There is an epidemic of sadness among teenagers, with one-in-10 having seriously contemplated or attempted suicide in 2021. What’s going on?
The "deaths of despair" narrative doesn't provide the whole picture.

By Joseph Friedman, PhD ’22; Helena Hannsen, MD, PhD; and Joseph P. Gone

The "deaths of despair" narrative doesn't provide the whole picture. What's going on?

By Dan Gordon

We Want to Hear from You

Dear Reader:

The goal of U Magazine is to illuminate the latest scientific and clinical advances in medicine and inform you about what's happening at UCLA Health and the David Geffen School of Medicine at UCLA. For us to better serve you and make informed editorial choices, it is important to understand your interests and reading habits. To accomplish this, we are utilizing an easy-to-use survey tool developed by the Council for Advancement and Support of Education and successfully implemented by more than 100 of its affiliated college and university publications.

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We look forward to hearing from you.

Thank you.

David Greenwald
Editor, U Magazine

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We look forward to hearing from you.
Building Toward Better Behavioral Health Care

UCLA Health is expanding critically needed capacity by building a world-class, state-of-the-art behavioral health campus.

NEARLY ONE-IN-20 ADULTS IN AMERICA — 13.6 million people — live with a serious mental illness. Yet, in this past year, only 45% of them received mental health services. Perhaps the greatest challenge to receiving help is insufficient access to high-quality behavioral health care. In Los Angeles County, the need is acute. There simply aren’t enough beds: 13 psychiatric beds per 100,000 population, which is well below the public health standard of 50 psychiatric beds per 100,000 population.

UCLA Health is one of the few remaining providers of inpatient behavioral health care services in Los Angeles County, and we feel a responsibility to address this urgent need and redefine the future of behavioral health care in our region. That is why we are expanding critically needed capacity by building a world-class, state-of-the-art behavioral health campus in the mid-Wilshire area of Los Angeles.

An anticipated investment of $452 million will help tackle a long-standing regional need for additional behavioral health services. The mid-Wilshire campus is being designed to support individuals, their families and the broader community by significantly expanding access to a healing environment with a full continuum of behavioral health services.

The new location will be on the site of the former Olympia Medical Center, which closed in 2021 and the campus acquired by UCLA Health. The UC Board of Regents this past November approved design plans for the 170,000-square-foot facility; construction is planned to begin in 2024, and the project is expected to be completed by spring 2026.

The new hospital will meet the state’s highest standards for acute psychiatric hospital buildings and will include comprehensive behavioral health care services for adult, geriatric, child, adolescent and intensive care patients, as well as crisis care. In addition, an adjacent medical office building will be renovated to expand, relocate and optimize outpatient behavioral health programs and clinical research and education programs associated with the licensed neuropsychiatric hospital and dedicated psychiatric emergency services.

This expansion comes at a pivotal moment, as we conclude the COVID-19 pandemic and the need for adult and children’s mental health services is growing. There are troubling reports that a growing percentage of youths are experiencing anxiety and depression (see “The Kids Aren’t Alright,” page 26), and access to services is challenging, especially for California’s children.

As part of our effort to address these critical issues, we have worked for the past two years with the Los Angeles County Department of Mental Health to expand the age range of Medi-Cal patients we are able to treat as inpatients. Historically, Medi-Cal only covered hospitalization of patients younger than 21; now, as of October 2022, UCLA Health is able to provide inpatient treatment to Medi-Cal patients of all ages. This is a major milestone in our ongoing quest for greater health equity, diversity and inclusivity.

UCLA Health looks forward to expanding mental health capacity to better serve Los Angeles and the surrounding region. The mid-Wilshire behavioral health campus is an extension of that commitment to our community.

Johnese Spisso, MPA
President, UCLA Health
CEO, UCLA Hospital System
Associate Vice Chancellor, UCLA Health Sciences
When a 7.8-magnitude earthquake devastated southern Turkey and western Syria on February 6, killing tens of thousands of people and leaving hundreds of thousands displaced, it hit close to home for members of the UCLA community with friends and family in the region.

Within a day of the horrific quake, a group of students in the David Geffen School of Medicine at UCLA, faculty and staff rallied to put together a relief effort to send supplies to help those in need. Founding members of the student-led Arab Health Organization (AHO) reached out to the group’s advisors, Faysal Saab, MD ’12 (RES ’16), assistant clinical professor of internal medicine and pediatrics, and Neveen S. El-Farra, MD (RES ’05), professor of clinical medicine, to spearhead a humanitarian response for the area.

For many of those who participated, the effort was deeply personal. “Getting messages and calls of distress from those closest to me really woke me up,” says Al-Hassan Dajani, a first-year medical student and a founding member of the AHO. Some of Dajani’s closest friends are Syrian refugees from the decade-long war that has consumed their homeland. “We have a lot of members of the Syrian community at UCLA, and they are going through a hard time,” Dajani says. “For us, it was important to fulfill our duty to respond, both by initiating action and by being a source of support for those around us.”

Fourth-year medical student Zina Jawad is also a founding member of the AHO. “It was important that our voices be heard,” she says, recalling that the group’s advisors, Drs. Saab and El-Farra, and UCLA Health had been involved in donating medical equipment to Beirut, Lebanon, after a massive explosion in the port shattered the city in 2020. “We wanted to know if it was possible for us to do something like that as well. It took off from there,” Jawad says.

Dr. Saab was on a UCLA global-health visit in northern Jordan when the earthquake hit, and he soon started receiving emails from AHO students. “I went straight to leadership at UCLA Health, who were so kind and gracious a few years ago in sending relief after the Beirut blast,” he recalls. His request for help moved up the chain, and once UCLA Health leadership signed off, the effort began in earnest.

Rana Al-Rasheed, BDS, a provider in the UCLA Faculty Dental Practice with ties to some members of the AHO, promptly joined in. “As a mother and health care provider, I knew that we had to act,” she says. “Watching the images on the news and hearing the stories of the suffering, I was heartbroken. But I’m not someone who sits and wallows.”

Dr. Al-Rasheed sent a group text to AHO students, who were working to collect urgently needed blankets, tents for those who have been left without shelter, thousands of people now without shelter and sleeping bags for the hundreds of thousands of people now without shelter in the freezing cold. Over the course of several days, some 3,300 items were gathered at Ronald Reagan UCLA Medical Center, UCLA Santa Monica Medical Center, Geffen Hall and a distribution facility in the San Fernando Valley.

Ahmed Kassem was among the volunteers who joined the effort. A child of Jordanian and Syrian parents, he says he felt a duty to participate. “I’m trying to understand the struggle that people from the other side of the world are experiencing,” he says. “They may not be physically close to us, but if we can empathize with their stories, we will feel close to them and begin to understand what they are going through.”

It is important for UCLA Health to be engaged at times like this, says Mike Burks, chief of UCLA Health Patient Navigation and Business Services. “Supporting high-priority humanitarian efforts is something we’ve done for many, many years. To mobilize an effort that brings together internal and external teams, undergraduate students, medical students and the many people who represent the global community that is UCLA unifies us. It is priceless.”

For fourth-year medical student Ghadi Ghanem, the drive wasn’t dissimilar to work he has done with the Student Run Homeless Clinic and Mobile Clinic Project. “This drive is born out of humanitarian need,” he says. “UCLA Health has been instrumental in spearheading an effort to deliver medical supplies and basic needs such as blankets and sleeping bags and tents for those who have been left without shelter. It is inspiring to see UCLA take this grand step and present itself on a global scale.”

The students responded that they wanted to send medical supplies abroad. In this regard, Dr. Al Rasheed had crucial connections: friends with contacts in the Turkish consulate, where donations were being collected to be flown by Turkish Airlines, and in the Turkish embassy. Soon plans began to formalize. The health care initiative team in the AHO was being collected to be flown by Turkish Airlines, and in the Turkish embassy. Soon plans began to formalize. The health care initiative team in the AHO field medical supplies to Beirut.

The faculty engaged in the effort included Dr. Al-Rasheed, Dr. Saab and Dr. Rana Al-Rasheed, BDS, a provider in the UCLA Faculty Dental Practice.

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MENTAL HEALTH IS THE DEFINING PUBLIC HEALTH CRISIS OF OUR TIME, and for many Americans, loneliness is at the heart of that crisis. At any given moment, about one out of every two of our fellow citizens is experiencing measurable levels of loneliness. It is not something we talk about or easily see: Loneliness is a condition that is hidden in the shadows. Our fellow citizens is experiencing measurable levels of loneliness.

It is not something we talk about or easily see: Loneliness is a condition that is hidden in the shadows. Social disconnection puts us at elevated risk — from predators, from starvation, from exposure — and that created stress. Our survival depended on being a part of something larger than just ourselves.

More than just a bad feeling, loneliness is a corrosive condition with grave consequences. Social disconnection puts us at increased risk for depression, anxiety and suicide, as well as heightening our risk for stress-related physical ailments like heart disease, stroke and dementia. Its impact on our risk of premature death is on par with smoking 15 cigarettes daily.

This epidemic of loneliness has been building over many years. The pandemic made it worse, to be sure, but it is a crisis that has been evolving for a half-century or more. During that time, there has been declining participation in communal life. Fewer people belong to churches or synagogues or other religious institutions or are engaged with civic organizations. We, as a society, move more around more. We change jobs more frequently. We don’t put down roots in the same ways as our parents and grandparents.

Too often, we imagine loneliness as a condition of the elderly living in isolation with no one to support them. While that can be true, loneliness in the United States is not limited to older Americans. There are people in marriages who are lonely, CEOs of major companies who are lonely, seemingly happy people posting pictures of their fabulous vacations on social media who are lonely. And far too many young people who are lonely.

From the outside, everything looks fine. But inside, they are struggling. Addressing this national crisis is a profound challenge. We all want to be seen and understood. Sometimes all we need is acknowledgment of our worth and value. This is something we can do for each other — and for ourselves. Taking just 15 minutes a day to reach out to someone you care about can makes a huge difference in how connected we feel.
WHAT DOES THE “DEATHS OF DESPAIR” NARRATIVE LEAVE OUT?

By Joseph Friedman, PhD ’22; Helena Hansen, MD, PhD; and Joseph P. Gone

In a recently published article in The Lancet, we provide new data showing that between 1999 and 2013, premature deaths among Native Americans increased by a far greater margin: nearly 30%. These deaths started at a much higher rate to begin with, and unfortunately the inequities have only deepened in recent years. We found that as of 2020, Native Americans had a premature death rate double that of white Americans. A disparity of this magnitude between ethnoracial groups should be inconceivable in our society. The case that white suffering was unique depended on the exclusion of data representing Native Americans. The Lancet’s January 26, 2023, article, “Deaths of Despair and Indigenous Data Genocide,” by Joseph Friedman and Helena Hansen, shows, midlife mortality is still significantly lower for white people, while the rate among white people did not come close to catching up to the mortality rate among Black Americans; we found that to reach parity, the rate would have had to increase by more than 50%.

In 2015, two economists introduced a social theory that would become one of the most famous of the era: deaths of despair. They speculated that rising rates of deaths among white Americans shared a common cause: rising despair and unemployment in areas such as the Rust Belt. The theory immediately caught on in the public consciousness. It drew from data showing that premature mortality — deaths among 45-to-54-year-olds — was increasing, but only for white Americans. Data from Hispanic and Black Americans showed declining premature death rates, as did records from other affluent countries.

Adherents to this theory sounded the alarm: White people were dying at unprecedented rates — killing themselves, quickly or slowly — from drugs, alcohol and suicide, causes of death shown to be spiking for this demographic between 1999 and 2013. Mass media were captivated by the finding that white midlife mortality increased, treating it as more newsworthy than the routine reality that other groups — most conspicuously Black Americans — were still dying at much higher rates. As the deaths of despair theory gained ground, health-equity scholars raised questions about its framing. The 9% documented increase in premature deaths among white people did not come close to catching up to the mortality rate among Black Americans; we found that to reach parity, the rate would have had to increase by more than 50%.

Now, nearly a decade after the phrase was coined, another flaw in this public-health concept has emerged. That midlife deaths were increasing only among white people — particularly men without college degrees — was the core insight highlighted from the theory. But a new analysis shows that notion was never quite true. It’s baked into the DNA of our country — starting with our violent past that has condemned generations of people to health struggles and economic precarity, and extending today to our profit-driven health care system and threadbare social safety net that help fuel our epidemic of early death.

The very structure of our country promotes despair in many of its people. We need progress on these issues to extend the lives of all Americans, and possibly reverse our unprecedented declines in life expectancy.

Dr. Joseph Friedman is a third-year medical student in the David Geffen School of Medicine at UCLA and a researcher studying social inequalities and the overdose crisis. Dr. Helena Hansen is professor of psychiatry and behavioral sciences and associate director of the UCLA Center for Social Medicine. Joseph P. Gone is a citizen of the Aaniiih–Gros Ventre Tribal Nation of Montana and professor of anthropology and of global health and social medicine at Harvard University, where he also directs the Harvard University Native American Program. This article originally was published in the opinion section of the Los Angeles Times. It is reprinted with permission.

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“We NEED PROGRESS ON THESE ISSUES TO EXTEND THE LIVES OF ALL AMERICANS, AND POSSIBLY REVERSE OUR UNPRECEDENTED DECLINES IN LIFE EXPECTANCY.”
Resistance to the drugs. Three years later, a clinical trial testing the safety and efficacy of a novel combination immunotherapy has, along with a unique type of precision radiotherapy, given the 43-year-old a new lease on life. "When he no longer responded to traditional immunotherapy, there was a significant worry that nothing was left for him," says Sidharth R. Anand, an associate professor of medicine at the UCLA GI oncology program.

While the experimental immunotherapy succeeded in controlling Barajas’ cancer, the patient faced a setback in 2021 when scans showed cancer progression at some lymph nodes near the left groin and left pelvic region. His oncology team referred Barajas to Michael Xiang, MD, PhD, a radiation oncology specialist and medical director of Santa Clarita Radiation Oncology. As a kind of "spot treatment," Dr. Xiang used stereotactic body radiation therapy (SBRT), which delivers high doses of radiation to a highly targeted area in a few sessions. He and his radiation oncology team were able to offer Barajas adaptive radiation therapy, which gives radiation oncologists a real-time view into the human body to adapt to the patient’s changing anatomy with high precision.

After adaptive SBRT treatment, scans showed the tumor areas in Barajas’ pelvis had decreased in size, demonstrating a good response to radiation. Also, his tumor marker, called CEA, which had been elevated and rising prior to treatment, returned to the normal range. Barajas has continued in the clinical trial, which is keeping his overall disease in check. "It is extremely rare to see this much of a response," Anand said. "We think there is a chance for him to live a normal life, with no more treatment required in the near future."

"The experimental combination immunotherapy has, along with adaptive radiation therapy, given the patient a new lease on life," Anand said. "We are optimistic about his prospects for long-term survival."

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Brain Changes in Autism Far More Sweeping Than Previously Known

**BRAIN CHANGES IN AUTISM** are comprehensive throughout the cerebral cortex rather than limited to particular areas thought to affect social behavior and cognition. To characterize ASD at the molecular level, brain researchers compared expression in 11 cortical regions analyzed, regardless of whether they are higher-order-association regions — those involved in functions such as reasoning, language, social cognition and mental flexibility — or primary sensory regions.

“We now finally are beginning to get a picture of the state of the brain, at the molecular level, of the brain in individuals who had a diagnosis of autism.”

Researchers found strong evidence that the genetic risk for autism is elevated in a specific group of genes expressed in neurons that has lower expression across the brain, indicating that these correlated RNA changes in the brain are likely the cause of ASD rather than a result of the disorder. One of the next steps is to determine if researchers can use computational approaches to develop therapies based on reversing gene-expression changes the researchers found in ASD, Dr. Geschwind says.

— Jason Millman

**The SymphNode device (left) contains nanoparticles (red dots) that release a drug that blocks the activity of regulatory T cells (green), which suppress the body’s response to solid tumors.** At the same time, the SymphNode’s microparticles (black dots) attract and beef up cancer-fighting T cells. Tiny Implantable Device Helps Kill Cancer

**MANY SOLID TUMORS RESIST** treatment in part by turning human biology against itself. Tumors surround themselves with extra white blood cells known as regulatory T cells, which call off the body’s natural defenses against the disease. Strategies to treat cancer by deactivating these cells risk creating a tumor while stimulating and strengthening tumor-fighting cells. The device was shown to drive tumors into remission, eliminate metastasis, prevent the growth of new tumors and result in longer survival in mice.

“Getting rid of regulatory T cells within the tumor seems to be trans-

putting. When surgically implanted directly next to a tumor, the drug stimu-
lates the body’s immune response against cancer in multiple ways. It slowly releases a drug that blocks the regulatory T cells in the tumor. At the same time, it attracts and boosts up the T cells that kill tumors. The material that the device is made of resembles a lymph node, a welcoming setting for cancer-fighting cells, and has pores lined with antibodies that further activate these cells.

The researchers tested the SymphNode in mouse models of both breast cancer and melanoma. With breast cancer, the device shrank tumors in 80% of mice and prevented the spread of cancer in 100% of them. In contrast, the cancer metastasized to the brain and lymph nodes of all mice in an untreated control group and killed all these mice within a few weeks. The researchers also found that placing a SymphNode next to one breast cancer tumor halted the growth of a second, simultaneous tumor at a different location in the body. In melanoma, the device shrank tumors in 100% of treated mice, with tumors decreasing to undetectable levels in more than 40% of cases.

In both types of cancer, the treatment significantly extended the life span of mice beyond that of untreated mice. Most promising, the researchers demonstrated mice whose breast cancer was treated with a SymphNode and survived also resisted the growth of a second tumor injected two days after the first, indicating that the technology may decrease the risk of cancer recurrence.

The team aims to make SymphNode available to treat human cancers in the future by licensing the technology to Symphony Biosciences, a company based at the California NanoSystems Institute’s Magnify startup incubator on the UCLA campus.

— Nicole Wilkins
USE OF AN INSULIN PUMP has been shown to improve glycemic control, quality of life and satisfaction with treatment, and to lower diabetes distress. Overall use has grown over two decades, from about 32% to 59% among people with type 1 diabetes. Yet, there has been no improvement in racial, ethnic and socioeconomic disparities in use of the device.

“Diabetes technology has numerous benefits for patients with type 1 diabetes, but the problem is that there is a huge divide in who actually has access to these technologies,” says Estelle Everett, MD ’13, assistant professor of medicine in the Division of Endocrinology, Diabetes & Metabolism. A study led by Dr. Everett found insulin pump use was 67% among non-Hispanic whites, 41% among Hispanics, 29% among Blacks and 46% among other racial and ethnic groups. In addition, 70% of people with bachelor’s degrees and higher used the pumps, compared with 56% among those with some college, 40% among holders of high school degrees and 18% among those with no high school education. By income level, 74% of those with household incomes of $75,000 or more, 66% with $50,000 to $74,000, 57% with $25,000 to $49,000 and 44% with less than $25,000 used the pumps.


“Our study found that over the past 20 years, despite the overall increase in the use of insulin pumps, racial-ethnic minority groups and those of lower socioeconomic status still have unequal access to this very beneficial management tool,” Dr. Everett says. “This is very concerning because these groups have more challenges managing their diabetes and have higher risk of complications with diabetes, so they may actually gain the most benefit from use of diabetes technology.” More research is needed on ways to improve access to insulin pumps and address persistent inequities in use of the devices. “Changes in the approach to diabetes care and health policies are needed to ensure equal access to this life-changing diabetes device because everyone deserves an equal opportunity to improve their diabetes health,” Dr. Everett says.

— Enrique Rivero

Risk Models for Breast Cancer May Incorrectly Classify Many Women

WOMEN AT RISK OF BREAST CANCER are likely receiving vastly different recommendations depending on the risk-assessment model used and the cutoff applied to define “high risk,” according to a new study from UCLA. Current incidence rates indicate that about one-in-eight women born in the United States today will develop breast cancer at some time during her life. The risk increases with age.

As precision medicine evolves in health care, risk models for breast cancer are increasingly used to identify women who would benefit from medicines and supplemental MRI screening to reduce the risk of breast cancer. Easy-to-use risk models are readily available online, and women are often given a risk estimate on their screening mammogram reports.

In 2019, the U.S. Preventive Services Task Force (USPSTF) recommended that clinicians offer risk-reducing medications such as tamoxifen, raloxifene or aromatase inhibitors to women who are at high risk for breast cancer in the next five years and at low risk for adverse medication effects.

While previously, a five-year-risk cutoff of 1.67% was established, the USPSTF recommended a new, higher five-year-risk cutoff of 3%. While current breast cancer risk-assessment tools work well at a population level, little attention has been paid to how they perform at an individual level or to the variation in risk estimates for the greater than or equal to 5% five-year threshold at the level of the individual.

The current study included more than 31,115 women who were part of the Athena Breast Health Network, a statewide quality-improvement initiative across the University of California medical centers and cancer centers. It focused on three commonly used risk-assessment models: the Breast Cancer Risk Assessment Tool (BCRAT, also called the Gail model), the Breast Cancer Surveillance Consortium (BCSC), and the International Breast Intervention Study (IBIS, also called the Tyrer-Cuzick model).

Investigators found when using a threshold of greater than or equal to 1.67%, more than 21% of women were classified as high-risk for developing breast cancer in the next five years by one model but average risk by another model. When using a greater than or equal to 3% threshold, more than 5% of women had disparities in risk severity between models. Almost half of women (46.6%) were classified as high risk by at least one of the three models. Because most women will not be diagnosed with breast cancer within five years, the authors say many women would be incorrectly classified as high-risk.

“The study highlights the risk of a blanket approach to using risk prediction models to inform individual-level medical screening and treatment decisions,” says Joann G. Elmore, MD, professor of medicine in the Department of Medicine, member of the Jonsson Comprehensive Cancer center and professor of health services research at the UCLA Fielding School of Public Health. “All three of the models we looked at had similar accuracy at the population level, but in our analyses there was marked disagreement between who was identified as ‘high-risk’ by all three models.”

The authors point out that newer risk models are being developed that include information on breast cancer susceptibility genes and other genetic susceptibility variants, which may improve predictability.

— David Sampson

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Genetic Links Between Traits Are Often Overstated

MANY ESTIMATES OF HOW STRONGLY traits and diseases share genetic patterns may be inflated, according to a new UCLA-led study that indicates current methods for assessing genetic relationships between traits fail to account for mating patterns.

With powerful genome-sequencing technologies, scientists in recent years have sought to understand the genetic associations between traits and disease risk, hoping that discoveries of shared genetics could point to clues for tackling diseases. However, UCLA researchers say their new study cautions against relying too heavily on genetic correlations estimated from data. They say that such estimates are confounded by non-biological factors more than has been previously appreciated.

Genetic-correlation estimates typically assume that mating is random. But in the real world, traits and diseases tend to pair up because of many shared interests and social structures. As a result, some genetic correlations in previous work that have been attributed to shared biology may instead reflect incorrect statistical assumptions. For example, previous estimates of genetic overlap between body mass index (BMI) and educational attainment are likely to reflect this type of population structure, induced by “cross-trait assortative mating.”

The study authors said genetic-correlation estimates deserve more scrutiny, since these estimates have been used as disease-risk, search for clues for potential therapies, inform diagnostic practices and shape arguments about human behavior and societal issues. The authors said some in the scientific community have placed too much emphasis on genetic-correlation estimates based on the idea that studying genes, because they are unalterable, can overcome confounding factors.

“If you just look at two traits that are elevated in a group of people, you can’t conclude that they’re there for the same reason,” says Richard Border, PhD, a postdoctoral researcher in statistical genetics at UCLA. “But there’s been a kind of assumption that if you can track this back to genes, then you would have the causal story.”

Based on their analysis of two large databases of spousal traits, researchers found that cross-trait assortative mating is strongly associated with genetic-correlation estimates and plausibly accounts for a “substantial” portion of genetic-correlation estimates.

“Cross-trait assortative mating has affected all of our genomes and caused interesting correlations between DNA you inherit from your mother and DNA you inherit from your father across the whole genome,” says Noah Zaitlen, PhD, assistant professor of computational medicine and neurology.

The researchers also examined genetic-correlation estimates of psychiatric disorders, which have sparked debate in the psychiatric community because they appear to show genetic relationships among disorders that seemingly have little similarity, such as attention-deficit hyperactivity disorder and schizophrenia.

The researchers found that genetic correlations for several unrelated traits could be plausibly attributed to cross-trait assortative mating and imperfect diagnostic practices. On the other hand, their analysis found stronger links for some pairs of traits, like anxiety disorders and major depression, suggesting that there truly is at least some shared biology.

“But even when there is a real signal there, we’re still suggesting that we’re over-estimating the extent of that sharing,” Dr. Border says.

— Jason Millman

Tailoring Obesity Treatments for the Male and Female Brain

A NEW STUDY BY UCLA HEALTH researchers finds sex-specific brain signals that appear to confirm that different drivers lead men and women to develop obesity. The study combined data from several modes of MRI with patients’ clinical features and personal histories to identify sex-specific mechanisms in the brain underlying obesity.

“We found differences in several of the brain’s networks associated with early-life adversity, mental health quality and the way sensory stimulation is experienced,” says Arpana Gupta, PhD, a brain, obesity and microbiome researcher and associate professor-in-residence of medicine. “The resulting brain signatures, based on multimodal MRI imaging, may help us more precisely tailor obesity interventions based on an individual’s sex.”

The study authors said genetic-correlation estimates deserve more scrutiny, since these estimates have been used as disease-risk, search for clues for potential therapies, inform diagnostic practices and shape arguments about human behavior and societal issues. The authors said some in the scientific community have placed too much emphasis on genetic-correlation estimates based on the idea that studying genes, because they are unalterable, can overcome confounding factors.

“If you just look at two traits that are elevated in a group of people, you can’t conclude that they’re there for the same reason,” says Richard Border, PhD, a postdoctoral researcher in statistical genetics at UCLA. “But there’s been a kind of assumption that if you can track this back to genes, then you would have the causal story.”

Based on their analysis of two large databases of spousal traits, researchers found that cross-trait assortative mating is strongly associated with genetic-correlation estimates and plausibly accounts for a “substantial” portion of genetic-correlation estimates.

“Cross-trait assortative mating has affected all of our genomes and caused interesting correlations between DNA you inherit from your mother and DNA you inherit from your father across the whole genome,” says Noah Zaitlen, PhD, assistant professor of computational medicine and neurology.

The researchers also examined genetic-correlation estimates of psychiatric disorders, which have sparked debate in the psychiatric community because they appear to show genetic relationships among disorders that seemingly have little similarity, such as attention-deficit hyperactivity disorder and schizophrenia.

The researchers found that genetic correlations for several unrelated traits could be plausibly attributed to cross-trait assortative mating and imperfect diagnostic practices. On the other hand, their analysis found stronger links for some pairs of traits, like anxiety disorders and major depression, suggesting that there truly is at least some shared biology.

“But even when there is a real signal there, we’re still suggesting that we’re over-estimating the extent of that sharing,” Dr. Border says.

— Jason Millman

Dr. Gupta said this is believed to be the first study using a data-driven approach to predict sex-specific obesity status based on multimodal brain signatures. It builds on an earlier UCLA study in which Dr. Gupta and colleagues examined sex-related differences in the prominence and signaling of brain regions in obesity. In addition to finding that emotion-related and compulsive eating appear to play a major role in obesity in women, that study showed that men’s eating behavior tends to be affected by a greater awareness of gut sensations and visceral responses — those related to abdominal discomfort.

The new study supports and corroborates many findings from that and earlier studies and provides MRI evidence of differences in brain structure, function and connectivity that may help researchers better understand obesity-related drives and behaviors. For example, alterations in certain brain networks suggest that compared to men, women with a high body mass index (BMI) may be more keenly aware of and driven to highly processed foods, with an increased risk of developing cravings and food addiction. “In designing treatment plans for females with high BMI, it may be important to focus on emotional regulation techniques and vulnerability factors,” Dr. Gupta says.

The study, conducted through the Integrative Behavior and Obesity Program of the G. Oppenheimer Family Center for Neurobiology of Stress and Resilience, included 183 participants, ages 18 to 55. Forty-two males had non-obese BMI, 24 males had high BMI, 63 females had non-obese BMI and 55 females had high BMI. All participants filled out a battery of questionnaires assessing childhood trauma, anxiety and depression, visceral sensitivity, food addiction, bowel symptoms, personality traits and many other factors. Each participant also underwent three different brain MRI scans to assess structure, function and connectivity. Data sets from the three scans and from clinical information were analyzed using an analytical tool that seeks to identify a limited number of variables from multiple data sets to predict an outcome.

The results show specific network connectivity changes associated with high BMI, regardless of sex. In females, the study identified brain regions and networks with alterations associated with early-life trauma. These appear consistent with previous observations that females with obesity, compared to males, may have greater anxiety, lower resilience and difficulty integrating emotions with action-directed goal planning. Females also may be more susceptible to the sight, smell and taste of ultra-processed foods. Importantly, the authors said the study identified associations, not cause and effect.

Future studies will be needed to determine whether changes in the brain are a factor in the development of obesity or a result of the condition. “Although causality is unknown, the strong associations between sex and obesity or mental illness, such as anxiety, depression, obesity and neural signatures suggest the importance of multidisciplinary mechanistic connection between the gut brain axis,” the authors said.

— Kevin McClanahan
Study Identifies Potential Animal Model to Improve Treatments for Patients with MS

MULTIPLE SCLEROSIS (MS) IS AN AUTOIMMUNE and neurodegenerative disease in which the immune system attacks nerves in the brain and spinal cord. There are numerous treatments aimed at immune mechanisms and reducing MS relapses, but none is designed to protect cells in the brain and spinal cord from damage. Existing treatments have limited effectiveness in slowing the disease, and none improve disabilities. Identifying an animal model of disease progression is critical for finding better treatments. In their research, Rhonda R. Voskuhl, MD, Jack H. Skirball Chair and director of the UCLA Multiple Sclerosis Program, and Allan Mackenzie-Graham, PhD, associate professor of neurology, have identified an animal model that shares many similarities with progressive MS.

Previously, acute and relapsing forms of experimental autoimmune encephalomyelitis (EAE), a mouse model characterized by inflammation within blood and the spinal cord, played a central role in development of current anti-inflammatory treatments for MS. In their research, Dr. Voskuhl and Dr. Mackenzie-Graham reported brain MRI and neuropathology analyses in a chronic form of EAE, revealing many features of neurodegeneration that are shared with MS. Beyond the spinal cord, findings included effects on the cerebral cortex, cerebellum and optic nerve, among others. In the future, this model can be used by researchers to discover targets for treatments that improve walking, cognitive, coordination and visual disabilities in MS.

“Identifying an animal model of disease progression is a critical step toward finding better treatments”

UCLA Researchers Identify Possible Approach to Keep Cancer from Evolving

A NEW CLINICAL AND PRECLINICAL study from UCLA Jonsson Comprehensive Cancer Center identifies the DNA roots of resistance to targeted cancer therapy, providing a possible strategy to address a vexing issue in cancer therapeutics. “We are taking a fresh approach to combating ‘acquired therapy resistance’ — the ability of cancers to escape targeted treatments by undergoing molecular evolution,” says Roger S. Lo, MD RES ’97, FEL ’08, PhD, professor of medicine and molecular and medical pharmacology. “We thought this preventing, rather than trying to reverse resistance after the cancer has become more aggressive, may improve our patients’ odds of survival.” To understand how the cancer genome changes immediately after the initiation of targeted therapy — potentially generating new genetic variants capable of escaping the therapy — the researchers focused on metastatic cutaneous melanoma. This aggressive skin cancer had no effective treatment until the recent development of a targeted therapy, providing a fresh approach to combating ‘acquired therapy resistance.’ Dr. Lo says. Through analysis of tumor biopsies taken from patients before targeted therapy and then at the time of clinical relapse, the team found that the melanoma genome can undergo extensive “shattering and re-stitching” in response to targeted therapy — in a process called chromothripsis.

Small amounts of chromosomal DNA can drop out of the chromosome and become re-stitched to become “circular extrachromosomal DNAs,” or ecDNAs. The cancer cells can generate and retain many copies of these ecDNAs — 50- to 100-copy in some cases — which amplify key genes that drive therapy resistance. The ecDNAs also can reintegrate back into chromosomes, becoming a stable source of gene amplification. “We analyzed how the re-stitching of shattered genomic DNA occurred in resistant melanoma and discovered that a protein called DNA PK may be particularly important,” says Gatien Moriceau, PhD, assistant adjunct professor of medicine. “We believe it may be possible to apply this approach to multiple subtypes of melanoma and several other types of aggressive cancers, such as pancreatic and lung cancers.”

“Blocking Genomic Instability Prevents Acquired Resistance to MAPK Inhibitor Therapy for Melanoma,” Cancer Discovery, January 26, 2023

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“Their cancers harbor a BRAF gene mutation — found in about half of metastatic melanoma patients and in patients with many other types of common and highly lethal cancers.”

“We hope that by blocking the means for melanoma to generate genetic diversity, we may prevent the myriad ways the cancer escapes targeted therapy,” Dr. Lo says. Through analysis of tumor biopsies taken from patients before targeted therapy and then at the time of clinical relapse, the team found that the melanoma genome can undergo extensive “shattering and re-stitching” in response to targeted therapy — in a process called chromothripsis.

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One of the most buzzed-about areas of biomedical research is the study of the human microbiome — the population of bacteria, viruses and fungi that inhabit our bodies — and its impact on our physical and mental well-being. Elaine Hsiao, PhD, De Logi Professor of Biological Sciences, is an up-and-coming leader of this emerging field. Since launching her lab in 2015, Dr. Hsiao has published a raft of groundbreaking papers on the relationship between the gut microbiome and the brain and how it influences processes ranging from neurodevelopment in fetuses to neurotransmitter production in adults. In 2022, she was one of three researchers to be honored by the New York Academy of Sciences with a Blavatnik National Award for Young Scientists. This past February, she was named founding director of UCLA’s Goodman-Luskin Microbiome Center, established with a $20 million gift from Andrea and Donald Goodman and Renee and Meyer Luskin. She spoke with contributing writer Kenneth Miller about the wonders of the microbiome and her vision for the center.
Interest in the microbiome seems to have skyrocketed in the past decade. Why is that?

Dr. Hsiao: In part, it’s because we’re just beginning to grasp the topic’s importance. Before the advent of genetic sequencing technologies, it was very hard to study these microbial populations. In 2012, the Human Microbiome Project gave us the first snapshot of the different bacteria living in a healthy human body. Yet, there’s still so much to learn. We don’t know what constitutes a healthy microbiome versus an unhealthy one; to some extent, it seems to vary according to the individual. We also don’t know much about the non-bacterial members of the population. This is such a vast and complex group of microorganisms! They outnumber human cells 10-to-one, but they’re so small that they make up only 1% to 3% of our body mass. The largest numbers are in the gastrointestinal tract, where there are 100 trillion bacteria alone, but they’re plentiful in other places as well — the skin, the eyes, the reproductive tract. What’s become increasingly clear, though, is that they play many crucial roles across different organ systems.

“Our thoughts of gut-brain interactions can impact a whole range of neurological disorders — things like depression, Parkinson’s, autism spectrum disorder and Alzheimer’s disease.”

How do these microbes interact with our bodies and brains?

Dr. Hsiao: They produce a lot of metabolites, or signaling molecules. These organisms can communicate with neurons and plug into sensory signaling pathways. They interface between our cells and the foods we eat, the medications we take, the environmental exposures we encounter. They interact with our immune system, our hormones, our metabolism. They affect both our risk of disease and our response to drugs that are used to treat disease.

Can you share some examples of the influence they exert?

Dr. Hsiao: My own team’s research centers on the gut-brain connection. In one study, we discovered that metabolites produced by the gut microbiome of pregnant mice can influence fetal neurodevelopment, with lasting effects on the behavior of their offspring. Mice born to mothers with depleted microbiomes had reduced white matter in their brains and an impaired sense of touch. In another study, we found that changes in the microbiome explain why eating a low-carbohydrate, high-fat ketogenic diet helps control seizure disorders; in mice, the regimen changes the proportions of bacterial species that affect levels of the neurotransmitter GABA. We think these sorts of gut-brain interactions can impact a whole range of neurological disorders — things like depression, Parkinson’s, autism spectrum disorder and Alzheimer’s disease.

All of this seems to suggest that the microbiome can directly influence behavior.

Dr. Hsiao: Absolutely. Across a bunch of lab animals — like mice and rats and zebrafish and flies — we’ve found that if you manipulate the microbiome, they start behaving differently. And if you change their microbiome to resemble that of an animal with a neurological disease, they’ll behave as if they have that disease. More and more studies are also showing that the microbiome is also involved in behavioral problems like eating disorders and addiction. The reasons aren’t clear yet, but the correlations are intriguing.

That’s kind of spooky. So, are we at the mercy of these microbes’ whims?

Dr. Hsiao: Well, it’s a two-way street. The microbiome can also be altered by our diets, our stress levels, the amount of sleep we get, habits like smoking and alcohol use, and other behaviors. We’re still working out questions of causality — in many cases, a kind of feedback loop may connect the microbiome’s behavior and our own.

Has microbiome research led to any effective therapies?

Dr. Hsiao: The FDA approved the first microbiome-based therapy just last December — an enema based on a defined community of microbes to treat the intestinal infection Clostridiodes difficile. Fecal transplants have already been used experimentally for several years to treat C. difficile, with high success rates. Based partly on our findings around the ketogenic diet and seizures, researchers are now testing probiotics for refractory epilepsy. Several other types of probiotics seem to be beneficial for other ailments, though there’s little evidence that commercially available products work as advertised. But we think these treatments are just scratching the surface of what microbiome-based therapies could eventually do. The hope is that the microbiome can be leveraged for a wide range of interventions. Specific microbes or their metabolites could be administered to patients in oral or alternative forms. Some experts have even wondered if we might one day actually be able to transplant the microbiome.

Can you give us a sense of the types of research we can expect from the new center?

Dr. Hsiao: Absolutely. A key lever for this project is leveraging for a wide range of interventions. Specific microbes or their metabolites could be administered to patients in oral or alternative forms. Some experts have even wondered if we might one day actually be able to transplant the microbiome.

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How will the new center advance microbiome research at UCLA?

Dr. Hsiao: Our goal is to provide a collaborative ecosystem for microbiome research that will propel new discoveries, leading to improved clinical care. We’re hoping that the center will unite people across the UCLA campus — not just the schools of medicine, but also social sciences, the physical sciences, engineering, anyone with microbiome-therapy interests. That includes researchers who maybe don’t have the expertise to run some of the core techniques required and could benefit from working with those who do. We’re pursuing several different areas of focus, including cardiovascular disease and lipid metabolism, inflammatory bowel diseases, liver disease, mental illness and pain, neurodevelopmental and neurodegenerative diseases, obesity and metabolic disorders and substance use disorder. We’ll be investigating the role of the microbiome in all these conditions, and researching therapeutic approaches based on those disease pathways.

What kind of infrastructure will the center provide for that work?

Dr. Hsiao: We’re launching a number of core facilities, which we hope will draw new talent into the field. We’ll have a microbiome-sequencing facility. We’re starting a gnotobiotic animal facility, where you can raise animals completely germ-free — that is, with no microbiome — and start colonizing them with microbial communities that you’re interested in. There’s already a biostatistics and informatics core. With microbiomes being so enormous and complex, you generate huge data sets, and you need sophisticated ways of integrating them. We’ve also got a neuroimaging core to help us visualize how changes in the microbiome affect the brain.

What excites you most about this project?

Dr. Hsiao: I first learned to love molecular biology and microbes. I came back eight years ago to work with the outstanding group of scientists here who specialize in gut-brain and brain-gut interactions. The Goodman-Luskin Microbiome Center gives us the opportunity to span the entire range of microbiome science, from the most fundamental basic research to the most impactful translational research. I’m confident that in the next few years, we’ll be able to push the boundaries forward and show how gut microbes influence chronic diseases that extend far beyond the GI tract, affecting not only the brain, but also organs like the heart and liver. It’s such an amazing time to be in this field. I’m thrilled to have the chance to explore new frontiers and make breakthroughs that will ultimately benefit people around the world.
Dr. Ketema Paul

Steps into the U Magazine Spotlight

Ketema Paul, PhD, knows a thing or two about getting a good night’s sleep. A professor of integrative biology and physiology and of psychiatry and biobehavioral sciences in the Jane and Terry Semel Institute for Neuroscience and Human Behavior at UCLA, Dr. Paul studies the interactions of circadian rhythms — the biological clock — and the biological regulatory mechanisms that govern the sleep-wake cycle. His research aspires to help improve therapies to treat sleep disorders.

When Did You First Start to Think About Science?
My cousin had a chemistry set and a microscope, and I thought that was the coolest thing. I must have been around 7 or 8 years old, and I was hooked. I pestered my parents to buy me a chemistry set. I was unrelenting.

What Has Been the Greatest Challenge in Your Work?
It is taking advantage of all the new ways that are available now to communicate. I was trained to do an experiment, write a peer-reviewed paper and publish it. But these days, there are so many creative and exciting ways to communicate what you’ve found — video, podcasts and now virtual reality. I'm still kind of old-school; I can't keep up with it all.

Where Does Your Inspiration Come From?
There were a lot of challenges growing up as a teenager in Washington, DC, and many of the guys I grew up with were really gifted, but they didn’t get opportunities for those gifts to serve them. I watched a generation of young people, my peers, fall victim to circumstances, and many of them, aren’t around anymore. Their struggles inspire me. I've always felt that I got lucky. I'm here for a reason. Every day for me is like an opportunity to try to do something great, because a lot of the guys I knew didn’t get a chance. Those guys inspire me more than anyone.

Who Is Your Science Hero?
A legendary scientist, Ernest Everett Just. He was a pioneering African American cytologist and instructor at Howard University’s biology department — a legend and a mega-force in science. There's a biography of him, Black Apollo of Science, and I credit that book with setting me on a path to be successful in science. For an African American man in the early 20th century, with the challenges and obstacles he had to overcome every day to do something he loved, to be so successful in science, it is incredible.

What Has Been Your Biggest “Ah-ha!” Moment?
In my third year at Howard, I isolated a pigment from a firefly eye. My advisor had identified the pigment, and he had measured its spectral range in the firefly, but he never isolated it from the firefly. I was able to actually take it out of the firefly eye. I thought it was because I was so great, but in reality, I think it was because I'm colorblind and was able to see the pigment on the background. The revelation in that moment was that this is something I could really do, that I could be a scientist.

What Do You Consider To Be Your Finest Achievement?
I don’t know that I've had a "finest achievement" yet. I tend to think of life as a series of moments, and I try to appreciate every moment as it comes. Whatever I'm doing right now, whatever that now is, I probably see that as my finest achievement.

What Are the Qualities of a Great Scientist?
The greatest scientists are the ones who always know the best questions to ask. Instinctively or through years of doing the work, they are able to quickly identify what are the most important questions. That is the pinnacle of what makes a great scientist.

What Characteristic Most Defines You?
Perseverance. I'm always going to show up. I'm never going to quit.

What Is Your Greatest Virtue? Luck. I've just had an enormous amount of it in my life and in my career. My circumstances coming up, there's no reason why I didn't meet the same fate as some of my friends. It was just luck. Everyone makes mistakes. I've made mistakes. But my mistakes have always had a way of pushing me forward, so I can only imagine it has been lucky.

What Is Your Greatest Fault? That changes over time. I tend to always want to work on what I consider to be my faults, so that means once that one is no longer a fault, something else becomes my biggest fault. Right now, I think my biggest fault is saying yes to too many students, bringing them up in what was not the best neighborhood. With everything going on around him, he was still able to build a successful career and to raise us, and we are all doing well.

If Not a Scientist, What Would You Be?
A DJ or a musician. I don't know how talented I would be as a musician, but I know I could be a DJ because I used to do that. I could be a DJ or a music producer — maybe half-and-half, a producer working in the studio and a DJ who gets to be out in front of an audience.

What Is Your Most-Treasured Possession?
Keeping with the theme of being in the moment, it is probably the coffee cup in front of me right now, because I am really enjoying this coffee. At the end of the day, it will probably be my bike as I ride home on this beautiful day. Tomorrow it will be something completely different.

To Which Superhero Do You Most Relate?
Cyborg from the Teen Titans. That's weird because I've never liked DC Comics; I've always been a Marvel fan. But that Cyborg character — he's a fusion of electronics and biological tissue — inspired me to think about neuroscience.

What Keeps You Up at Night? Absolutely nothing. I would like to say it's because I'm a sleep scientist, but people who have known me since I was a baby will tell you that I've never had a problem sleeping. I don't let anything get in the way of sleeping.

How Do You Want to Change the World?
I don't have any kind of lofty ambitions. I think that if I can give just one more thing back to the world than I took from it, that would make me happy.

What Is Your Definition of Happiness?
Spending time with the people that I love.

What Is Your Definition of Miser? Living inside your head, being so preoccupied with your thoughts that you miss everything that's happening around you.

What Music Do You Listen to While You Work?
I listen to jazz-funk fusion more than anything. It used to be straight-ahead jazz, but I've become such a big fan of that that I can't listen to straight jazz when I'm working any more. I find myself getting lost in the individual improvisations and I wouldn't be able to get any work done. So, now it is mostly jazz-funk fusion.

Tony Healey

SPOTLIGHT

U Magazine Spring 2023
There is an epidemic of sadness among teenagers, with one-in-10 — including one-in-three girls and 22% of LGBTQ+ youths — having seriously contemplated or attempted suicide in 2021. What’s going on? And what can be done about it?

WHEN THE CENTERS FOR DISEASE CONTROL AND PREVENTION (CDC) released a report in February that evinced a bleak picture of teen emotional life — particularly among adolescent girls — alarms went off across the country.


The CDC’s biennial Youth Risk Behavior Survey, which tracks the health and well-being of the nation’s high school students, examined the state of teen life in 2021, the first full year after the start of the COVID-19 pandemic. Among the key points: More than 40% of the survey respondents reported feeling so sad or hopeless that they couldn’t engage in their regular activities for at least two weeks during the previous year, and one-in-10 had attempted to end their life.

Girls and minoritized youths reported suffering the most. Nearly three-in-five teen girls (57%) said they’d felt persistently sad or hopeless in 2021, double the rate of boys and an increase of nearly 60% over the last decade. Nearly one-in-five girls
experienced sexual violence. Almost one-in-three seriously contemplated suicide. “America’s teen girls are engulfed in a growing wave of sadness, violence and trauma,” Debra Houry, MD, the CDC’s chief medical officer and deputy director for program and science, said at a press conference upon the report’s release.

Among LGBTQ+ youths (the survey asked about sexual orientation, but not gender identity), nearly 70% reported persistent feelings of sadness or hopelessness during the past year, with more than 50% experiencing poor mental health over the last 30 days. Twenty-two percent had attempted suicide in the past year. "For the first year or so, there was an acute rise in mental health problems among members of minority groups. Pre-pandemic, approximately 8% of high school students reported a suicide attempt in the previous year.

These and other disturbing trends began well before COVID-19 upended the lives of America’s youths. Each Youth Risk Behavior Survey since 2003 has revealed more mental health problems than the previous one. Suicide deaths spiked 45% in the decade leading up to the pandemic, with disproportionate increases among members of minority groups. Pre-pandemic, approximately 8% of high school students reported a suicide attempt in the previous year.

“More sadness and depression among teens was a trend that was already brewing, in combination with fewer and fewer resources for prevention and mental health treatment, as well as easier access to potentially lethal methods,” says Natalia Ramos, MD (RES ’15, FEL ’17), MPH, associate professor of psychiatry and biobehavioral sciences. What initially looked like two weeks of isolation stretched to nearly two years. During that time, social tensions and protests erupted following the police killing of George Floyd. And as pandemic restrictions eased, students returned to a world in which gun violence has become all too common.

“Part of a parent’s job is to teach children that the world is a relatively safe place,” says Dr. Schneider, medical director of the Achievement Behavior Cognition (ABC) Day Treatment Program in the Stewart and Lynda Resnick Neuropsychiatric Hospital at UCLA, which sees school-age children with a range of developmental, social, cognitive and emotional disorders. “It’s become much harder to do that.”

To be sure, the disturbing trends predating the pandemic point to the need to address concerns unrelated to the coronavirus. Yet, the woes afflicting America’s teens cannot be attributed entirely to mental illness. ADOLESCENCE WAS NEVER EASY. But Dr. Ramos points out that new developments, both biological and social, appear to be contributing to the greater distress. “Teens are hitting puberty earlier and earlier with each generation, so teen brains are being subjected to influences of mood and socialization changes that they’re less prepared for,” she says. “With the pervasive, 24/7 access to information, introduced a heightened level of uncertainty about the future, notes Benjamin N. Schneider, MD (RES ’12, FEL ’13), associate professor of psychiatry and biobehavioral sciences. What initially looked like two weeks of isolation stretched to nearly two years. During that time, social tensions and protests erupted following the police killing of George Floyd. And as pandemic restrictions eased, students returned to a world in which gun violence has become all too common.

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To be sure, the disturbing trends predating the pandemic point to the need to address concerns unrelated to the coronavirus. Yet, the woes afflicting America’s teens cannot be attributed entirely to mental illness. ADOLESCENCE WAS NEVER EASY. But Dr. Ramos points out that new developments, both biological and social, appear to be contributing to the greater distress. “Teens are hitting puberty earlier and earlier with each generation, so teen brains are being subjected to influences of mood and socialization changes that they’re less prepared for,” she says. “With the pervasive, 24/7 access to information,
they’re much more aware of stressors, without the cognitive and emotional preparation to process them in healthy ways. It’s also become harder for parents to control what their teens have access to, or to discuss it with them, given this constant barrage of information from multiple platforms."

Why these developments seem to weigh more heavily on the psyches of girls than boys is a complicated question. In the CDC survey, female students fared worse than males across all measures of mental health, substance use, experiences of violence and suicidal thoughts and behaviors — with one notable exception. "Teen girls have higher rates of suicidal ideation; suicide attempts; and non-suicidal, self-injurious behavior," Dr. Meza says. "But boys die from suicide at a much higher rate." Asarnow says. "But boys die from suicide at a much higher rate." Asarnow says. "But boys die from suicide at a much higher rate." Asarnow says. "But boys die from suicide at a much higher rate." Asarnow says. "But boys die from suicide at a much higher rate." Asarnow says. "But boys die from suicide at a much higher rate." Asarnow says. "But boys die from suicide at a much higher rate." Asarnow says. "But boys die from suicide at a much higher rate." Asarnow says. "But boys die from suicide at a much higher rate." Asarnow says. "But boys die from suicide at a much higher rate." Asarnow says. "But boys die from suicide at a much higher rate." Asarnow says. "But boys die from suicide at a much higher rate." Asarnow says. "But boys die from suicide at a much higher rate." Asarnow says. "But boys die from suicide at a much higher rate." Asarnow says. "But boys die from suicide at a much higher rate." Asarnow says. "But boys die from suicide at a much higher rate." Asarnow says. "But boys die from suicide at a much higher rate." Asarnow says. "But boys die from suicide at a much higher rate." Asarnow says. "But boys die from suicide at a much higher rate." Asarnow says. "But boys die from suicide at a much higher rate." Asarnow says. "But boys die from suicide at a much higher rate." Asarnow says. "But boys die from suicide at a much higher rate." Asarnow says. "But boys die from suicide at a much higher rate." Asarnow says. "But boys die from suicide at a much higher rate." Asarnow says. "But boys die from suicide at a much higher rate." Asarnow says. "But boys die from suicide at a much higher rate." Asarnow says. "But boys die from suicide at a much higher rate." Asarnow says. "But boys die from suicide at a much higher rate." Asarnow says. "But boys die from suicide at a much higher rate." Asarnow says. "But boys die from suicide at a much higher rate." Asarnow says. "But boys die from suicide at a much higher rate." Asarnow says. "But boys die from suicide at a much higher rate." Asarnow says. "But boys die from suicide at a much higher rate." Asarnow says. "But boys die from suicide at a much higher rate." Asarnow says. "But boys die from suicide at a much higher rate." Asarnow says. "But boys die from suicide at a much higher rate." Asarnow says. "But boys die from suicide at a much higher rate." Asarnow says. "But boys die from suicide at a much higher rate." Asarnow says. "But boys die from suicide at a much higher rate." Asarnow says. "But boys die from suicide at a much higher rate." Asarnov notes that this can also occur through a school counselor for help, an important potential protective factor when teens are in acute distress. "Kids were watching it and talking about it," Dr. Asarnow says. "And studies showed a 30% increase in teen suicide deaths around the time it was released." While these data do not prove a causal relationship between viewing the series and suicide deaths, the numbers raise serious concern and support the value of reducing media exposure to suicide-related content in vulnerable teens, particularly when viewed without the support of a protective adult who can help the teen to process the material. "The contagion phenomenon with suicides used to be more confined," Dr. Schneider says. "People’s networks are much larger now. This can also extend to the experience of trauma — when kids see reports of schools getting locked down after shootings, they have to live with that knowledge, and some experience trauma vicariously." "There’s so much racist, sexist, transphobic and homophobic content, even in mainstream media," she says. "And many youths tend to internalize things that they hear about their identities being negative or unworthy."

Compounding the problem is the all-too-common experience and enduring impact of trauma from adverse childhood events — neglect, violence and abuse, poverty and homelessness, immigration stress, structural racism, sexism, homophobia, transphobia and more, all of it accentuated in the era of COVID-19. In the STAR program, Dr. Ramos says she has seen an uptick in both the number of traumatic stressors families are coping with and their intensity. "All of this comes at a time when access to mental health treatment and preventive services is sorely lacking." For decades, we have had limited education, funding and resource allocation," Dr. Ramos says. "We’re seeing the consequences of that, especially for less-resourced youths, with this tinderbox of factors all stacking up." Dr. Schneider notes that seeing a child and adolescent psychiatrist in the U.S. often requires

"AS IT PERTAINS TO SUICIDE, THE SUPERCHARGED ERA OF ONLINE INFORMATION AND INTERACTION HAS THE POTENTIAL TO FUEL A CONTAGION EFFECT."

with peers; certainly, it offered relief from pandemic-induced isolation. But the documented negative effects of social media, beyond the cyberbullying, include reductions in face-to-face interaction, poorer-quality sleep and the perils of social comparison.

"Teens may not necessarily post when they are alone or feeling low," Dr. Schneider says. "They may be more likely to post during pleasurable activities — when they are out with friends or having a good time. That gives some of my patients the idea that they’re not measuring up."

As it pertains to suicide, the supercharged era of online information and interaction has the potential to fuel a contagion effect — an association between exposure to peers who have attempted suicide or engaged in self-harm and higher rates of suicide and suicidal thinking. Dr. Asarnow notes that this can also occur through media exposure. In 2019, she and other mental health experts noted that many teens viewed the Netflix series 13 Reasons Why, which dramatized teen suicide, bullying and rape and offered scenes that may discourage youths from going to a school counselor for help, an important potential protective factor when teens are in acute distress. "Kids were watching it and talking about it," Dr. Asarnow says. "And studies showed a 30% increase in teen suicide deaths around the time it was released." While these data do not prove a causal relationship between viewing the series and suicide deaths, the numbers raise serious concern and support the value of reducing media exposure to suicide-related content in vulnerable teens, particularly when viewed without the support of a protective adult who can help the teen to process the material.
s spending months on a waiting list. “As a result, rather than treating people near the beginning of the problem, we’re having to react to dire circumstances in acute-care settings and emergency rooms,” he says.

Another access-related trend is also troubling. Suicide-prevention experts point out that when a person is contemplating ending their life, having access to lethal means substantially elevates the risk. And with nearly 400 million privately owned firearms in the U.S., it’s become all too easy for youths to act on what might represent a fleeting thought.

“Developmentally, children don’t have a fully developed prefrontal cortex, which is the part of the brain we use to put on the brakes and not act impulsively,” Dr. Meza says. And it’s not just the easy access to guns. “There are websites now with detailed instructions about how to ‘successfully’ end your life,” Dr. Meza says. “And we know kids are always online.”

THERE’S NOT GETTING AROUND THE BLEAK NATURE OF THE CDC FINDINGS. But Dr. Asarnow is able to offer one optimistic point. “The good news is, we actually know what to do about this,” she says. “Community-based suicide prevention works.”

She points out that the federal Garrett Lee Smith Memorial Act, first signed into law in 2004 and most recently reauthorized in 2022, has provided grants to counties, states and tribes to implement community-specific suicide-prevention programs for at-risk teens. Evaluations of the programs have found that counties that implemented evidence-informed suicide-prevention care through Garrett Lee Smith saw significantly fewer suicide deaths and attempts.

In March, Dr. Meza, Dr. Asarnow and colleagues published a review of 18 large studies that have evaluated interventions aimed at reducing suicide and self-harm in youths ages 12 to 18. They found several common threads in the programs that showed improvements, including integration of parents or other family caregivers in the therapy, an emphasis on relationship-building and teaching skills such as emotional regulation, development of a safety plan for coping in times of distress and restrictions on access to lethal means.

The UCLA Youth Stress and Mood Program has conducted key studies showing the positive effect of dialectical behavioral therapy (DBT), which teaches teens skills that include emotional regulation and distress tolerance, as well as strategies for building a better life. In multisite research led by Dr. Asarnow at UCLA, DBT reduced self-harm and suicidal behavior in teens at high-risk for suicide and self-harm. “When emotional regulation improved, the kids got better,” Dr. Asarnow says. “We’re all going to experience pain and stress, so as parents and therapists, we need to help our kids tolerate that.”

Involving parents in the treatment contributes to what Dr. Asarnow calls a “protective seatbelt” — a circle of support around the child that provides a buffer against acting out on feelings of self-harm during the toughest times. Her program counsels parents on reducing family conflict, and on the do’s and don’ts of communication with their child. For example, gentle criticism such as, “Your room is messy; I’d like you to clean it up,” is OK, but statements like “You are the sloppiest person on Earth” don’t help the depressed teen.

The protective seatbelt ideally extends beyond the parents to include other trusted and caring adults — including relatives, teachers, coaches and primary care providers — in whom the teen feels comfortable confiding. “Parents shouldn’t be offended if their child goes to another adult; just make sure their life is populated with people they trust,” Dr. Asarnow says.

Among adolescents, white males are the most likely to die by suicide, but Black and Latino teens have the highest rate of suicide attempts, with trends moving in the wrong direction. In the Health Equity & Access Research and Treatment (HEART) lab directed by Dr. Meza, she and her colleagues focus on understanding the social-cultural predictors of suicide for adolescents and young adults, with the goal of promoting their inclusion in culturally informed treatments. This includes addressing common experiences such as racism, discrimination and acculturation-related factors.

“For Black, Latino, LGBTQ+ and other kids from groups that experience marginalization, predictors include a sense of not having a place in the world,” Dr. Meza says. “Having a strong racial and ethnic identity, a sense of belonging within a community and civic engagement all serve as protective factors.”

Given the barriers to accessing community-based mental health care, particularly among low-income families, the UCLA experts say any solution to the growing crisis has to bring mental health treatment and prevention services to the places where teens spend their time. School-based health and wellness centers play a critical role in providing access to mental health services for families that face insurance, transportation and other barriers. “We’ve known for a long time that schools are the place where most youths receive mental health services, especially in under-resourced communities,” says Roya Ijadi-Maghsoodi, MD (RES ’12, FEL ’14), assistant professor of psychiatry and biobehavioral sciences, who studies the delivery of mental health services in schools.

Dr. Ijadi-Maghsoodi and her UCLA colleagues have worked closely with the Los Angeles Unified School District to bring evidence-based mental health services to schools. To meet the needs of low-income, predominantly minoritized LAUSD students who have experienced trauma, her team has worked with district partners to adapt and implement a resilience-building curriculum originally developed at UCLA for military-connected families.

The Focus Resilience Curriculum, delivered in the classroom setting and provided to both students and parents, teaches skills that include emotional regulation, goal setting, empathy and communication. In addition to reporting improvements on measures of resilience, problem-solving and empathy,
Dr. Ijadi-Maghsoodi and her colleagues have found that the curriculum enhances connections among students and helps to destigmatize mental health issues.

Among the most promising developments for promoting mental health within schools is the increasing emphasis on programs that build peer support. “Peers play an important role in a teen’s life, and we want students to be able to talk to each other about mental health and normalize help-seeking behavior,” Dr. Ijadi-Maghsoodi explains. Programs have been developed to train high school students in how to recognize and help a peer during times of high distress.

Dr. Ijadi-Maghsoodi says normalizing discussions about mental health should be a priority for the adult population, as well. “We’re living in stressful times, and parents need to know it’s OK to reach out for mental health support for themselves if they need it,” she says.

WHEN FIRST MEETING WITH PARENTS OF CHILDREN WHO ENTER THE ACHIEVEMENT BEHAVIOR COGNITION PROGRAM, Dr. Schneider stresses the important role they will play in navigating their child to a better place. “If there’s turbulence on an airplane and the captain comes on the loudspeaker and calmly says everything is going to be OK, the passenger’s reaction is going to be very different than if they hear the captain in a state of panic,” Dr. Schneider says.

But too many parents are hurting. In an opinion piece in the Washington Post the week the CDC findings were released, journalist Kate Woodsome noted that in 2020, more than 50 million adults had a mental illness such as anxiety, depression or bipolar disorder. More than 60% of the adult population experienced trauma as children, challenging their ability to remain attentive and resourceful for their own kids. “There is a frantic search for ways to stop kids from hurting,” Woodsome wrote. “But if we want to make any lasting difference, it is us, the adults, who need an intervention.”

Dr. Asarnow agrees. “Families are stressed, and schools have been struggling with limited resources,” she says. “If everybody’s suffering, who’s going to protect our children?”

Unfortunately, beyond the problems of access, the stigma against talking about depression and suicidality leaves many teens isolated and suffering in silence. Many parents remain in denial, afraid to acknowledge the unfathomable — or concerned that broaching the topic of suicidality with their child might plant the seed. Dr. Meza says the research refutes that assumption. “There is a misconception that if you ask about suicide, you’re increasing the risk, but bringing it up actually has a therapeutic effect,” she says. Dr. Meza advises parents to raise the subject by making an observation about their child’s behavior and why it concerns them, then asking directly whether they have had any thoughts of self-harm or suicide.

The UCLA Youth Stress and Mood Program educates parents about worrisome behaviors, such as self-harm in the form of cutting, burning and banging; giving away belongings or no longer bathing; and declarations such as “I wish I could go to sleep and never wake up.” Dr. Asarnow says parents should not assume a child who uses such language is merely being manipulative. “It is important to take your child’s comments seriously, let them know you are there for them and that you can work together to address problems and build a life they enjoy and want to live.”

Unfortunately, the signs don’t always appear. One study found that approximately one-in-three child suicides occur without any apparent warning. “If I have a depressed child, I just assume that suicide risk is elevated and protection is needed,” Dr. Asarnow says. “It is better to be safe than sorry.”

When in doubt, she adds, a parent can never go wrong offering unconditional love and support. “The most important message is, ‘I love you to bits,’” she says. “It’s telling the child, ‘We are a team, and there is no problem that’s too big for the both of us. I may not always like it, but there’s nothing you can’t tell me. And I’m here for you.’”

Dan Gordon is a frequent contributor to U Magazine. His two-part story, “UCLA In the Time of AIDS,” received the Robert G. Fenley Gold Award for Excellence in Writing and “Best of Show” from the Association of American Medical Colleges.

For more information about the UCLA Youth Stress and Mood Program, go to uclahealth.org/medical-services/psychiatry/family-focused-programs/youth-stress-mood-program-ysam or scan the QR code.

If you are experiencing mental health-related distress or are worried about a loved one who may need crisis support, call or text 988, or chat at 988lifeline.org, to connect with a trained crisis counselor. The 988 Suicide & Crisis Lifeline is confidential, free and available 24/7.
TALK TO THE ANIMALS

DR. BARBARA NATTERSON-HOROWITZ’S INTEREST IN WHAT ANIMALS CAN TEACH US ABOUT THE HUMAN BODY AND MIND HAS LED HER TO FOCUS ON THE SPECIES-SPANNING SIMILARITIES IN FEMALE HEALTH.

By Corinne Purtill
Zainabu was in good health in the days before she gave birth to her fourth baby, despite the fact that her blood pressure was likely somewhere around 280/220.

For a human, such a reading would be catastrophic. Spiking blood pressure in a pregnant or recently postpartum woman is a sign of preeclampsia, a common but potentially fatal condition that can affect the heart, lungs, liver, and kidneys.

Zainabu, fortunately, is a Masai giraffe at the Los Angeles Zoo. Giraffes have the highest known blood pressure in the animal kingdom, but this has no apparent effect on fetal or maternal health.

For Barbara Natterson-Horowitz, MD (RES’90, ’92, FEL’95), a UCLA cardiologist with a long-standing interest in cross-species health, this raises some compelling questions. What adaptations have evolved in female giraffes that protect their cardiovascular systems from the damage high blood pressure can cause? And why don’t we know enough about the physiology of human females to prevent a common complication like preeclampsia?

Dr. Natterson-Horowitz says that, by exploring health connections across species, she and collaborator Kathryn Bowers wrote the 2012 bestseller *Zoobiquity*, about the intersection of human medicine, veterinary medicine and evolutionary biology, followed by 2019’s *Wildhood*, which examined adolescence across the animal kingdom.

Her latest focus is on cross-species similarities in female health, a field that has long been underfunded, understudied and misunderstood. Diseases that primarily affect women get a disproportionately small amount of research money relative to the years of healthy life they steal. (The reverse is true for diseases that primarily affect men.) In addition, women have historically been a minority of clinical trial participants, and for several years those of childbearing age were barred as research subjects in the U.S., a policy the National Institutes of Health reversed in 1986.

We can’t go back in time, Dr. Natterson-Horowitz says. But we can fill some of the gaps by looking to the animal world. Many of the species that share our planet are exposed to similar stressors and environmental contaminants. Some endure the same chronic diseases that humans do, while others appear to be naturally resistant. Solutions to some of medicine’s most vexing questions could be walking on four feet beside us. “There’s a pretty vast landscape of unexamined assumptions about human uniqueness,” Dr. Natterson-Horowitz says. Failing to recognize our place in the animal kingdom, she adds, “can prevent us from recognizing connections that, were we to see and understand them, could allow us to better understand the cause of disease and to be better at innovating effective solutions.”

Dr. Natterson-Horowitz grew up in Los Angeles as the daughter of two psychotherapists. She made occasional trips to the zoo as a child, with no inkling that some of the animals she was looking at would later become her patients.

She studied evolutionary biology at Harvard under famed biologists E.O. Wilson and Stephen Jay Gould. She returned to California for medical school at UC San Francisco and residency and fellowship at UCLA.

She’d been on the faculty at UCLA for a decade when, in 2005, she got a call from the zoo asking for assistance with a transesophageal echocardiogram, a type of ultrasound exam she specialized in. This one would be for a chimpanzee, her first nonhuman patient.

It was a procedure she’d performed countless times before. But probing the internal biology of a fellow primate, albeit one that wasn’t human, was like “that gleam of light you see when you crack open a door,” she recalls. “In this case, the door happened to be separating my world of modern human medicine and the natural world’s endless health insights.”

Physicians tend to be human-centric in their approach. But veterinarians investigating perplexing problems often look to the medical histories of other species—including *Homo sapiens*. “We’ve always done that, because we know that there’s...
Jane Sykes, PhD, professor of small-animal internal medicine at UC Davis School of Veterinary Medicine, says, “We’re always looking for parallels. Is there anything in humans that can help this dog in front of us?”

Now Dr. Natterson-Horowitz wanted to do the same thing, just in the other direction. The more she consulted with the L.A. Zoo, the more she came to admire that inclusive approach — and to ques-

“PHYSICIANS TEND TO BE HUMAN-CENTRIC IN THEIR APPROACH. BUT VETERINARIANS INVESTIGATING PERPLEXING PROBLEMS OFTEN LOOK TO THE MEDICAL HISTORIES OF OTHER SPECIES.”

tion its absence in human medicine. “Anthropocentrism is a blindfold,” she says of humans’ fixation on our own species. “If we can move beyond that, we could see connections that are meaningful and powerful.”

ONE OF THE FIRST PATIENTS TO SPARK HER INTEREST IN FEMALE HEALTH WAS A LIONESS with pericardial effusion, or fluid in the sac around the heart. The condition affects at least 20% of cancer patients, both feline and human, and breast cancer is common in lions. Those two facts made veterinarians worry that the lioness had an advanced case of the disease.

Dr. Natterson-Horowitz started research. She knew that breast cancers in some women were connected to BRCA1, a gene on the 17th chromosome. People born with certain versions of the gene are more likely to develop breast cancer when exposed to an environmental or hormonal trigger.

What she had not realized was how many non-primate species share this vulnerability. English springer spaniels with certain BRCA1 variants are four times more likely to develop breast cancer than dogs with the most common version of the gene. Dr. Natterson-Horowitz noted in Zoobiquity. Another study found that zoo jaguars taking a particular type of hormonal birth control developed breast cancer in rates similar to human women with high-risk BRCA1 variants, and that the cancer was common in lions and other big cats.

Many factors influence breast cancer rates in females across the animal kingdom: age, genetics, the frequency and duration of lactation, environmental factors and hormonal changes. Taken together, the range of mammals vulnerable to breast cancers could offer a trove of valuable comparative data, Dr. Natterson-Horowitz realized. But virtually no one was looking for it — even for a disease that claims the lives of more than 42,000 women in the U.S. alone each year.

So, she started researching these evolutionary links herself.

As she dug in, Dr. Natterson-Horowitz says, she noticed something else: “Not only is human medicine anthropocentric, it’s androcentric” — that is, focused on cisgender men.

Until the 1993 passage of the NIH Revitalization Act, women and people of color were not required to be part of research studies or clinical trials funded by the NIH, and as a result, they usually weren’t. The same preference for males is seen even in research on mice. In 2016, the NIH set a policy requiring researchers to at least “consider” biological sex as a variable in the design of human cell and animal studies, though they can study only one sex if they can show “strong justification” for it.

“The good news is that today, over half of the participants in NIH clinical trials are women,” says Janine Austin Clayton, MD, director of the NIH Office of Research on Women’s Health. But, she notes, women are still underrepresented in studies of several major diseases, including cardiovascular disease, kidney disease, hepatitis and HIV/AIDS. “Until we have representation across every disease category that affects women and men,” she says, “we still have work to do.”

PHYSICIANS TEND TO BE HUMAN-CENTRIC IN THEIR APPROACH. BUT VETERINARIANS INVESTIGATING PERPLEXING PROBLEMS OFTEN LOOK TO THE MEDICAL HISTORIES OF OTHER SPECIES.
A MALE-CENTERED RESEARCH APPROACH MANIFESTS IN MANY WAYS. It isn’t just the dearth of funding for conditions primarily affecting women, like endometriosis and rheumatoid arthritis. It’s that data on female bodies are often absent from medical research altogether, resulting in skewed results that can short-change all genders.

The result is that researchers often haven’t even realized when their results apply only to men. Take heart attacks. When the Physicians’ Health Study, whose sample consisted of 22,071 men and zero women, found in 1989 that a regular low dose of aspirin led to a 44% decrease in heart attacks, many physicians recommended the treatment to men and women alike. But the 19,876 participants in the Women’s Health Study allowed researchers to report in 2005 that for women younger than 65, aspirin didn’t help at all. And for those 65 and older, aspirin prevented not only heart attacks, but also strokes — a benefit that was not apparent in the all-male study and would have remained unseen without studying women.

Excluding women from research studies forces doctors to treat them “as guinea pigs, generation after generation,” says Chloe Bird, PhD, a sociologist who heads the Center for Health Equity Research at Tufts Medical Center in Boston.

But Dr. Natterson-Horowitz knows unlocking the secrets of the animal world is not a one-person job. Since 2011, she has organized Zoobiquity conferences that have brought together thousands of physicians, veterinarians and evolutionary biologists to examine health issues from multispecies perspectives. The most recent, titled “Female Health Across the Tree of Life,” took place in July 2022 in Lisbon, Portugal.

She also teaches the relevance of the animal world to undergraduates and medical students at UCLA and Harvard, and she is heartened to see the eagerness of a new generation of physicians to look across species for answers.

Climate change and urbanization have blurred the boundaries between the human and nonhuman animal worlds, Dr. Natterson-Horowitz points out. Zoonotic diseases like COVID-19 and influenza have shown us how closely we’re tied to fellow members of the animal kingdom. When she first got into medicine, she pledged to do no harm. Today, she believes, “if we can move from an androcentric, anthropocentric view to a sex-, gender- and species-spanning perspective, then we can do good.”

Corinne Purtill is a science and medicine writer for the Los Angeles Times. This article originally was published in the Los Angeles Times. It is reprinted with permission.

To view a video about Dr. Barbara Natterson-Horowitz and her work with animals, go to: uclahealth.org/news/talk-2-animals

“There is a tremendous opportunity to look across species and begin to understand what happens with what systems and why, and how we could improve health care.”

“Anthropocentrism is a blindfold. If we can move beyond that, we could see connections that are meaningful and powerful,” says Dr. Natterson-Horowitz, stopping by an ape enclosure at the Los Angeles Zoo.

One of the first patients to spark Dr. Natterson-Horowitz’s interest in female health was a lioness with fluid in the sac around its heart.
“My father never hesitated to talk about what he went through in the Holocaust. I’m sure that left some sort of imprint on me,” says Dr. Gary J. Schiller, outside Holocaust Museum LA, which he helped to start into existence.

Ultimately, Dr. Schiller and the leadership of the museum were successful enough in their efforts to, in 2010, establish a permanent home in Los Angeles’ Pan Pacific Park. Since then, the museum has had more than 500,000 visitors, and it is planning an expansion that will nearly double its size as it aims to significantly grow its annual attendance. Telling the story of the Holocaust is in Dr. Schiller’s blood. His father, Frank, a Czech Jew, was 15 in 1941 when he and his family were sent to the Lodz Ghetto, where both of his parents would die. After nearly three years, Frank was sent to a succession of forced-labor and concentration camps. He survived — stories of what happened during those years are harrowing — and immediately after the war wrote a memoir about his experiences. He then set it aside for the next 45 years, when it was translated into English but never published. Such a contemporaneous account of the Holocaust was rare. “Those who survived, books and served as “de facto treasurer for a long time,” Dr. Schiller says. Not only did Dr. Schiller’s father imbue him with a deep sense of connection to his past, but he also was instrumental in steering him toward a career in medicine. His father, Dr. Schiller says, believed it was important that his children pursue a career that not only would bring them esteem, but also, crucially, be easily transportable — “in case you need to get out quickly,” a vocational version of sewing jewelry into the lining of one’s garments.

When it was time for him to choose a direction in medicine, Dr. Schiller decided to focus on blood cancers, which he saw as a neglected area. “I wanted to do something that other people didn’t want to do,” he says.

He has come to see parallels between his efforts to educate people about the Holocaust and his work with cancer. Whether talking about the 6 million killed in the Holocaust or about cancer-survival rates, “both numbers are dispassionate data points that can be hard for people to comprehend,” Dr. Schiller says. But, “as I’ve gotten older, I no longer view the material with dispassion. Dealing with cancer or teaching about the Holocaust — it is quite emotive. We are talking about life-threatening illness or a very challenging history. That touches on all the difficult emotional things that are involved in being human,” Dr. Schiller says. “These are things I didn’t appreciate as a young person. I do now.”

Jazen Millian is a senior media relations officer for UCLA Health.

AWARDS & HONORS

Dr. Aparna Bhaduri, assistant professor of biological chemistry, received the Sontag Foundation’s 2022 Distinguished Scientist Award, given to young scientists pursuing major advances to treat brain cancer.

Dr. Richard Boxer (RES ’79), clinical professor of urology, was appointed by President Joe Biden to the National Cancer Advisory Board of the National Cancer Institute.

Dr. Sara A. Herrvitz (RES ’02, ’03, FEL ’06), professor of medicine, director of clinical research at the UCLA Jonsson Comprehensive Cancer Center and director of breast oncology, received the 2023 European Society for Medical Oncology Breast Cancer Award.

Dr. Barbara Netanyahu-Horowitz (RES ’90, ’92, FEL ’98), professor of medicine in the UCLA Division of Cardiology, was appointed co-chair of the Board on Animal Health Science, Conservation and Research of the National Academies of Science, Engineering and Medicine.

Dr. Thomas Rando, professor of neuroscience and developmental biology and director of the Eli and Edythe Broad Center of Regenerative Medicine and Stem Cell Research at UCLA, received the 2023 Achievement Award from the International Society for Stem Cell Research.

Dr. Chelsea L. Shaver, assistant professor-in-residence in medicine and health services research, received the inaugural National Institutes of Health HEAL (Helping End Addiction Long-term) Initiative Director’s Award for addiction research.
Carrying Forward an Enduring Connection and Legacy of Philanthropy

By Marina Dundjerski

More than 2,400 years ago, Hippocrates, the Greek physician considered to be the father of modern medicine, stated, “All disease begins in the gut.” Today, researchers at UCLA are studying the gastrointestinal tract — and the trillions of bacteria that make up its microbiome — and the trillions of bacteria that make up its microbiome. The gift will fund a new headquarter in the UCLA Center for Health Sciences to support collaboration in several focus areas, including inflammatory bowel disease; cardiovascular and liver diseases; obesity and eating disorders; neurodevelopmental and neurodegenerative diseases, such as autism, Alzheimer’s and Parkinson’s diseases; irritable bowel syndrome; substance use, mental illness and pain disorders; as well as gender differences of the microbiome. It also will support a fellowship, an early-career research fund for promising scientists, an endowed chair in brain-gut-microbiome research and an annual symposium – all aimed at a fuller understanding of the brain-gut-microbiome interface and its role in human health.

The fact that microbiome research touches upon such a wide number of areas is what attracted the Goodmans to join in this endeavor. “It has a widespread benefit of helping a large amount of people, and is not limited to one scope of medicine,” said Donald Goodman, president of Don Lee Farms, a multigenerational family food company he founded in 1982. “It strikes me that there is a lot of hope that can lead to treatments and help enhance or save people’s lives.”

The joint venture is based on a friendship between the Goodmans and Luskins that goes back a generation. Meyer Luskin, an industry leader in the business of recycling and processing food waste, and his wife, Renee, were good friends of Larry Goodman, Donald’s late father, and his wife, Muriel Goodman, and the families have been close since. Luskin says it was Larry Goodman who first encouraged him to serve on the UCLA Medical Center, Santa Monica Board of Advisors many years ago, when Larry Goodman was chairman. Luskin later became chairman, and years later he encouraged Donald Goodman to join the hospital board. (He later became chairman.)

Things came full circle when last year, as Donald Goodman was looking to make the family’s first transformational gift, he consulted Luskin for philanthropic advice. The two began talking about the microbiome project with Dr. Eric Esrailian (FEL ’06), chief of the UCLA Vatche and Tamar Manoukian Division of Digestive Diseases and The Lincy Foundation Chair in Clinical Gastroenterology in the David Geffen School of Medicine at UCLA, and a new partnership was forged.

“We are extremely grateful to the Goodman and Luskin families for their foresight,” Dr. Esrailian said. “The center’s initial focus on brain-gut-microbiome research will build on our existing strengths and advance UCLA’s collaborations with other microbiome-research centers across the country.”

Both families have a long history of being charitable. “I learned from my parents at a young age about philanthropy,” said Goodman. “They didn’t necessarily teach us about it, but it came through dinner conversations and various experiences. I remember my mom worked on a regular basis at the friendship I had with Don’s father and now to have a joint venture with Larry’s son gives an additional satisfaction to the feeling of helping humanity with what we’re doing.”

As for this joint gift with the Goodmans, Luskin says he is proud to carry forward the families’ enduring connection and legacy of philanthropy. “It’s just wonderful to look back at the friendship I had with Don’s father and now to have a joint venture with Larry’s son gives an additional satisfaction to the feeling of helping humanity with what we’re doing.”
Maxine and Eugene Rosenfeld.

Long-standing UCLA Partners Maxine and Eugene Rosenfeld Advance Lung Health

F or more than 50 years, Maxine and Eugene Rosenfeld have been dedicated UCLA partners. Their philanthropy has advanced numerous areas across the campus, including medical research, patient care and education. Their most recent contribution of $1 million provided the initiative to advance the Lung Health Innovation Fund in the David Geffen School of Medicine at UCLA. Under the direction of Dr. John Belperio, interim chief of the UCLA Division of Pulmonary, Critical Care, Sleep Medicine, Clinical Immunology and Allergy and Gaultier Pierpoint Endowed Chair in Interstitial Pulmonary Fibrosis, the fund will provide vital support for Dr. Belperio and his team’s efforts to improve treatments for advanced lung diseases and outcomes for patients who have received a lung transplant.

The Rosenfelds’ lead gift established the fund, which the division hopes to increase to $6 million through continued contributions from other philanthropists. This goal will enable Dr. Belperio and his team to rapidly pursue new directions from real-time discoveries and continue transforming the field of pulmonary medicine.

Grateful for the care Eugene Rosenfeld received from Dr. Belperio, and after learning of the physician’s achievements combatting rejection of transplanted organs, the Rosenfelds were committed to helping further his research and clinical initiatives. Dr. Belperio’s work also focuses on the use of stem cells to heal airway injuries and reverse fibrosis, as well as research to determine the causes of and develop treatments to improve interstitial lung disease, pulmonary fibrosis, sarcoidosis, chronic obstructive pulmonary disease, emphysema and other advanced and rare lung diseases. “We are profoundly grateful for Dr. Belperio’s lifesaving treatment and care,” Maxine Rosenfeld said. “It means so much to help advance his research that promises to improve the lives of so many who are challenged by lung diseases.”

The Belperio laboratory also trains the next generation of physicians and scientists who gain hands-on experience with real-world studies and experiments. Students, fellows and junior faculty work with him to investigate the underlying causes of lung conditions, developing biomedical models that mimic lung conditions or diseases found in humans and testing potential therapies. U.S. News & World Report consistently ranks UCLA pulmonology and lung surgery among the top five in the nation.

“Treatments for advanced lung disease and his team’s efforts to improve them are vital support for Dr. Belperio and the rest of his team to rapidly pursue new directions from real-time discoveries and continue transforming the field of pulmonary medicine.”

In Memory of His Son, Peter Morton Raises Awareness for Congenital Heart Disease

By Julie Kirst

In Memory of His Son, Peter Morton Raises Awareness for Congenital Heart Disease

A ll loss is difficult, but the sudden death of a loved one leaves no time to prepare and can be especially devastating. While the grieving process is different for each person, some bravely channel their grief into helping others. When philanthropist and restaurateur Peter Morton’s son, Harry, died unexpectedly of sudden cardiac arrest at the age of 38, Morton vowed to make a difference. His recent contribution to UCLA Health has established the UCLA Harry Morton Congenital Heart Disease Screening Fund in memory of his son, and also benefits the existing Congenital Heart Disease Program Greatest Needs Fund. This is in addition to his recent support for the Ocular Oncology Research Program led by Dr. Kalsey Roozlos (FEL ‘22), UCLA Stein Eye Institute.

Harry was living a seemingly healthy life, with no outward signs of a heart condition, when he died suddenly from undiagnosed congenital heart disease in 2019. His family wanted to honor the philanthropist he was and established the fund to help advance screening opportunities and treatment for the condition. The gift will support pediatric and adult patients by providing early-de tection screening and diagnostic services for those with undiagnosed congenital heart disease. The gift will fund research to expand the understanding of congenital heart disease, as well as development of a new screening protocol for anomalous coronary artery – a coronary artery that has an abnormality or malformation present at birth.

“Our main goal is to raise awareness of congenital heart problems and help those without resources to get the care they need,” Morton said. “We also want to make sure others know about this disease, and we encourage people to talk with their primary care doctor about their heart health.”

Efforts funded by the gift include outreach through distribution of a flier about heart health in UCLA Health clinics and at dozens of UCLA Health community events. Outreach also includes distribution of the flier in 200 UCLA Medical Plaza, named the Peter Morton Building in honor of his 2004 contribution of $10 million to help fund new operating rooms and expand radiation therapy and research for breast cancer treatment.

“Peter Morton has been a valued UCLA partner for many years, and his amazing generosity in creating the UCLA Harry Morton Congenital Heart Disease Screening Fund will bring much-needed attention to the condition,” said Johness Spisso, MPA, president of UCLA Health, CEO of the UCLA Hospital System and associate vice chancellor of UCLA Health Sciences. “This gift will pave the way for more screenings and early detec tion, enabling people with congenital heart issues to receive the health care they need.”

A third-generation restaurateur, Harry Morton followed in his family’s footsteps and was founder of the chain Pink Taco. His father, Peter Morton, co-founded the Hard Rock Cafe chain, and his grandfather, Arnie Morton, founded the restaurant chain Morton’s The Steakhouse.

Cardiovascular diseases are the leading cause of death globally, and sudden cardiac death (SCD) is the single-greatest cause of natural death in the United States, typically striking people in their mid-30s to mid-40s. In more than 50% of cases, SCD has no warning signs. The American College of Cardiology and American Heart Association urge screening for a family history of SCD. For those who know they have a family history of heart disease or SCD, the organizations recommend screening for asymptomatic left ventricular dysfunction. If a person has a cardiac condition, it is important for family members to learn cardiopulmonary resuscitation and how to use automated external defibrillators, which are located in many offices and public spaces.

“Harry was a man of numerous accomplishments, and a dear friend to many. It means so much to our family to create a legacy for Harry in this way,” Morton said. “It gives me great satisfaction to play a vital role in research focused on congenital heart disease that will change outcomes so that other families will not have to experience what we have.”

Julie Kirst is a senior writer for UCLA Health Sciences Development.

For more information, contact lasa@uclahealth.org at 310-933-3730.
Party on the Pier Returns to the Santa Monica Pier

For more information, contact Christopher Carbado at: 310-562-6498

On November 6, 2022, the annual Party on the Pier returned for the first time since 2019 to Pacific Park on the Santa Monica Pier. The signature fundraising event for UCLA Mattel Children’s Hospital, which had gone virtual during the COVID-19 pandemic, surpassed the previous event record by more than $215,000. The success of the 23rd annual Party on the Pier was made possible by the dedication of co-chairs Hillary Milken and Loris Lunsford, the UCLA Mattel Children’s Hospital board, event planning committee, sponsors, supporters and volunteers.

“The Pier is an iconic Southern California event that brings families together for fun and fundraising for UCLA Mattel Children’s Hospital,” said Johnese Spisso, MPA, president of UCLA Health, CEO of the UCLA Hospital System and associate vice chancellor of UCLA Health Sciences. “We are pleased to once again celebrate this special day in person and are so grateful to the many sponsors and volunteers who have helped make this year’s Party on the Pier the most successful to date.”

Mattel, the hospital’s naming partner, provided premium toys to fill the game booths; the Los Angeles Dodgers Foundation helped make the VIP tent a home run with hat giveaways; and the giant, costumed Dodgers Bobbleheads spread team spirit, sharing high-fives and showing off dance moves. Attendees needing a moment away from the action were able to wind down with therapy dogs and volunteers from the UCLA Health People-Animal Connection.

“The Play It Forward area, sponsored by the Goldhirsh-Yellin Foundation, offered a shady retreat for all guests, with a variety of craft activities hosted by Ronald McDonald House Chariites of Southern California, face painting sponsored by WWE, as well as a space for children to move and groove during ‘The BeatBuds’ live performances. Elsewhere in the park, a makeover station, hosted by Petite ‘n Pretty, and a celebrity photo booth, where guests could take selfies with stars from kids’ favorite TV shows and movies, were fun highlights.

Additional major sponsors of the 2022 Party on the Pier include the Michael and Lori Milken Family Foundation, NBCUniversal Media, The Change River, Beth and Dr. Neal Cutler, HCL Technologies, Mia and John Janick, KPMG, the Anthony & Jeanne Pritzker Family Foundation, Ellen and Richard Sandler, Iris and Michael Smith, Wolfgang Puck Catering and WWE.

Party on the Pier generates funds to support and transform children’s health care. The funds provide admission tickets for UCLA Mattel Children’s Hospital patients and their families to enjoy the event.

For more information about the event, visit partyonthepier.ucla.edu

UCLA Neurology Celebrates the Laurie and Steven C. Gordon Chair in Neurosciences

On October 11, 2022, UCLA Chancellor Gene D. Block and Carol Block welcomed Laurie and Steven C. Gordon, Dr. Ming Guo (RES ’01, FEL ’02), their families and UCLA faculty to the UCLA Chancellor’s Residence. The evening celebrated the Gordons’ gift to establish the Laurie and Steven C. Gordon Chair in Neurosciences and Dr. Guo’s appointment as the inaugural chair holder.

“The university is very grateful to Laurie and Steve for their dedication to furthering studies into Parkinson’s disease and other neurological conditions,” Chancellor Block said. “Thank you for establishing the neuroscience chair and providing funding for other endowed chairs that are vital to our health sciences efforts.”

The Laurie and Steven C. Gordon Chair in Neurosciences is part of a $26 million gift made in 2018 by the Gordons to establish the UCLA Laurie and Steven Gordon Commitment to Cure Parkinson’s Disease in the David Geffen School of Medicine at UCLA. In recognition of the contribution, the UCLA Neuroscience Research Building was renamed the Laurie and Steven Gordon Neurosciences Research Building.

“Funding a cure for Parkinson’s is very important to our family,” said Steven Gordon. “Laurie and I have seen the difference funding can make in accelerating research. It’s a long but worthwhile process, and we are committed to supporting scientists such as Dr. Guo who have the ability to make a difference and find answers for debilitating, neurodegenerative diseases.”

Dr. Guo, professor of neurology, molecular and medical pharmacology and director of the UCLA Aging Center, specializes in research and the clinical care of patients with memory, neurodegenerative and neurodevelopmental disorders, including Parkinson’s. She has received numerous prestigious awards, including the Alfred P. Sloan Research Fellowship, McKnight Neurobiology of Brain Disorders Award and the Klingenstein-Simmons Fellowship.

Dr. Guo’s research and contributions have helped make a difference, and we are committed to supporting scientists such as Dr. Guo who have the ability to make a difference and find answers for debilitating, neurodegenerative diseases.”

Chancellor Spisso noted that the gift from the endowed chair will enable Dr. Guo to further advance Parkinson’s research, patient care and education.

“Laurie and Steve are true philanthropists,” said Dr. John C. Mazziotta (RES ’81, FEL ’83), vice chancellor of UCLA Health Sciences and CEO of UCLA Health. “Endowing chairs provides a significant benefit that strengthens our competitive edge and provides investigators with flexibility to pursue leading-edge scientific studies that can be applied in a clinical setting and benefit patients around the world.”

In addition to the Laurie and Steven C. Gordon Chair in Neurosciences, funds from the endowed chair will enable Dr. Guo to further advance Parkinson’s research, patient care and education.

For more information, contact Christopher Carbado at 310-562-8488
MAKING A DIFFERENCE IN WOMEN’S HEALTH

Beth and Joshua Friedman have made a philanthropic commitment to advance women’s health and genetics. The gift will establish an endowed chair and an annual faculty award in the Department of Obstetrics and Gynecology of the David Geffen School of Medicine at UCLA and support pediatrics at UCLA Health, as well as the UCLA Center for East-West Medicine. The Joshua S. and Beth C. Friedman Chair for Women’s Genetic Research will support the work of a faculty member in the Department of Obstetrics and Gynecology who has expertise in women’s health and genetics, and the endowed Joshua S. and Beth C. Friedman Award for Women’s Reproductive Sciences will foster research breakthroughs that improve women’s health through annual awards for promising studies. The Joshua S. and Beth C. Friedman Pediatric Assistance and Innovation Fund will support patient care and clinical initiative in UCLA Mattel Children’s Hospital and pediatric clinics. The Friedman gift also benefits the UCLA East-West Primary Care and UCLA East-West Consultative services. In recognition of this gift, the executive leadership suite on the first floor of Novakoff Hall, which houses the Department of Obstetrics and Gynecology, has been named the Beth C. and Joshua S. Friedman Executive Leadership Center.

A FRIENDSHIP INSPIRES PHILANTHROPY

Farah and Steve Gozini and Thomas Safran have pledged $1 million to support the UCLA Medical Assistant Program. Steve Gozini made the lead gift of $500,000, which inspired Safran to match the contribution. The two close friends are both involved in various areas on the UCLA campus. Safran serves as a UCLA Health System Board Member and Safran serves on the UCLA Ziman Center Board in the Anderson School of Management and on the Founders Council for the UCLA School of Law Williams Institute.

Medical assistants play an essential role in helping physicians care for patients by taking vital signs, administering medications and performing administrative tasks. The UCLA Medical Assistant Program combines the theory and practical experience necessary to prepare students to transition successfully into a career as a medical assistant.

CELEBRATING THE PHILANTHROPIC WORK OF UCLA HEALTH SYSTEM BOARD MEMBERS

On October 20, 2022, the UCLA Health System Board celebrated the 10th anniversary of its founding in 2012. The evening marked the return of this annual meeting after a three-year hiatus and featured Henry Gluck, chairman of the UCLA Health System Board; Dr. John H. Crawford III, vice chancellor of UCLA Health Sciences and CEO of UCLA Health; and Johnese Spisso, MPA, president of UCLA Health, CEO of the UCLA Hospital System and associate vice chancellor of UCLA Health Sciences. Award-winning actor, producer and director Michael Keaton was the featured guest speaker. He shared his experience as a teen with his mother’s Alzheimer’s disease, and expressed gratitude to UCLA Health for its commitment to preventing and treating strokes, and to physicians, such as the event’s featured faculty speaker, Dr. S. Thomas Carmichael (FEL ’01), chair of the UCLA Department of Neurology and the Frances Stark Chair in Neurology. His presentation, “The Future State of Brain and Aging,” highlighted UCLA’s innovations in treating brain diseases, aging and brain-injury repair. He noted the latest technological advancements in research, prevention and patient care around stroke, Alzheimer’s disease and other dementias. Dr. Mazziotta and Spisso reported on the university’s achievements in providing the best in health care and the latest in medical technology to the people of Los Angeles and around the world.

Supporting Palliative Care Fellowships

The board of the Hennings-Fischer Foundation has contributed $30,000 to support the work of Dr. Christopher Petras, director of palliative care at UCLA Health. The gift will support seven hospice and palliative medicine fellowship trainees annually. This is the seventh consecutive year that the Hennings-Fischer Foundation has provided funding in the area of palliative care. This year, partial funding will be directed toward homeless palliative care and advance care planning efforts.

HUMANITARIAN PRIZE ESTABLISHED IN MEMORY OF YOUNES NAZARIAN

The Younes & Soraya Nazarian Family Foundation has contributed more than $1 million to establish the Younes Nazarian Medical Humanitarian Prize in memory of Younes Nazarian, who passed away in 2022. This gift recognizes a UCLA Health visionary practitioner or senior-level health care provider whose clinical care, medical research, community programs or technological innovations are advancing humanity. Dr. David Reuben (FEL ’88), chief of the Division of Geriatrics and Archstone Foundation Endowed Chair in Geriatrics, was awarded the inaugural prize on September 28, 2022. A businessman and vital benefactor to UCLA, Mr. Nazarian supported the creation of the Israel studies program and, with his wife, Soraya, established a permanent endowment in 2010 that led to the naming of the UCLA Younes and Soraya Nazarian Center for Israel Studies. “Our father was a man who believed in the decency and humanity of people,” said Sharon Nazarian. “Establishing a prize in his name that celebrates those in the medical profession who touch so many lives, day in and day out, and whose humanitarian work reflects the reverence between life and death, is a true reflection of what our father stood for. We are thrilled once again to partner with UCLA to enshrine our family values in ways that celebrate those doing good for our greater society.”

RETURNING SCIENTIFIC DISCOVERY IN CONGENITAL HEART DISEASE

The Ahmanson/UCLA Adult Congenital Heart Disease (ACHD) Center has received a $250,000 contribution from the Ruth J. Wagner Survivor’s Trust, established by UCLA alumna Ruth J. Wagner and her husband, Gerald D. Wagner. The Ahmanson/UCLA ACHD Center, directed by Dr. Jamil A. Aboulhosn (MD ’99, RES ’02, FEL ’06), Streisand Chair in Cardiology, the fund will broadly support ACHD’s mission to respond directly to the needs of a growing patient population, lead the way in research and train the next generation of experts in congenital heart disease. “We are honored by this generous gift from Ruth and Gerald,” said Dr. Aboulhosn. “Their legacy will enable the UCLA Adult Congenital Heart Disease Center to advance scientific discovery, ultimately benefiting the lives of countless heart patients for many years to come.”

EXPANDING SPECIALTY NURSING TRAINING

Longtime UCLA supporters Lynda and Stewart Resnick have made an investment in the education and professional development of cardiac care nurses. The gift to the UCLA Health Center for Nursing Excellence will expand a range of training programs, including providing resources that enable nurses to attend symposia and conferences that enhance specialty nursing practices for cardiac and cardiothoracic nursing faculty. UCLA Health would like to thank the Campagna Family for their continued partnership, philanthropy and contributions as UCLA Health ambassadors within the community.

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I know something about the struggles of families who have been separated and scattered, either by conflict, natural disaster or by the choices of politicians who are far beyond their control. While in medical school and as a student of public health in the UC Berkeley-UC San Francisco Joint Medical Program between 2005 and 2009, I traveled to El Salvador to volunteer with the Salvadoran nonprofit Asociación Pro-Búsqueda de Niñas y Niños Desaparecidos (Pro-Search for the Disappeared Children) to help build a DNA bank to match — and hopefully reunite with their biological families — children who were forcibly “disappeared” during the 12 years of civil war in the 1980s and early ’90s. So, my heart sank when I first read about children flying to a meeting and, with a feeling of dread spreading through my chest, I thought: Please, not again. It is the same tactic of war that we saw in El Salvador now playing out 40 years later in Ukraine.

My experience has taught me how being torn from their families in the midst of war will affect these children. They will experience the same fundamental issues of ambiguous loss, the same feelings of fear of abandonment, of identity confusion, of intense longing for their biological families as did the separated children of El Salvador. Depression, substance use and poor physical health are too often the outcomes for children who have experienced such profound trauma, and the health effects likely carry into adulthood.

Russia’s leaders have cloaked this outrage in the guise of it being a humanitarian effort, portraying themselves as charitable saviors rescuing vulnerable children from war-torn countries — a country that Russia, without provocation, invaded. They hide behind a banner of “children’s rights.” But the mass transfer of children into Russia is a clear violation of the Convention on the Rights of the Child and is a war crime.

How many times must history repeat itself?

As with the separated children of El Salvador, many of whom were put up for international adoption, DNA matching may be essential to reunite these families in the months and years ahead. Organizations such as DNA Bridge, a nonprofit coalition of scientists and human rights advocates that I co-founded in response to the Trump Administration’s U.S.-Mexico boarder family-separation policy to promote the humanitarian use of forensic DNA for family reunification, will be important participants in this effort.

I have witnessed first-hand the impact of this powerful tool. Expanding on the thesis that I wrote after working with Pro-Búsqueda, my 50 interviews and updated field notes culminated in the publication of the book Reunion: Finding the Disappeared Children of El Salvador, a chronicle of families’ experiences with military attacks, child disappearances, family separations, joyful reunions and the arduous process of reintegration.

While writing the book, I knew I’d gotten it right if I cried after finishing a chapter. The stories still tug at my heart, and I carry them forward in my current work.

Awareness of social-justice issues was an elemental part of my upbringing. My father, a Jewish psychiatrist from New York, instilled in me a love of science and big-picture thinking. My mother, who fled alone from Castro’s Cuba when she was 15 years old, is a social worker who, for much of her career, counseled troubled high school students, many of them first-generation Americans who butt heads with their immigrant parents over issues like cultural identity and gangs.

Every Saturday growing up, my father took me to the library and taught me about the importance of lifelong curiosity and learning. At restaurants or in the market, my mother, who left her home country with just five dollars in her pocket and knew profound poverty, would speak in Spanish to the busboys and cashiers about their lives. She taught me how to connect with people and understand the value of their stories and experiences.

There is something about one’s lengua materna — the language that your mother feeds you in, praises you in, admonishes you in — that makes that language and the culture and people it represents feel like home and instills empathy and understanding.

That is how it felt in El Salvador. I went there because I wanted to understand how war affects children’s health. I did not anticipate the profound impact it would have on my life, or how it would shape the person I would become. I am still haunted by stories I heard there. As the father of a disappeared child told me, to hear about war is terrible, but to experience it and live it in your skin is something entirely different. To receive their testimony to hear their anguish, to see their tears and to absorb both their pain and their resilience — it changed me.

During an undergraduate year abroad in Latin America, I learned a chant that now plays in my head as I read about events in the world: “El pueblo unido jamás será vencido” — the people united will never be defeated. In spite of all they have gone through, the mothers and fathers and sons and daughters I’ve met and come to know in El Salvador endure in their calls for justice, identity and truth. They are among the most generous people I’ve ever known. Having survived a war together, they know they must look out for one another.

In the world today, it is a lesson we all could benefit from.

Dr. Elizabeth S. Barnert is associate professor of pediatrics in the David Geffen School of Medicine at UCLA and the author of Reunion: Finding the Disappeared Children of El Salvador (University of California Press, 2023). She works extensively with youths held in the juvenile legal system, and her research examines children affected by violence, family separation and incarceration.

Dr. Barnert (back to camera) was present for the family reunion of a transnational adoptee, Angela, with her biological mother and brother in rural El Salvador.

Dr. Elizabeth S. Barnert as a student (fourth from right) with members of the Pro-Búsqueda team.

A mother and son are reunited after 35 years apart through a cold-hit match in Pro-Búsqueda’s DNA bank. The son became separated from his family during the Salvadoran Civil War and was raised in Australia.

A mother and son in rural El Salvador.

A mother and son are reunited after 35 years apart through a cold-hit match in Pro-Búsqueda’s DNA bank. The son became separated from his family during the Salvadoran Civil War and was raised in Australia.
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We look forward to hearing from you.

Thank you.

David Greenwald
Editor, U Magazine

To take the survey, go to: http://ucla.in/U-Mag-Readership-Survey or scan the QR code.