during the pandemic. The 2020-21 Max Gray Fellows working in the Jane and Terry Semel Institute for Neuroscience and Human Behavior at UCLA discussed the shifts in family dynamics due to virtual learning and working from home, self-care and the impact of social distancing.

Moderated by Laurie Gordon, founder of the Max Gray Fund for Treatment of Mood Disorders, the webinar featured Drs. Megan C. Ichinose and Glenna C. Smith (FEL ’20), first-year Max Gray Fellows in the Child and Adolescent Mood Disorders Clinic; Dr. Cassidy Zanko (FEL ’18), third-year Max Gray Fellow in the Child and Adolescent Mood Disorders Clinic; and Dr. Keerthan Somanath (RES ’20, FEL ’21), of the Mood Disorders Clinic in the Division of Adult Psychiatry.

The panelists advised attendees to be realistic and relax expectations for themselves and one other and to be kind and empathetic as family members take on more roles with new demands that cause elevated stress. Self-care tips included finding calming words to repeat, increasing daily movement with walking or stretching and scheduling time with family to talk about and better understand feelings and issues that need to be addressed. Finally, people should give themselves some grace and take things one day at a time.

 For more information, contact Dorin Esfahani at: 310-267-1838

 For more self-care tips, visit: tinyurl.com/Semel-Self-Care-Tips

Mother and Daughter Send Health Care Workers Virtual Hugs

In the early days of the COVID-19 pandemic, UCLA frontline health care workers bravely cared for patients, while scientific experts wrestled with how the novel coronavirus spreads and how to best protect people, particularly those working with COVID-19 patients. These dedicated clinicians remained steadfast in their commitment to the community, providing the exceptional health care that is the hallmark of UCLA Health. At the end of those tiring and tense days, who wouldn't need a hug?

Enter longtime UCLA donor Dominique Wirtschafter and her teenage daughter Kauri. Recognizing the emotional toll the pandemic was taking on health care workers, the Wirtschafter family made a \$10,000 contribution to establish the Healthcare Hugs program. UCLA Health employees acknowledged by patients and families received "hugs" through small gifts — a gift card to pick up essentials, a self-care package or a fitness bundle. The family's contributions alone provided gifts for 200 employees through this program. Many of the hug recipients have shared immense gratitude for the kind gesture.

"As a high school student, this pandemic has really shown me how much UCLA health care workers tirelessly work to keep our communities healthy and safe," said Kauri. "When I saw all of the pressure and strain it put on them, I knew I couldn't just sit back and let them power through this alone. They needed a hug."

To raise additional funds, Kauri started a Spark campaign. To get the word out, she challenged her fellow students to offer a hug of their own by sending the Healthcare Hugs link to three friends every day after their remote school day ended. To date, the program has raised more than \$8,000 toward their \$25,000 goal.

"If this pandemic has taught us anything, it is that the most valuable thing we all have is our health," said Wirtschafter, vice chair of the UCLA Health-Santa Monica Medical Center Board of Advisors. "We owe it to the UCLA health care workers to not only thank them, but to make sure they know that their health and happiness is at the forefront of our minds."


Through their creativity and generosity, the Wirtschafter family has shown that a hug is only a click away.



Kauri (left) and Dominique Wirtschafter.

Photo: Courtesy of the Wirtschafter family

 For more information, contact Lauren Davis Sweeney at: 310-339-4755

 To learn more about Healthcare Hugs, visit: spark.ucla.edu/project/24060

New Endowed Chair Advances Pediatric Orthopaedics

Dr. William L. Oppenheim (FEL '79), an internationally renowned expert in orthopaedics, has dedicated his work



Patricia Schnegg and Dr. William L. Oppenheim.
Photo: Courtesy of the Oppenheim family

to improving the care and treatment of cerebral palsy and musculoskeletal disorders. He joined the UCLA Department of Orthopaedic Surgery in 1979 and is now Distinguished Professor Emeritus of Pediatric Orthopaedics and Director Emeritus of the Center for Cerebral Palsy at the UCLA/Orthopaedic Institute for Children in the David Geffen School of Medicine at UCLA. After these many years, his commitment to advancing the field continues. Dr. Oppenheim and his wife Patricia Schnegg made a lead gift to establish the William and Patricia Oppenheim Presidential Chair in Pediatric Orthopaedics in the UCLA Department of Orthopaedic Surgery. Dr. Rachel Mednick Thompson has been named as the inaugural chair holder.

"As a member of the UCLA faculty for many years, I understand how important endowed chairs are to empowering gifted physicians and scientists who have the passion and ability to advance their field," said Dr. Oppenheim. "Patty and I are proud to be a part of establishing this chair that will support Rachel in her efforts to continue to improve treatments and provide the best possible care for pediatric orthopaedic patients and help them achieve their best possible quality of life."

Dr. Oppenheim founded the pediatric orthopaedic program in 1979. As he followed his young patients into adulthood, he saw the crucial need for improved transitional care, and in 1995 he established the Center for Cerebral Palsy at UCLA, a visionary model for interdisciplinary care across the lifespan that is one of the first of its kind in the country. Dr. Oppenheim and his wife, who is a retired Los Angeles Superior Court judge,

have been UCLA donors since 1985 and have previously supported the Center for Cerebral Palsy.

Dr. Thompson joined UCLA in 2017, and she recently was promoted to director of the Center for Cerebral Palsy, taking the reins from Dr. Oppenheim. Dr. Thompson focuses her research on the muscular pathology of cerebral palsy, and her primary area of practice is pediatric orthopaedics, with a specialization in neuromuscular orthopaedics/cerebral palsy.

"I am so grateful for Bill's mentorship, friendship and support," Dr. Thompson said. "He has always been in my corner as a colleague, lending advice and guidance, and I am honored to continue his legacy in the Department of Orthopaedic Surgery and at the Center for Cerebral Palsy at UCLA/OIC and as the inaugural chair holder."



Dr. Rachel Mednick Thompson, inaugural chair holder.
Photo: Courtesy UCLA Health

In addition to the Oppenheims' gift, more than \$1 million was raised for the chair, with contributions from Shirley and Ralph Shapiro and their children Peter and Alison; a group of Dr. Oppenheim's colleagues, friends and patients; and the University of California Presidential Match for Endowed Chairs Program.

"It is especially significant when our faculty expands their service to the university as philanthropists," said Dr. Kelsey C. Martin, dean of the David Geffen School of Medicine at UCLA and Gerald S. Levey, M.D., Endowed Chair. "It is a privilege to have worked with Bill, and we are grateful to him and Patty for this chair, which honors Bill's remarkable career and creates a meaningful legacy."

 For more information, contact Gretchen McGarry at: 310-794-4746

UCLA Donors Join Together to Honor Esteemed Orthopaedic Surgeon



Dr. Jeffrey J. Eckardt.
Photo: Courtesy of UCLA Health

Collective philanthropy can do great things, as evidenced by the UCLA friends, colleagues and fellow philanthropists who raised more than \$1 million to honor the legacy of the late Dr. Jeffrey J. Eckardt (RES '79), who died November 13, 2020. Thanks to lead gifts by Maxine and Eugene Rosenfeld, the Leonetti/O'Connell Family Foundation, and Jean-Marc Chapus and Christine and Steven F. Udvar-Hazy, along with contributions from 38 others, the David Geffen School of Medicine

at UCLA established the Jeffrey J. Eckardt, M.D., Term Chair in Orthopaedic Surgery. Dr. Nicholas M. Bernthal (FEL '12) has been named as the inaugural chair holder.

A world-renowned orthopaedic oncologist who retired to emeritus status in 2019, Dr. Eckardt served as Distinguished Professor of Orthopaedic Surgery and chair of the Department of Orthopaedic Surgery, and he held the Helga and Walter Oppenheimer Endowed Chair in Orthopaedic Oncology. Dr. Eckardt pioneered limb-salvage surgery that replaced amputation for patients with bone cancers, designed and improved oncologic implants and trained hundreds of surgeons how to treat bone tumors and care for patients. Under his leadership, the UCLA Department of Orthopaedic Surgery pushed scientific frontiers by opening dozens of clinical trials for less-toxic agents in sarcoma care, added studies to understand and improve function after surgeries and developed an "avatar" program of precision medicine to try to understand each patient's individual tumor.

"Endowed chairs are vital to UCLA's mission to advance transformative research and education by enabling outstanding faculty members the intellectual flexibility required to pursue new paths and uncover breakthroughs," said Dr. Kelsey C. Martin, dean of the David Geffen

School of Medicine at UCLA and Gerald S. Levey, M.D., Endowed Chair. "I am confident that Dr. Bernthal will continue Dr. Eckardt's legacy through his dedication to compassionate care, leading-edge research and community outreach."

Prior to his death, Dr. Eckardt expressed his awe of the support he received as fundraising for this chair began, and he frequently expressed how honored and moved he was. Dr. Bernthal, who shared a close relationship with Dr. Eckardt, said, "Dr. Eckardt was an unparalleled physician who taught many of us how to be doctors and to challenge ourselves to be better. He will be most remembered for his unwavering humanity, and I am immensely proud to hold the inaugural chair named in his memory."

Dr. Bernthal joined the UCLA Department of Orthopaedic Surgery in 2013, and he serves as an associate professor,

chief of the Division of Musculoskeletal Oncology, director of the UCLA Orthopaedic Oncology Fellowship and director and founder of the Global Orthopaedic Initiative at UCLA. Funding from the chair will support Dr. Bernthal's research to enhance quality of life for patients with sarcoma, decrease orthopaedic-implant infections and advance implant engineering. His lab also is pioneering new implant coatings to enhance the patient's ability to fight off bacteria.



Inaugural chair holder Dr. Nicholas M. Bernthal.
Photo: Courtesy of UCLA Health

 For more information, contact Gretchen McGarry at: 310-794-4746

Conrad N. Hilton Foundation Establishes Fund to Support Neurological Research at UCLA

Neurodegenerative diseases, such as Alzheimer's, Parkinson's and multiple sclerosis, affect millions of people worldwide, and the UCLA Department of Neurology is committed to finding ways to prevent and treat these conditions more effectively. To support clinical and basic medical-research efforts, the Conrad N. Hilton Foundation contributed \$2 million to establish the Conrad N. Hilton Foundation Research Support Fund in the Department of Neurology in the David Geffen School of Medicine at UCLA. The new fund will operate under the guidance of Dr. Rhonda R. Voskuhl, director of the UCLA Multiple Sclerosis Program, professor in the Department of Neurology and Jack H. Skirball Chair for Multiple Sclerosis Research.

"This fund honors the commitment my father Barron Hilton made to ongoing research after seeing my mother Marilyn live with multiple sclerosis for many years," said Hawley Hilton McAuliffe, board chair of the Conrad N. Hilton Foundation. "We hope for a time when no other family will have to watch their loved ones live with the same disease, and we are honored to support the important work Dr. Voskuhl and her team at UCLA are performing in search of a cure."

The new research fund will advance the discovery of treatments tailored and optimized to prevent and repair each patient's neurodegenerative disability, as opposed to a "one-size-fits-all" approach to the development of treatments for neurological diseases.

"I am grateful to the Conrad N. Hilton Foundation for its longtime support and generosity, which is vital to advancing novel approaches in clinical and basic medical research in multiple sclerosis and brain aging," Dr. Voskuhl said.

The Hilton Foundation, founded by the late Conrad N. Hilton, is a longtime benefactor of the university. Its giving has previously benefited the Department of Neurology, the UCLA Division of Infectious Diseases and the UCLA Jonathan and Karin Fielding School of Public Health, among others.

"The Conrad N. Hilton Foundation has been an important partner with UCLA Neurology, and this most recent gift will help accelerate our neurodegenerative disease research," said Dr. S. Thomas Carmichael (FEL '01), professor and chair of the UCLA Department of Neurology and Frances Stark Chair in Neurology.

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



Hawley Hilton McAuliffe.
Photo: Courtesy of the Conrad N. Hilton Foundation

Changing the Paradigm for the Treatment of Sports Concussion

Steve Tisch's landmark investment in 2014 established the UCLA Steve Tisch BrainSPORT Program, a sophisticated research, prevention, diagnosis and treatment program for concussions and brain injuries. His philanthropy — the single largest gift from an individual to a medical center for a concussion-related initiative — has enabled the program's director, Dr. Christopher C. Giza (RES '94, FEL '96, '00), and his team of experts in the David Geffen School of Medicine at UCLA to advance the understanding of the neurobiology of sports-related concussion using the latest techniques in brain imaging, molecular biology

“As the father of children who are athletes and as an NFL owner, I greatly value the positive role that sports play in people's lives and am personally concerned about sports concussions. UCLA runs one of the best youth concussion programs in the nation, and I'm honored that my gift will allow the program to accelerate and expand its efforts to help kids, parents and coaches understand how to prevent and treat concussions and enjoy the sports that they love.”

—Steve Tisch, 2014

and neuro-engineering. Their comprehension of the connection between concussions and long-term brain disease has enabled the team to devise innovative new treatments for those with concussion and promote safe sports participation for both the professional and nonprofessional athlete.

Over the past five years, the UCLA Steve Tisch BrainSPORT Program has brought public attention to the detrimental neurological effects of sports concussions. From President Obama's Healthy Kids and Safe Sports Concussion Summit in 2014 to the roll-out of the National Collegiate Athletic Association (NCAA)-Unit-



Photo: Shutterstock

ed States Department of Defense (DoD) Concussion Assessment Research and Education (CARE) Grand Alliance project with all UCLA varsity sports, the team's groundbreaking success was jump-started by Tisch's crucial program funding. In addition, the multiple community partnerships that have been formed have helped the UCLA Steve Tisch BrainSPORT Program make significant progress in clinical outreach and research, define best practices, make contact sports safer and meet the demand for care that includes the treatment of children, athletes and veterans. The UCLA Steve Tisch BrainSPORT Program continues to be the most advanced diagnostic and treatment program for sports concussion and brain health in the country.

 For more information, contact Samantha Lang at: 310-351-9806

Gifts

Gift Advances Focal Therapy Research

William J. Howard has made a \$100,000 contribution to the UCLA Department of Urology to advance the research of Dr. Leonard S. Marks (RES '78), professor of urology and Jean B. deKernion, M.D., Endowed Chair in Urology, into focal therapy for prostate cancer. Focal therapy involves a process of ablating the lesion without removing the organ. In the United States, prostate cancer is the second most common cause of cancer deaths in men. For the estimated 80,000 men who are diagnosed each year with intermediate-risk lesions, neither surgery nor active surveillance is appropriate, making focal therapy a promising treatment.

“When Dr. Marks explained the high-intensity focused ultrasound procedure and told me about all the fancy equipment they would be using to zap my cancer, I was sold on UCLA Urology,” Howard said. “Since having the procedure, with great results, I decided what they are doing at UCLA needs all of our support and dollars, and I was convinced that in the very near future, men's PSA problems will be solved with a simple outpatient office procedure, all because of Dr. Marks' leadership and hard work.”

Dr. Marks is among the leaders in advancing focal therapy, which offers the possibility of a cure without the complications of whole-organ treatment. He also has pioneered the development of targeted prostate biopsy.

 For more information, contact Gretchen McGarry at: 310-794-4746




Karl and Maria LeCompte.
Photo: Courtesy of the LeCompte family

A Wife Honors Her Husband's Lifetime Love Affair with UCLA

“I believe my husband Karl was taken to UCLA for the first time when he was 16 years old,” said Maria LeCompte. “It was a lifetime love affair, and he only trusted UCLA Health.” When her husband was diagnosed with arrhythmia and cardiomyopathy, UCLA became the couple's second home. Following Karl's death in July 2020, Maria contributed \$50,000 to establish two research funds in the Division of Cardiology in the David Geffen School of Medicine at UCLA.

“It was clear to me that the best way to honor Karl's memory and the amazing doctors who took care of him would be to make a donation to UCLA,” Maria said.

The funds, named in recognition of Karl's physicians, include the Dr. Eric Buch Cardiac Arrhythmia Research Fund, which will support research into cardiac arrhythmia and related activities under the direction of Dr. Buch (FEL '07, '08), and the Dr. Arnold Baas General Fund in Cardiology, which will provide resources for research, clinical care and education efforts under the direction of Dr. Baas. The gift also will name the Karl LeCompte Exam Room in the UCLA Vatche and Tamar Manoukian Medical Building.

 For more information, contact Noah Green at: 424-325-8184


Gary Barber Establishes Innovation Fund for Celiac Disease

A \$1 million gift from Gary Barber has established the Barber Family Celiac Disease Innovation Fund to enhance the Celiac Disease Program, a cornerstone of the Melvin and Bren Simon Digestive Diseases Center in the UCLA Vatche and Tamar Manoukian Division of Digestive Diseases. In addition, an equivalent matching contribution was made to the program, amplifying the impact of Barber's support for celiac disease, an inherited autoimmune disorder in which the ingestion of gluten leads to damage in the small intestine. The disease has increased fourfold since the mid-20th century.

“As one of the top medical and research institutions in the nation, UCLA is the right place to which to direct some of our philanthropy,” Barber said. “It is meaningful to our family to support UCLA teams and their efforts to improve the quality of life for generations of patients.”

The Barber Innovation Fund will benefit clinical care for celiac disease, fuel new discoveries that translate to better patient care and educate the next generation of physicians. This investment will further strengthen the program's whole-person approach to nutrition, which promotes education and lifestyle strategies to reduce stress and improve patient well-being.

The UCLA Celiac Disease Program is the first of its kind in the Greater Los Angeles area, and it is among fewer than 10 nationally that provide comprehensive care for the disorder. The UCLA Manoukian Division serves patients through 11 clinical sites across the region and telemedicine.

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

Memoriam

Dr. Arthur M. Cohen, professor emeritus of education, medical school benefactor and a pioneering scholar whose work focused on community colleges, died on December 25, 2020. He was 93 years old. Dr. Cohen joined the UCLA faculty in 1964, and he remained with the university until he retired in 2014. He was a vanguard in the study of community colleges and is largely credited with helping to shape national scholarship



Dr. Arthur M. Cohen.
Photo: Courtesy of UCLA School of Education and Information Studies

and the understanding of this field. Dr. Cohen and his wife Dr. Florence Brawer Cohen were generous donors to UCLA, as well as champions of medical education. The couple established the Arthur M. Cohen and Florence Brawer Cohen Scholarship in the David Geffen School of Medicine at UCLA to benefit fourth-year medical students with financial need and who were interested in pursuing careers in primary care.

Donation to Lung Health Fund Made in Memory of CF Advocate

Friends and family donated to the UCLA Lung Health Research Accelerator Fund in memory of Stacy Ann (Hawes) Melle, who died October 10, 2019, at the age of 50. Melle was diagnosed with cystic fibrosis (CF), a genetic disease that affects the lungs and digestive system, when she was 2 years old, but she never used her condition as an excuse to sit on the sidelines. Rather, she chose to fully live. After graduating college, she pursued her dream of a career in media and telecommunications.

Melle worked in a number of roles before joining Universal Studios, where she became vice president of marketing for NBCUniversal Media. In 1998, Melle received a double lung transplant. On the eve of her transplant surgery, she met the love of her life, Kelly Melle, who serves on the UCLA Lung Health Advisory Board.

Shortly before her death, Melle ended a speech during a cystic fibrosis fundraising event with a quote from Eleanor Roosevelt: “The purpose of life is to live it, to taste experience to the utmost, to reach out eagerly and without fear for newer and richer experience.”

Melle fulfilled that mission.



Stacy Ann (Hawes) Melle.
Photo: Courtesy of Kelly Melle

From Russia, with Love

BY HELEN LAVRETSKY, MD (RES '95, FEL '96)

This past year has been one of hindsight, during which my research activities — like those of so many others — have been suspended due to the COVID-19 pandemic, and I have had plenty of time to reflect upon the meaning and direction of my life. We have been living through unprecedented and difficult times, during which the entire world was forced to pause, rebalance and find new sources of resilience and collective wisdom in order to discover creative solutions to its many problems. The surreal nature of the pandemic and the global lockdown has made so many of us look back and ask, “How did I get here?” followed by, “How do I move forward?” Reflections upon our life choices that have led us to our current place can be very revealing and help to define our next chapter.

I typically say that I was born to become a psychiatrist, in part because my mother was (and still is) a psychiatrist and my father was a neurologist, and in part because I was always drawn to emotional suffering in humans, always trying to understand or help out.

As a child growing up in Moscow, Russia, I was introduced to scientific books about psychiatric and neurological disorders in children at a very early age — before I turned 10. I was reading books about cerebral palsy and Down syndrome and was strangely attracted to the pictures of young children who looked different, with deformed extremities and other body parts, and who clearly were suffering. My first “patient” was my little friend, a 3-year-old boy who was mute, but somehow, intuitively, I understood his wishes and translated them to the adults. I made it my responsibility to show up daily for him.

And even though later I would go through decades of medical training, the essence of what I do for patients today is no



Top: Dr. Helen Lavretsky had to give up her Soviet citizenship to receive the exit visa that would allow her to leave Russia.

Bottom: Dr. Lavretsky with her husband Eugene and 2-year-old son Philip on a final family vacation to Latvia shortly before they left Russia in 1988.

Photos: Courtesy of Helen Lavretsky



In 2017, Dr. Lavretsky was invited to speak at the Tibetan Medical and Astral-Science Institute in Dharamsala, India, during a conference on “Body, Mind and Life,” focused on the global prevention of mental disorders.

different than what I tried to do for my little friend — understand their suffering, translate it to the world and help to alleviate it.

During high school, I developed an interest in psychiatric research. When I was 15 years old, I took a summer job working at a psychiatric hospital. I watched patients wandering in the beautiful gardens of the hospital grounds where they worked in the greenhouses as a part of their vocational rehabilitation program — a staple of psychiatry in Russia — and tried to imagine what was going on in their minds. For science classes, I performed hypnosis on my classmates, using a pendulum and techniques I learned in a book, and classified their responses. After reading an old French book about phrenology, I examined my classmates’ skulls and described their personalities based on the topography of their heads.

When I began my medical education in 1979 at the Moscow Medical Institute, I immediately joined a research group in the psychiatry department and subsequently published my first paper, a study of psychiatric manifestation in women with gynecological cancers. I started my psychiatry residency at the Moscow Center of Mental Health, and became interested in geriatric psychiatry. After completing my residency, my husband, young son and I left Russia in November 1988, during the third wave of Russian-Jewish emigration that preceded the fall of the Soviet Union.

Such an enormous transition did not feel drastic at all. In fact, for the first time in my life I felt at home and was quite happy. The melting pot of L.A. was more accepting of me than Russia ever had been. There, I was acutely aware that I was different from most everyone else because I was a Jew, even though I did not really know as a child what being Jewish entailed, since all religious practices were forbidden and to practice even in secret was dangerous. My family had tried to leave the Soviet Union 10 years earlier, but we were denied permission, becoming members of a group of Jews known as *refuseniks*. My father lost his job in the Ministry of Health because of our desire to emigrate. But when President Ronald Reagan and Soviet leader Mikhail Gorbachev began talking together, a brief window opened. I was married, with a 2-year-old child, but we dropped everything and left.

After waiting in Italy for our visas to enter the U.S. and taking English lessons from volunteers who helped Jewish immigrants from the Soviet Union, we arrived in Los Angeles, where my cousins had settled in the 1970s, in January 1989.

Life in Russia was gray. Los Angeles felt free and open. Soon after I arrived, I discovered the UCLA campus, and its marvelous biomedical library and the botanical gardens, where I spent a lot of time while preparing for the medical boards. In the library, I also found, to my great joy, a book written in Russian by my uncle, who had served as the chief psychiatrist of Russia shortly after World War II and was instrumental in the development of neuropsychiatry based on his work on the war-related brain injuries. It had been expunged from medical libraries in Russia in the 1950s as part of Stalin’s purge against physicians and other scientists following what became known as the “Doctors’ Plot,” when a number of prominent Jewish physicians were accused of conspiracy to assassinate Soviet leaders. It felt very special to me to have found it in the UCLA library.

I wanted to continue my training in psychiatry, and entered UCLA’s residency program at the Sepulveda VA Hospital in the San Fernando Valley, and I later completed UCLA fellowships in geriatric psychiatry and neuroscience. The training I received has opened doors to amazing experiences and successes, both as a clinician and a researcher, as well as to new directions in my professional evolution, such as my growing interest in integrative medicine and mind-body practices like yoga, Tai Chi and meditation for older adults and stressed caregivers.

How different my life would be if I had not chosen some 30 years ago to leave my home country and come here. UCLA has provided the flexible space for my many transitions and transformations. My scientific activities have been a big part of my spiritual journey focused on seeking to understand the true nature of human mental and emotional suffering and resilience, where all life events are assumed to provide valuable lessons and “silver linings” that ensure the individual and collective evolution of consciousness. I look forward to this unprecedented opportunity for the reinvention of ourselves, our world and our scientific innovation, and for the global evolution of consciousness as a result of our collective search for peace and the alleviation of suffering.

Dr. Helen Lavretsky is a geriatric integrative psychiatrist and professor-in-residence in the Department of Psychiatry and Biobehavioral Sciences in the Semel Institute for Neuroscience and Human Behavior at UCLA. In 2020, the year of the COVID-19 pandemic, she received three national awards for her work to promote resilience to stress in older adults.



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U.S. News & World Report's Best Hospital Survey ranks UCLA #1 in California and #4 in the nation.

#TeamLA



Image: Courtesy of Allan Holzman/Message to a Stutterer

Perhaps the greatest insight by UCLA psychologist Dr. Joseph Sheehan (page 36) is his iceberg analogy to explain the challenges of stuttering, that the speech difficulties that are evident to listeners represent just the tip of the iceberg; the bulk of the underlying issues, such as self-image and identity, are submerged below the surface.