There's more to memory than just recalling where you left your keys, and scientists at UCLA are working to unlock its mysteries.
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Not long after he was sworn in as America’s 26th president, Theodore Roosevelt said: “This country will not be a good place for any of us to live in unless we make it a good place for all of us to live in.” One-hundred-and-fifteen years later, those remain words for us to embrace. As we pursue our goal of benefiting society by advancing medical research, providing excellent patient care and educating the next generations of healthcare leaders, we also take seriously our essential role to improve population health through research and community partnerships that address social, economic, cultural and biological factors.

Johnese Spisso, MPA, our new president of UCLA Health and CEO of UCLA Hospital System, talks about these and other efforts in this issue of U Magazine (“Raising the Bar,” page 14). I would like to add my own voice to the discussion. As a leading public medical school and teaching hospital in one of the most diverse cities in the country, UCLA has a responsibility to care for our local community and, in some cases, to provide services for which our institution receives minimal, if any, compensation, as well as provide community health education and preventive care.

Our work in this regard manifests in many ways. Members of our faculty volunteer at the Venice Family Clinic to directly serve vulnerable patients, and our hospitals donate radiology, laboratory, surgical and other clinical services; the UCLA Stein Eye Institute’s Mobile Eye Clinic treats underserved populations at schools, community centers and social-service agencies throughout the region; and our Helping U Help the Community program supports UCLA Health-community partnerships that seek solutions to critical health issues in the Los Angeles region. These are just a few examples of our engagement to benefit our broad community. You can learn more about such programs by visiting medschool.ucla.edu/communityengagement.

In addition, we support and serve our nation’s fighting men and women through UCLA’s Operation Mend; the Ronald A. Katz Center for Military Collaborative Medicine; and our longstanding partnership with the Greater Los Angeles and Sepulveda VA Hospitals, where nearly 400 medical school faculty and 350 medical students provide care to more than 3,000 VA patients annually, and new and expanded services will include a UCLA-VA Family Resource and Well-Being Center and a Mental Health and Addictions Center for Excellence.

UCLA Health was a key partner in the reopening of Martin Luther King, Jr. Community Hospital, which serves the Southeast Los Angeles community, and we collaborate with the Charles R. Drew University of Medicine and Science to train healthcare leaders who are committed to serving disadvantaged populations. We also are engaged with two major county hospitals that are the cornerstones of healthcare services for hundreds of thousands of Los Angeles County residents.

As you see, we are involved on many fronts, and we’re proud of the work of our UCLA community to “make [this] a good place for all of us to live in.”

John C. Mazziotta, MD (RES ’81, FEL ’83), PhD
Vice Chancellor, UCLA Health Sciences
CEO, UCLA Health
Genetic Evolution of Zika Virus Unraveled

How does a formerly innocuous and obscure virus such as Zika transform itself into a feared pathogen inflicting a devastating impact on global health? According to a new UCLA study, it’s because the virus possesses the ability to mutate rapidly.

“The Zika virus has undergone significant genetic changes in the past 70 years,” says Genhong Cheng, PhD, professor of microbiology, immunology and molecular genetics. “By tracing its genetic mutations, we aimed to understand how the virus is transmitted from person to person and how it causes different types of disease.”

First isolated in 1947, the Zika virus only sporadically caused disease in Africa and Asia until the 2007 Micronesia and 2013 French Polynesia outbreaks. Scientists previously believed that infection was spread solely by mosquitoes and caused only mild illnesses. The latest epidemic, which has drawn international attention, has linked the virus to fetal brain-development disorders and Guillain-Barre syndrome. New modes of transmission, including sexual intercourse, also have surfaced.

“We don’t know why Zika infection was not associated with serious human disease, especially in newborns, until recently,” says Stephanie Valderramos, MD (FEL ’16), PhD, a specialist in maternal-fetal health. “We hoped that taking a closer look at the virus’s genetic changes over time would reveal clues to this mystery.”

Dr. Cheng’s laboratory collaborated with researchers at the Chinese Academy of Medical Sciences and Peking Union Medical College in Beijing, China, to compare individual genetic differences among 41 strains of Zika. Thirty strains originated from humans, 10 from mosquitoes and one from monkeys. In sequencing the virus, the team identified substantial nucleotide changes between the strains, showing a major split between the Asian and African lineages, as well as the human and mosquito versions. “We suspect these mutations could help the virus replicate more efficiently, evade the body’s immune response or invade new tissues that provide a safe harbor for it to spread,” says Lulan Wang, a PhD-student researcher in Dr. Cheng’s laboratory.

The study also found that contemporary human strains of Zika share a genetic sequence more similar to the 1966 Malaysian strain than the 1968 Nigerian strain. This implies the strains causing the current human outbreak evolved from the Asian lineage. Additionally, researchers discovered human strains in the current epidemic resemble the 2013 French Polynesia strain more closely than the 2007 Micronesia strain, suggesting that the two strains evolved from a common viral ancestor. Finally, scientists determined that a key viral protein varied the most between the Asian human strain and the African mosquito strain, indicating a possible structural change in the virus.

“Our results have raised new questions about the evolution of the Zika virus,” Dr. Cheng says, “and highlight that a lot more research is needed to understand the relationship between the virus and human disease.”


Human neural progenitor cells (gray) infected with Zika virus (green) increased the enzyme caspase-3 (red), suggesting increased cell death.

Image: National Institutes of Health
UCLA researchers have found that a state-of-the-art molecular genetic test greatly improves the speed and accuracy for diagnosing neurogenetic disorders. The discovery could lead to better care for people with rare diseases like spinocerebellar ataxia, leukodystrophy and spastic paraplegia. The test, called exome sequencing, involves determining the order of the genes in a person's genome. When used in concert with a patient evaluation and family medical history, the approach can help doctors identify disorders that may have gone undiagnosed for years, says Brent Fogel, MD (RES '07, FEL '09), PhD, director of the UCLA Neurogenetics Clinic and associate professor of neurology and human genetics.

Exome sequencing is more efficient and less costly than the type of genetic testing that has been more commonly used, Dr. Fogel says, and a proper diagnosis can end what for many patients is an agonizing journey just to find a name for their conditions. The growing body of evidence supporting the use of the test, and the demonstrated benefits to patients, should lead to greater insurance coverage of the test, he says. “Despite extensive literature supporting the use of this technology, many insurance companies still consider it to be investigational and may refuse coverage. Our article outlines the appropriate use, benefits and limitations of exome sequencing that these companies need to consider when making coverage decisions.”

UCLA has been a leader in using the test as a diagnostic tool since 2012. Dr. Fogel and his team were among the first to adopt the technology for routine neurological practice, and he has been a strong advocate for wider use. Dr. Fogel and his colleagues wrote a study in 2014 about exome sequencing that was published in the *Journal of the American Medical Association Neurology*. That research found that 20 percent of a group of people with spinocerebellar ataxia could be diagnosed immediately using the technique. Additionally, they discovered that useful genetic information could be identified in more than 60 percent of the subjects, regardless of their age when the disease began or their family history.

“Clinical Exome Sequencing in Neurologic Disease,” *Neurology Clinical Practice*, April 2016
Before women even become pregnant, their biological profile may predict a lower-birthweight baby, a UCLA-led research team found. The study analyzed 142 women who were participating in a larger study that was conducted by the Community Child Health Network (CCHN), which looked at how chronic stress affects new parents and their babies. The subjects were chosen for the UCLA-led research because they provided daily saliva samples, and they became pregnant again during the CCHN study. The research, which found the women were more likely to give birth to lower-weight babies, is the first evidence that maternal cortisol patterns before conception influence the weight of the baby.

“We found that the same cortisol pattern that has been linked with chronic stress is associated with delivering a baby that weighs less at birth,” says Christine Guardino, PhD, a UCLA postdoctoral scholar in psychology.

More than 300,000 babies in the U.S. are born each year with low birth weight, meaning they weigh under 2,500 grams, or less than about five-and-a-half pounds. They have an above-average risk for infant mortality, developmental problems and health abnormalities throughout their lives, including cardiovascular and metabolic disorders.

The UCLA-led research looked at families in five different regions — Los Angeles, California; Washington, D.C.; Baltimore, Maryland; Lake County, Illinois; and eastern North Carolina — beginning a month after the birth of a child and again when the child was 6, 12 and 18 months. Previous studies have shown the importance of stress hormones during pregnancy for fetal growth and development, but the new study provides the first evidence that the mother’s stress physiology before she even conceives also is important.

Chris Dunkel Schetter, PhD, professor of psychology, said women planning a pregnancy should take into account the possible effects of stress and begin planning for a healthy first pregnancy well in advance.

The study evaluated mothers who are African-American, Latino or Hispanic and white non-Hispanic. A majority of them have household incomes near or below the federal poverty level, which in 2013 was $23,550 for a family of four. The mothers were affected by stress triggered by numerous sources, ranging from finances, family relationships and neighborhood issues to major life events such as the death of a family member, interpersonal violence and racism.

The researchers gauged the subjects’ stress levels based on measurements of their blood pressure, body mass index, the level of cortisol in their saliva and other factors, which collectively offer insight into how the body’s systems age in response to stress. The researchers also interviewed mothers and fathers in their homes. Drs. Guardino and Dunkel Schetter and others are conducting follow-up research on some of the children, now between 3 and 5 years old, from the original study.

While most cases of osteoporosis are caused by normal aging, hyperparathyroidism — when the parathyroid glands release an excessive amount of a hormone that regulates the body’s calcium levels — is another leading cause of the bone-loss disease.

Doctors commonly treat hyperparathyroidism using a class of prescription drugs called bisphosphonates, including alendronate and ibandronate, which are supposed to strengthen bones. A study led by scientists at UCLA, however, found that those drugs actually increase the risk of fracture. The research also revealed that patients who have surgery to remove the overactive parathyroid glands have fewer subsequent bone fractures.

About 400,000 people in the U.S. — 1-in-400 women and 1-in-1,200 men — have hyperparathyroidism, making osteoporotic fractures a major public-health and economic burden, says Michael Yeh, MD, associate professor of surgery and medicine and chief of endocrine surgery. “Hip fractures, in particular, are associated with significant rates of mortality, disability and loss of independence,” Dr. Yeh says. “Before this study, there were no data that compared parathyroid surgery with prescribing medication on the risk for fractures in people with hyperparathyroidism.”

The researchers analyzed data from more than 6,000 people who had been diagnosed with hyperparathyroidism between 1995 and 2010. All had healthcare coverage through Kaiser Permanente Southern California, and their demographic and socioeconomic profiles mirrored those of the greater Los Angeles population. Dr. Yeh describes the findings as “startling.”

Among the participants who were not treated for hyperparathyroidism, the study found there were 56 hip fractures per 1,000 people after 10 years. Among those who had parathyroid surgery, there were just 20 fractures per 1,000 people. And for those taking bisphosphonate medications, the study showed that the rate of hip fractures was 86 per 1,000 patients — higher than the combined rate for those who underwent surgery or did nothing at all.

The researchers also reviewed the number of bone fractures of all types (including hip fractures), and the results were similar. For people who did not receive treatment, there were 206 fractures per 1,000; for those who had surgery, 157 fractures per 1,000; and for those taking bisphosphonate medications, 303 fractures per 1,000.

Researchers also found that the risk for fractures among people taking bisphosphonates was higher whether people had osteopenia, or early bone loss, or full-blown osteoporosis, which Yeh said could suggest that either the drugs are harmful or the people taking them had other risk factors.

“Regardless, we were unable to demonstrate any benefit associated with this class of drugs, which have been around and routinely prescribed for more than 20 years,” Dr. Yeh says. “These findings should make bisphosphonates less attractive as an alternative to parathyroid surgery in patients with primary hyperparathyroidism.”

“The Relationship of Parathyroidectomy and Bisphosphonates with Fracture Risk in Primary Hyperparathyroidism: An Observational Study,” Annals of Internal Medicine, April 5, 2016
Whether or not nerve cells are able to regrow after injury depends on their location in the body. Injured nerve cells in the peripheral nervous system, such as those in the arms and legs, can recover and regrow, at least to some extent. But nerve cells in the central nervous system — the brain and spinal cord — can’t recover at all.

A UCLA-led collaboration has identified a specific network of genes and a pattern of gene-expression that promote repair in the peripheral nervous system in a mouse model. This network, the researchers found, doesn’t exist in the central nervous system. The researchers also found a drug that can promote nerve regeneration in the central nervous system.

“We know the transmission of messages (via nerve cells) can be impaired by injury, and the recovery of nerve cells after injury largely depends on their location,” said Vijayendran Chandran, PhD, a postdoctoral project scientist in the Department of Neurology. “Understanding these molecular differences in injured nerve cells in the limbs, where regeneration happens, versus injured nerve cells in the spinal cord, where regeneration fails, would open up the possibility to design treatment to enhance neuron regeneration in the central nervous system after injury.”

The researchers measured the response of gene regulation at the level of messenger RNA (mRNA) in each instance of injury. Gene regulation is the process of turning genes on and off, ensuring that genes are expressed at the right times. mRNA carries information from a gene that, in a long molecular cascade, ultimately tells a protein what to do. The researchers developed a unique set of algorithms to look at the interactions of various groups of genes and the order in which they were expressed.

“That allowed us to find common patterns that correlated with regeneration in the peripheral nervous system, and within those patterns, we were able to identify several genes not previously known that enhanced repair,” says Daniel Geschwind, MD (RES ’95, FEL ’97), Gordon and Virginia MacDonald Distinguished Chair in Human Genetics and professor of neurology and psychiatry and biobehavioral sciences. “But we did not find these patterns in the central nervous system. That was the major advance — identifying, in an unbiased way, the entire network of pathways turned on in the peripheral nervous system when it regenerates, key aspects of which are missing in the central nervous system.”

As a proof of principle that global patterns of gene expression could be used to screen for drugs that mimic the same pattern, the researchers used a publicly available database at UCLA’s Broad Stem Cell Research Center to look for such a drug. That led them to one called Ambroxol, which significantly enhanced central nervous system repair.

“We’re excited about this study because there are a number of firsts that came out of it,” Dr. Geschwind says. “While we still have a long way to go from a mouse study to humans, we present a novel paradigm that has never been applied to the nervous system.”


Steps toward Potential Treatments for Central Nervous System Injury
Nearly half of California adults, including one out of every three young adults, have either prediabetes — a precursor to type 2 diabetes — or undiagnosed diabetes, according to a study released by the UCLA Center for Health Policy Research. The research provides the first analysis and breakdown of California prediabetes rates by county, age and ethnicity, offering alarming insights into the future of the nation’s diabetes epidemic.

The researchers analyzed hemoglobin A1c and fasting-plasma-glucose findings from the National Health and Nutrition Examination Survey, as well as California Health Interview Survey data from more than 40,000 respondents. Their findings indicate that some 13-million California adults, or 46 percent, have prediabetes or undiagnosed diabetes, while another 2.5-million adults, or 9 percent, already have been diagnosed with diabetes. Combined, the two groups represent 15.5-million people — 55 percent of the state’s population. Because diabetes is more common among older adults, the study’s finding that 33 percent of young adults aged 18-to-39 have prediabetes is of particular concern.

The study estimates prediabetes rates by county, finding major disparities across the state, particularly among those aged 18-to-39. Within that group, prediabetes rates ranged from lows of 26 percent in Lake County and 28 percent in San Francisco County to a high of 40 percent in rural Kings and Imperial counties.

Racial and ethnic disparities are extremely pronounced. There are statistically higher prediabetes rates among young-adult Pacific Islanders (43 percent), African-Americans (38 percent), American Indians (38 percent), multiracial Californians (37 percent), Latinos (36 percent) and Asian-Americans (31 percent) than among white young adults (29 percent), pointing to the need to focus additional prevention efforts in those communities.

Complicating matters, many people do not get tested for prediabetes because the test often is not covered by insurance, particularly for those under age 45. And although there are effective interventions to help people control their weight and adopt a healthier lifestyle, these programs often are not covered by insurers.

“There are significant barriers not only to people knowing their status, but also to getting effective help,” says Susan H. Babey, PhD, co-director of the UCLA Center for Health Policy Research’s Chronic Disease Program. “A simple blood test for diabetes should be covered by all insurers, as should the resources and programs that can make a real difference in stopping the progression of this terrible disease.”

**Prediabetes — A Generation in Jeopardy: Key Findings**

- **More than half** of California adults (55%) have either prediabetes or diabetes.
- **1-in-3** young adults has prediabetes.
- Prediabetes is **higher among adults of color**, with at least half of Pacific Islanders, American Indians and African-Americans estimated to have prediabetes.
- Prediabetes rates **vary significantly** from county to county and among age groups.

Source: UCLA Center for Health Policy Research
UCLA scientists have developed a new approach that could one day be used to treat Duchenne muscular dystrophy. The stem-cell gene therapy would potentially be applicable for 60 percent of people with Duchenne, which affects approximately one-in-5,000 boys in the U.S. and is the most common fatal childhood genetic disease.

The approach uses a technology called CRISPR/Cas9, or clustered regularly interspaced short palindromic repeats, to correct genetic mutations that cause the disease. The researchers designed the approach to be useful in a clinical setting, and “the method is likely 10 years away from being tested in people,” says Melissa Spencer, PhD, co-director of the UCLA Center for Duchenne Muscular Dystrophy and member of the UCLA Broad Stem Cell Research Center.

Duchenne typically occurs through one mutation in a gene called dystrophin, which produces a protein with the same name. There are hundreds of mutations in the dystrophin gene that can lead to the disease, but in 60 percent of people with Duchenne, their mutation will occur within a specific hot spot of the gene. Duchenne mutations cause abnormally low production of the dystrophin protein, which in turn causes muscles to degenerate and become progressively weaker. Symptoms usually begin in early childhood; patients gradually lose mobility and often die from heart or respiratory failure around age 20. There currently is no cure.

The platform developed by the UCLA researchers focuses on the hot spot of the dystrophin gene. They obtained skin cells from consenting patients who had mutations within the dystrophin gene hot spot. The scientists reprogrammed the cells to create induced pluripotent stem (iPS) cells. After they had produced iPS cells that were free from Duchenne mutations, they differentiated the iPS cells into cardiac-muscle and skeletal-muscle cells. Later, they transplanted the skeletal-muscle cells into mice that had a genetic mutation in the dystrophin gene.

The result was the largest deletion ever observed in the dystrophin gene using CRISPR/Cas9, and the study was the first to create corrected human iPS cells that could directly restore functional muscle tissue affected by Duchenne. The UCLA researchers plan to develop strategies to test the Duchenne-specific CRISPR/Cas9 platform to treat the disease in animals as the next step toward perfecting a method that can be used in humans.


A Key to Unlock Effective Personalized Medicine

For decades, researchers have predicted that personalized medicine — tailoring drug doses and combinations to people’s specific diseases and body chemistries — would be the future of healthcare. Now, a team of UCLA bioengineers and surgeons has taken a major step toward that reality.

Compilation of patient-specific parabolic response surfaces, which are the keys to personalized medicine. They represent responses to combination therapy for individual patients for liver-transplant immunosuppression.

Image: UCLA School of Dentistry
PET Imaging Technology to Improve Cancer Treatment

A discovery by UCLA scientists could lead to a new method of identifying cancer patients who have high levels of an enzyme and are more likely to respond to cancer treatments. Decades of significant advances and improvements in positron emission tomography (PET) have led to the detection of an enzyme in humans that plays a significant role in DNA formation. The enzyme, called deoxycytidine kinase (dCK), was previously found to be highly expressed in acute leukemia cells and in activated lymphocytes and controls a critical step in the nucleoside salvage pathway, an important therapeutic and PET-imaging target in cancer.

In a seven-year study, a team of UCLA researchers led by Caius Radu, MD, professor of molecular and medical pharmacology, developed a highly sophisticated PET probe called [18F]CFA that is capable of detecting dCK activity in humans for the first time. “The quality of the images is much better,” Dr. Radu says. “We are able to clearly see tissues, including tumor tissues, with high dCK activity that we haven’t seen before in humans using any of the other probes previously developed for this enzyme.”

PET is a noninvasive imaging technology that uses a radioactive substance, called PET probe, to look for disease in the body, and it also shows how organs and tissues are functioning. Until recently, PET technology was only able to clearly detect dCK in mice due to metabolic instability of the previous probes and cross-reactivity with a dCK-related enzyme in humans. The dCK enzyme plays an integral role in allowing drugs such as clofarabine, cytarabine and fludarabine to treat certain types of leukemia, and others like gemcitabine to treat breast, ovarian, non-small-cell lung and pancreatic cancers.

“This enzyme is essential for the therapeutic activity of an entire class of anticancer drugs and even for some antiviral drugs,” Dr. Radu says. “It can take an inactive drug and activate it. If you trick a cancer cell or virus to activate the drug, it would be toxic for the cancer cell or viral genome.”

Because activated immune cells increase their expression of the dCK enzyme, [18F]CFA could also be used to monitor the effectiveness of immunotherapeutic interventions, Dr. Radu says. The researchers hope to begin clinical trials with the [18F]CFA soon.

The researchers, from the UCLA schools of medicine, dentistry and engineering and applied science, developed a revolutionary technology platform called phenotypic personalized medicine (PPM), which can accurately identify a person’s optimal drug and dose combinations throughout an entire course of treatment without the need for complex, time-consuming analysis of a patient’s genetic information or of the disease’s cellular makeup.

Dean Ho, PhD, professor in the Division of Oral Biology and Medicine in the UCLA School of Dentistry, says one of the platform’s significant capabilities is producing graphs that are personalized for individual patients and represent precisely how they respond to treatment.

Remarkably, Dr. Ho says, every person produces a graph in the shape of a curve called a parabola — picture a “U” either right-side up or upside down — and that parabola dictates how doctors should proceed with treatment. Each person’s unique curve provides doctors with a visual guide to determine the exact doses of medicine they should prescribe as the treatment continues, which, Dr. Ho says, is the key to achieving truly personalized medicine.

“This study demonstrated the ability to use a patient’s phenotype to personalize their treatment in an actionable manner without the need for genome profiling,” Dr. Ho says. “We also have shown that PPM can be extended to optimize combination therapy for a wide spectrum of diseases.”

Revealing that every patient’s response to medical treatment produces a parabola-shaped graph is a landmark advance. Among other things, Dr. Ho says, the approach will allow doctors to prescribe the precise amount of medicine needed to shrink a tumor or ensure the body doesn’t reject an organ, for example, as opposed to using a higher “standard” dose that’s recommended based on an average of how all patients have responded previously.


“Individualizing Liver Transplant Immunosuppression Using a Phenotypic Personalized Medicine Platform,” Science Translational Medicine, April 6, 2016
Two UCLA neuroscientists have found that the brain shows more empathetic impulses — and temporarily disables other regions that oppose those impulses — than most people might realize. The findings, published in two separate studies, also point to a possible avenue to help people to behave in less selfish and more altruistic ways, says Marco Iacoboni, MD, PhD, professor in residence of psychiatry and biobehavioral sciences in the Jane and Terry Semel Institute for Neuroscience and Human Behavior at UCLA. The discoveries could be especially critical in treating people who have experienced desensitizing situations like prison or war.

For the first study, 20 people were shown a video of a hand being poked with a pin and then asked to imitate photographs of faces displaying a range of emotions. Meanwhile, the researchers scanned participants’ brains with functional magnetic resonance imaging, paying close attention to activity in several areas of the brain. One brain cluster they analyzed — the amygdala, somatosensory cortex and anterior insula — is associated with experiencing pain and emotion and with imitating others. Two other areas are in the prefrontal cortex, which is responsible for regulating behavior and controlling impulses.

In a separate activity, participants played a version of the “dictator game.” They were given $10 per round for 24 rounds to either keep for themselves or to share with a stranger. The recipients’ names were changed, but their actual ages and incomes were used. After each participant had completed the game, researchers compared their payouts with brain scans.

Participants with the most activity in the prefrontal cortex proved to be the stingiest, giving away an average of $1-to-$3 per round. But one-third of the participants who had the strongest responses in the areas of the brain associated with perceiving pain and emotion and imitating others were the most generous. On average, subjects in that group gave away about 75 percent of their bounty. Researchers referred to this tendency as “prosocial resonance,” or mirroring impulse, which they believe to be a driving force behind altruism.

“It’s almost like these areas of the brain behave according to a neural Golden Rule,” says Leonardo Christov-Moore, a postdoctoral fellow in the Semel Institute. “The more we tend to vicariously experience the states of others, the more we appear to be inclined to treat them as we would ourselves.”

In the second study, the researchers explored whether or not the same portions of the prefrontal cortex might be blocking the altruistic mirroring impulse. Fifty-eight participants were subjected to 40 seconds of a noninvasive procedure called theta-burst transcranial magnetic stimulation, which temporarily dampens activity in specific regions of the brain. In the 20 participants assigned to the control group, a portion of the brain that had to do with sight was weakened on the theory it would have no effect on generosity. But in the others, the researchers dampened either the dorsolateral prefrontal cortex or the dorsomedial prefrontal cortex, which combine to block all impulses.

Surprisingly, study participants with disrupted activity in the brain’s impulse-control center were 50 percent more generous than members of the control group. The researchers also found that whom people chose to give their money to changed depending on which part of the prefrontal cortex was dampened.


“Increasing Generosity by Disrupting Prefrontal Cortex,” Social Neuroscience, March 21, 2016
**Glial Scarring Enhances Nerve-cell Regrowth**

Neuroscientists have long believed that scar tissue formed by glial cells — the cells that surround neurons in the central nervous system — impedes damaged nerve cells from regrowing following an injury to the brain or spinal cord. So it’s no wonder that researchers have assumed that if they could find a way to remove or counteract that scar tissue, injured neurons might spontaneously repair themselves. But a new study by UCLA scientists shows that this assumption might have been impeding research on repairing spinal-cord injuries.

In a study using mice, Michael V. Sofroniew, MD, PhD, professor of neurobiology, and colleagues found that the glial scar tissue that forms after spinal-cord damage actually might favor nerve-cell regeneration. The research could ultimately lead to new approaches to repair catastrophic spinal-cord injury.

“For 20 years, we have been applying technologies to prevent glial scarring in hopes of promoting nerve-fiber regeneration, repair and recovery but never observed a positive effect,” Dr. Sofroniew says. “Now we find that disrupting glial scars actually harms nerve-fiber regeneration that can be stimulated by specific growth factors.”

The spinal cord is a thick cable of nerve projections called axons that course from the brain to activate muscles and from sensory organs back to the brain to provide feedback. Unlike peripheral nerves, which re-sprout axons when they’re damaged, mature spinal neurons don’t regrow axons in the part of the body where the injury has occurred, which results in paralysis below the injury.

So, wondering whether or not preventing or removing scars would encourage the nerves to regenerate, researchers evaluated two types of mice — one in which specific genes could be switched on to prevent the formation of scars and another engineered with genes that could dissolve scars after they formed. Using fluorescent imaging, the researchers then traced individual axons to see if they would approach or cross an injury site if the scarring was blocked or obliterated. In both cases, the axons showed no sign of regrowing through the lesion.

The research also revealed glial scars’ beneficial role in an experiment in which the scientists softly flog injured neurons into regenerating — a strategy Dr. Sofroniew likens to a “carrot-and-a-stick” approach. In either normal or genetically modified mice, neurotrophic growth factors (the carrot) are infused at the spinal-injury site at the same time that additional lesions known to stimulate nerve regrowth (the stick) are applied.

In the normal mice, the approach stimulated robust regrowth of the stalled spinal axons past glial scars and through the injury site. And in the mice that were engineered to eliminate scars, there was a pronounced reduction in this stimulated nerve regeneration — and in some cases, none at all.

The team also performed a biochemical screen to identify molecules expressed in scar tissue and discovered a relatively high level of factors that support axon growth. This shows that scars are capable of producing chemical signals, albeit faint ones, that permit axons to grow over them. Thus, future strategies for repairing the central nervous system might involve concocting even more potent mixtures of growth factors, like Dr. Sofroniew’s “carrot,” that could be continuously infused or implanted near a patient’s injury.

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**“Astrocyte Scar Formation Aids Central Nervous System Axon Regeneration,” Nature, April 14, 2016**

Previously injured nerve fibers (red) regrow through a dense astrocyte scar (green) and around the edges of a biomaterial depot (blue). The growth occurred after the release of growth factors by the biomaterial depot.

Image: Courtesy of Dr. Michael Sofroniew
Members of the community cast more than 7,000 votes to select four projects to advance collaborations between UCLA faculty and community partners that aim to improve the health and quality of life for residents of Los Angeles and beyond. Each project will receive a $20,000 award to support its work. The second Helping U Help the Community competition was sponsored by UCLA Health and the David Geffen School of Medicine at UCLA. The award-winning projects are:

**Clinic for the Developmentally Disabled in Underserved L.A.**
The goal of the project is to work with Special Needs Network, Inc. to establish a comprehensive clinic to provide community education as well as medical diagnosis and management for children with developmental disabilities in underserved communities.

**Student Run Homeless Clinics**
Participants in the weekly clinics work in local shelters under the supervision of volunteer physicians to provide such services as primary care, psychiatry, medications, immunizations, health education, podiatry, and physical therapy.

**Bruin Shelter**
In partnership with the Student Run Homeless Clinics of the David Geffen School of Medicine at UCLA, the project will provide housing, comprehensive social services, and medical care to homeless youth in Los Angeles County.

**Project AutTrain**
Project AutTrain aims to build a cadre of volunteers from the UCLA medical faculty, other UCLA entities, regional center experts, therapists, parents, and autistic adults to train medical professionals and students on issues of physical and mental health, sexuality, healthcare delivery, and communication related to adults with autism.

To learn about the winners and their projects, go to: uclahealth.ideascale.com
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Raising the Bar

Johnese Spisso, MPA, has devoted her career to building world-class healthcare organizations. Now she brings her talent and abundant energy to help guide UCLA Health toward greater achievement.

After more than two decades working to build University of Washington Medicine into the premier health system in the Pacific Northwest, it was a tough choice for Johnese Spisso, MPA, to uproot and move 1,000 miles south to take the reins as president of UCLA Health and CEO of UCLA Hospital System. “I am definitely not someone who job-hops,” she says. “I get so connected to the mission of the organization, it becomes a passion. Truly, the only place I would have left for was UCLA.”

Spisso arrived from Seattle, Washington, in February 2016 to oversee the operations of UCLA’s hospitals and clinics. She brings with her a national reputation and more than 30 years of leadership experience in academic healthcare — 22 years at UW Medicine, in progressive leadership positions, with the past eight years serving in the top role as chief health system officer and vice president for medical affairs. Prior to UW Medicine, she worked for 12 years at UC Davis Medical Center, where she directed critical care; trauma, burn and emergency services; and the Life Flight Air-Medical Program.

Before moving into leadership roles, Spisso worked as a registered nurse in critical care. “My background in nursing and patient care has served me well throughout my career in administration and leadership,” she says. “It has given me the perspective to understand the full continuum of care and the needs of the patient, as well as the needs of care providers so they can best serve patients.”

She talked with U Magazine editor David Greenwald about the opportunities ahead for UCLA Health and her vision for the future.

What makes this the right time for you to leave an institution you have spent nearly a quarter-century working to build and come to UCLA?

Johnese Spisso: My excitement about coming to UCLA is not just because of where UCLA Health is now, but because of where it is going in the future. The level of support that UCLA has in the Los Angeles community is remarkable, and that creates real opportunities for us to be leaders — locally, nationally and internationally — in transforming care for our communities. Today, consumers expect value-driven healthcare. The innovation and leadership that UCLA has shown in using evidence-based medicine to cure diseases and identify new ways to treat injury and illness put us in a leadership role. It also is a time when we are seeing changes...
in the healthcare marketplace, changes that are happening faster than they ever have before. We are seeing provider networks narrow and many different types of affiliations and collaborations taking place. With the expansion of healthcare coverage under the Affordable Care Act, we are seeing many more patients coming to us for the first time for healthcare. It is really a remarkable and exciting time to be in healthcare.

How does that affect UCLA’s approach to healthcare delivery?

Johnese Spisso: Our goal is to deliver on the triple aim of better access to care, better population health and more affordable healthcare. To address this goal, UCLA is taking steps like expanding access into communities, opening clinics closer to where patients live so that we can affect the health outcomes of a group of individuals, what is known as population health, in a more meaningful and affordable way. We now have more than 160 outpatient locations throughout the Southern California region, which enable us to provide prompt access to care and really to begin to influence the health of these communities. In addition, UCLA Health partners with many other community organizations to expand access for underserved patients. For example, we provide physician staffing for the Venice Family Clinic that provides care to more than 10,000 individuals.

What larger opportunities does that present?

Johnese Spisso: They are multifold. Our mission as a leading academic health system is to provide “Our goal is to deliver on the triple aim of better access to care, better population health and more affordable healthcare.”
“Sometimes, as healthcare providers, we think we know what is best, but, really, it is the people who are using our services 24/7 who recognize how we can improve.”

high-quality value-added healthcare, complete the bench-to-bedside translation of our research efforts and to train the next generations of healthcare professionals. UCLA Health is well-positioned to lead the way in advances and the transformation of the healthcare-delivery system to make healthcare accessible for all, in convenient locations. Our ability to deliver on our vision of healing humankind, one patient at a time, by improving health, alleviating suffering and delivering acts of kindness is what makes patients and families choose us for care. Going forward, we continue our efforts to make healthcare more affordable and eliminate inefficiency and waste, while improving the experiences and outcomes for our patients and families.

UCLA’s presence in communities throughout the region is increasing. What is behind this expansion?

Johnese Spisso: This really is part of a nationwide movement. As we progress toward population health and away from what used to be a very siloed model of healthcare in which people came in only when they were sick, expanding in the community allows us to deliver preventive healthcare close to people’s homes in an affordable and accessible way. At the same time, as we enter areas where there are opportunities to serve the community better, we continue to work with a variety of community agencies to broaden the scope of services we can provide. At the Venice Family Clinic, for example, we provide medical staff to help care for more than 10,000 residents who are among the most vulnerable populations in Los Angeles. Our work in settings like the Venice Family Clinic also enables us not only to provide care, but also to study innovations to remove barriers in access to care for underserved populations. As we work with organizations in the community to promote wellness to help populations stay healthy, we also are looking at how we can become more involved in such areas as food and nutrition services, so we have a whole portfolio of activities that we provide and partners with whom we work to help make these improvements a reality.

Over the past several years, UCLA has become a national leader in evolving a culture of patient-centered care. Do you see ways to elevate that culture to another level?

Johnese Spisso: Much of our effort has been focused on leadership and staff training, about what we need to do to make the patient experience better. As our culture evolves further, we are looking more at patient empowerment — listening and learning from the voice of the patient. So now, we are creating advisory councils that include patients and members of their families, as well as physicians and leaders. Sometimes, as healthcare providers, we think we
know what is best, but, really, it is the people who are using our services 24/7 who recognize how we can improve. Groups like advisory councils can provide us with the best information about what goes right and also about what goes wrong and where we can make improvements. They can identify the hurdles that patients feel are barriers to efficient care. We learn a great deal from when things don’t go exactly as we would have liked, and we don’t meet a patient’s expectations.

The strategies we are using for patient empowerment are even more important as we move more into population health, and we ask patients and their families to be accountable and to be partners with us for their own healthcare. As the public becomes more educated about healthcare and such things as quality and safety, consumers are asking different questions. As we enter into the realm of price transparency, they will be focusing more on cost and value. That is driving us to look closely at our systems and at how we can take out waste and inefficiencies, while providing care in an environment that is error free. We are moving toward an approach, I think, that will be very similar to what the airline industry did years ago, building an infrastructure that supports quality and safety, one that ensures we are training our staff, at every level, to report any near-misses, any errors in the system that they feel lead to undesired events for patients. We want to have a culture in which staff members who identify an issue are not blamed or punished for doing so. We know from studying events and errors in healthcare that the process of errors begins at a very basic level, and it snowballs if no one says “stop.” We also want a culture in which patients and their families are empowered to speak up if they observe something that causes them concern.

You have been at UCLA since February. In your time thus far, has there been one story you have heard that has stood out for you?

Johnese Spisso: There have been many. The other day, I read a note from a patient who came to us for an outpatient surgical procedure, and she commented on everything from the courtesy of the valet who parked her car all the way through the caring of the nurse who called her at home to follow up after her visit. It is very gratifying to hear stories like that. We also hear incredibly moving stories from families of patients who have come to us at the end-stage of their illness, and they tell us how they felt everything possible was done and about the compassion that came through from everyone involved in their loved-one’s care. And not just in regard to the care of the patient, but also in regard to the care they received as family members. A wonderful example, I think, is a bereavement ceremony for pediatric patients that was hosted by our staff at Mattel Children’s Hospital UCLA. Hearing those families talk about how wonderfully their child was cared for and also about how wonderfully they were cared for and the emotional support they received — it is so meaningful and touching. Let’s also keep in mind that these cases are very stressful and difficult for the staff, as well. They become very committed to the patients and their families. That they can deliver such compassion to the families in circumstances in which they also are grieving is a testament to the incredible devotion they have to our patients.

You have said that recognizing and learning from times when something didn’t go as well as we might have liked is of vital importance.

Johnese Spisso: That is very true. It must be an ongoing process of evaluation and reflection and revision. I always appreciate patients who take the time to write or speak to us and who allow us to see through their eyes how we deliver service. I round frequently, and I talk to patients and families. Sometimes everything appears to be going really well, but then we have an opportunity to view it through the lens of the patient, and we see that things we may think are small issues really are monumental for the patient and family. It is at times like that when we can do our best learning.

“The strategies we are using for patient empowerment are even more important as we move more into population health, and we ask patients and their families to be accountable and to be partners with us for their own healthcare.”
After losing his memory, a writer seeks to understand the elusive nature of our recollections and how they are created, retained and recalled.

never gave much thought to how my memory works until the day it stopped working. One morning, just before I turned 50, I was in my closet, choosing a shirt. Then — snap — I was lying in the emergency room, an IV tube in my arm and a neurologist asking me questions.

Four hours had passed.

My wife gently filled me in. That morning, I had become disoriented. When I didn’t recall our lunch plans with friends, she figured it was just run-of-the-mill absentmindedness. But when I didn’t seem to know that our oldest son was away at college, she grew concerned.

As she drove me to the hospital, I kept repeating the same series of questions, in the same order: We’re going to the hospital? Did you bring my wallet? What about my glasses?

She feared I’d suffered a stroke, but at the ER, a CT scan showed no brain hemorrhaging. Nor did I display any of the physical symptoms typical of stroke.

I do remember what the doctor told me as the fog lifted. “This is benign,” he said. The diagnosis: transient global amnesia. In other words, an inexplicable temporary memory loss. A brain MRI and an EEG confirmed there was no damage — or explanation.

Within days, I returned to my routine, but the doctor explained that I’d never recall those four hours. And I couldn’t help but feel disoriented and perplexed. How could I forget in a blink who came to dinner last night? Or that I had authored a book? If I define myself by the accumulation of my memories, what did it mean that they could all just disappear? What exactly is a memory, and where do our memories live?

As it turns out, a wide range of researchers at UCLA is working to answer such questions, seeking to understand, in the most fundamental and profound ways, how our memory works. “There are very few places around the world that have as many highly successful memory researchers as UCLA,” says Alcino Silva, PhD, director of the Integrative Center for Learning and Memory and Distinguished Professor in the Departments of Neurobiology, Psychiatry and Biobehavioral Sciences and Psychology.

Memories Are Made of This

By Tom Fields-Meyer • Illustrations by Noma Bar
And with our population aging, the topic has never been more relevant. “Next to cancer, Alzheimer’s disease is probably the most feared illness,” says Gary Small, MD (FEL ’83), director of the UCLA Longevity Center and professor of psychiatry and biobehavioral sciences. At age 65, you have a 10-percent risk of Alzheimer’s disease. By the time you turn 85, it’s closer to 50 percent. But concern about memory isn’t limited to the elderly, Dr. Small says. “In fact, some studies show that the average 45-year-old already is showing cognitive decline.”

SO I SET OUT TO LEARN ABOUT THE WORKINGS OF MY MEMORY. Mine was hardly a new exploration; scientists and philosophers have been pondering the mysteries of memory since at least 2,300 years ago, when Aristotle postulated that our minds are a tabula rasa upon which our thoughts and memories are inscribed. Of this blank slate, he wrote, in On the Soul: “What it thinks must be in it just as characters may be said to be on a writing-tablet on which as yet nothing stands written: this is exactly what happens with the mind.”

At UCLA, members of the faculty have, for decades, been working in that tradition to advance our understanding. In 1971, for example, Joaquin M. Fuster, MD, PhD, discovered and described the first “memory cells” ever found in the primate brain. Dr. Fuster’s work on memory at UCLA, where today he is professor emeritus of psychiatry and biobehavioral sciences, continued to evolve. In recent years, he and his colleagues have been utilizing the modern science of neuroimaging to clarify how the cerebral cortex stores and retains memory.

Among the first lessons that I learned in my own exploration is that memory encompasses a lot more than I had considered. Mayank Mehta, PhD, professor of physics, neurology and neurobiology and head of the W.M. Keck Center for Neurophysics at UCLA, offers a thought experiment to explain the workings of memory. Sitting behind his desk in his office on the UCLA campus, Dr. Mehta slowly sweeps his left arm horizontally from left to right, and challenges me to try to catch his hand.

It seems straightforward enough, but then Dr. Mehta enumerates the remarkably complex calculations and processes my brain must undertake to accomplish something as simple as predicting when a moving hand will arrive in a certain space in a certain period of time. “Even in trying to do this simple thing, your brain is using an enormous amount of memory and complicated math,” he says. “When we think about memory, most people think of something like ‘Where did I park my car?’ But you use a lot of memory without even realizing it.” Standing near the edge of a cliff, for example, one unconsciously adjusts leg muscles based on memory of how to avoid a dangerous fall. Even shifting one’s body in a chair requires remembering how various combinations of positions help to maintain balance.

To put his own work in context, Dr. Mehta explains that memory research has evolved in three significant phases over the past half-century. First, scientists pinpointed which brain regions were responsible for specific types of memory: The hippocampus is necessary for spatial memory or following a conversation; the basal ganglia is needed for learning how to ride a bicycle.

A new wave of research focused on two areas. Neurophysiology looked closely at the workings of neurons and changes in synapses, while other
The idea that our memories are made of connections among the mesh of neurons in the brain originated with the Spanish neuroscientist Santiago Ramón y Cajal near the end of the 19th century. Almost 80 years later, another Spaniard, working 6,000 miles away, at UCLA, would, for the first time, identify and describe “memory cells” within that network in the primate brain.

The pioneering work of Joaquín M. Fuster, MD, PhD, from the mid-1950s onward to understand cognitive function laid the foundation for much of the memory research now being done at UCLA and elsewhere, making him, in some respect, the patriarch of modern memory science — padre de la memoria. His nine books and numerous articles and chapters explore the mysteries of the cerebral cortex, and his autobiography occupies nearly 40 pages in a collection that illuminates the history of neuroscience. An endowed chair at UCLA carries his name: the Joaquín Fuster Chair in Cognitive Neuroscience.

Dr. Fuster, who today is professor emeritus of psychiatry and biobehavioral sciences and who continues his research at the Jane and Terry Semel Institute for Neuroscience and Human Behavior at UCLA, was born in Barcelona in 1930, where he grew up amid the turmoil of the Spanish Civil War (his father was a medic on the Republican side) and World War II. After training as a psychiatrist and earning his MD from the University of Barcelona, he came to UCLA in 1956 as a fellow (he joined the psychiatry and anatomy faculties in 1960) and received his PhD from Spain’s University of Granada in 1967. An intellectual disciple of his famous countryman — a first-edition from 1904 of Cajal’s Textura del Sistema Nervioso del Hombre y de Los Vertebrados is proudly displayed among the volumes on the bookshelf of Dr. Fuster’s impeccably tidy office — he always has been fascinated by the hidden workings of the human brain and mind.

In his research into the mechanisms of memory, Dr. Fuster brought space technology into his laboratory. After training monkeys to perform memory tasks — selecting a specific color or shape after having heard earlier an associated tone, for example — he and his students applied small probes that had been modified from ones designed to cool electronic components of satellites in space. The probes temporarily chilled selected areas of a monkey’s cortex, impairing short-term memory and the associated task. But when the area was rewarmed, memories were reawakened, and the monkey was again able to perform the task. As those memories came back online under normalized conditions and temperature, the researchers could record and measure the electrical firing of memory-retaining neurons, thus confirming the presence of “memory cells,” which are temporarily activated within the larger network. Dr. Fuster’s landmark research was published in Science in 1971.

Dr. Fuster describes these memory cells as a window onto the liberally distributed networks that make up our long-term memory, snippets among the whole that we require for retention of information in “working memory” to make future choices and decisions. His findings would later be confirmed in humans through the evolving science of brain imaging.

— David Greenwald

“Neuron Activity Related to Short-Term Memory,” Science, August 13, 1971
researchers focused on the activity of neurons in animal behaviors. But working separately, scientists in these various fields can achieve only a limited understanding of memory, Dr. Mehta says. “Each individual synapse is highly complex, and each individual neuron does something highly complex,” he says. “The big question is, how is all of this working together?”

Dr. Mehta places his own work in a new wave of memory research examining emergent phenomena, a process he compares to watching a flock of geese fly rather than observing a single bird. “Each individual bird has no idea what it’s doing,” he says, “but a collection of birds flying has an interesting pattern.”

While there are plenty of experimental data and many theories about memory, what is needed, Dr. Mehta says, is an integrated approach in which the experiments and mathematical theories are tied together. “We need a new breed of researchers who are not only conversant with complex mathematics, but also are unafraid of the complexity of biological data or of doing sophisticated experiments.”

This integrated approach has yielded significant new insights. For example, Dr. Mehta’s research showed how neurons in the hippocampus rapidly construct maps of space, on the fly, using synaptic plasticity, and how neural rhythms play a crucial role in generating these maps. “These insights linking synapses to neurons and behavior would not have been possible if they had been done only with good experiments or only with good mathematical work; the integration between the two was crucial.”

One fascinating way his lab has studied the workings of spatial memory is by recording the activity of many individual neurons simultaneously while rats navigate a maze in immersive virtual reality. Dr. Mehta explains that in remembering how to get places, we typically use a variety of sensory input: visual cues, scents, sounds, textures. In virtual reality, with only visual cues, the rats appeared to be able to keep track of distances, but they failed to create the kind of mental map they would in the real world.

The rat experiment had another surprising result. When the rat was operating in the virtual world, 60 percent of its neurons stopped firing, a phenomenon Dr. Mehta can’t fully explain. But he says that with the large number of people experiencing virtual reality either for entertainment, military training or other purposes, it’s worth investigating the impact of the experience on the brain.

On the other hand, he says the fact that so many neurons shut down so easily offers promise of finding ways to do the opposite: to enhance memory. “There’s potential for revolutionary technologies,” he says, “to activate the brain and do all kinds of things.”

WHILE THE IMAGE OF SMALL, FURRY CREATURES scurrying through a virtual-reality maze is both fascinating and cute, what I really want to know is more basic: What is a memory? It’s not a new question, says Kelsey C. Martin, MD, PhD, professor of biological chemistry, psychiatry and biobehavioral sciences and interim dean of the David Geffen School of Medicine at UCLA. “There’s been a long debate about whether or not there is something called an engram, a physical location of the memory,” she says.

Our memories, Dr. Martin says, exist in the brain’s circuitry, enmeshed within the vast network of connections among our brain cells and not collected in a single repository. Each of us has about 85-billion neurons, and each of those is connected through more than a thousand synapses to other neurons. This circuit of 100-trillion connections forms the foundation of our ability to perceive, feel, imagine — and remember.

Dr. Martin’s work focuses on how our experiences alter those connections through a phenomenon called synaptic plasticity. “Who we are is a combination of our genes — what we’ve inherited — and the experiences we have,” she says. “To me, it’s hard to think of a more profound definition of what our identity is.”
The idea that memory exists within the brain’s circuitry rather than being focused in any one place is more than a century old. Long before scientists understood molecular biology, the Spanish neuroscientist Santiago Ramón y Cajal, who won the Nobel Prize in Physiology or Medicine in 1906, hypothesized that memories are stored as changes in the number of connections that form between brain cells.

A cell biologist, Dr. Martin explores precisely how those changes occur. “I want to understand which genes get turned on and off to be able to change connections in a permanent way,” she says.

Dr. Martin’s interest in memory stems from both her drive to bring relief for such conditions as Alzheimer’s disease and her passion for cell biology. “I want to understand when a person has had an experience that changes the structure of his or her brain, what happens?” she says. “And I think about it on a molecular level.”

Her interest in the mind goes back to Harvard College, where she majored in English literature because she was fascinated with closely observing how people behave. Later, after earning her MD and PhD from Yale University, she did postdoctoral work at Columbia University with Nobel laureate Eric Kandel, MD, as he studied sea slugs to gain insights into how neurons store memories.

Dr. Martin later advanced that work at UCLA, where, using brain cells from a sea slug and a fluorescent dye, she and her team actually imaged a long-term memory as it was being created in the process of proteins forming between the neurons.

“My work has moved to a subcellular level,” she says. “We’re not looking at a single neuron, but rather the synaptic connection that a neuron forms with another cell.”

She is an active participant in the Integrative Center for Learning and Memory, a forum for a variety of specialists — cell biologists, brain-imaging specialists, systems neuroscientists, computational experts and others — to regularly meet, discuss current research and learn from each other.

The implications of her work are profound, both for improving memory and for interfering with it in beneficial ways. Understanding exactly how
memories are stored in the brain’s circuitry could lead to therapeutic benefits for people suffering from various forms of dementia. And knowing how to alter synaptic changes might help scientists find ways to rid people of debilitating traumatic memories.

“That’s a good side of plasticity, that you could interfere in ways that help people,” Dr. Martin says.

HELPING PEOPLE RECOVER FROM SUCH DAMAGING MEMORIES is a central focus for another UCLA memory researcher, Michael Fanselow, PhD, Distinguished Professor of Behavioral Neuroscience. Dr. Fanselow studies how we form “fear memories” and, in particular, how memories rooted in fear can lead to crippling levels of anxiety and traumatic-memory disorders.

Dr. Fanselow has his own idea of the most widespread misconceptions about memory. Most people, he says, assume that memory is mostly about recalling the past. “That’s a nice byproduct,” he says, “but what we really need is to be able to anticipate the future, so that we’re prepared.”

That’s where the role of fear comes in. In evolutionary terms, if an animal misses an opportunity to eat or mate, the chance is likely to come again. “But if I fail to protect myself against a threat,” Dr. Fanselow says, “I most likely am dead.”

While fear helps us to protect ourselves, our fear memories are so strong and overpowering that when they’re misdirected, they pose challenges. When our brains remember things — often subconsciously — that we don’t need to remember, the result can be disabling levels of anxiety. The National Institutes of Health estimates that as many as one-in-three Americans suffers from an anxiety disorder at some time in his or her life, making anxiety the most common psychological or mental problem. Among the most debilitating forms of anxiety is post-traumatic stress.

Dr. Fanselow seeks ways to make emotional memories appropriate to the situation. “We look at how we can make fear memories specific only to threatening situations,” he says, “and seek to get a handle on the anxiety that’s not serving us.”

Significantly, we aren’t always conscious of what we remember. Just as putting on a pair of pants requires a complex combination of memorized skills that we’re hardly aware our bodies are recalling, we can experience fear memories without even realizing it or understanding their origin. Dr. Fanselow gives the example of a worker buried alive in a construction accident and deprived of oxygen. “Later,” he says, “he can’t remember any of the events that happened, but he still experiences post-traumatic stress, still has nightmares.”

Helping patients to overcome such challenging anxiety disorders requires far more than simply offering reassurance that the person need not be afraid. Instead, Dr. Fanselow says, “you really have to retrain the brain” through cognitive behavior therapy, a process of exposing the individual to the frightening experience while making sure no negative outcome occurs.

Dr. Fanselow is investigating other promising interventions. His lab has isolated a particular protein involved in creating memories that appears to be elevated in the case of traumatic stress. His team is working in animal studies to find ways to block the protein, diminishing the overly strong reactions that lead to disabling levels of anxiety.
“Traumatic memories, unless treated, will stay with you forever. They never go away,” Dr. Fanselow says. “But we’re doing exciting things to determine how we can reverse these physiological changes and get the brain back to a normal state.”

PART OF WHAT MAKES UCLA SUCH A FERTILE PLACE for memory research is that scientists working on such problems are not in isolation. Dr. Silva notes one significant paper on memory that drew on the work of five different UCLA labs. “Some of the work we have done in our lab could have been done anywhere else,” he says. “Collaboration isn’t just about being warm and nice; it’s about doing science that you couldn’t otherwise do.”

His own lab works on trying to understand memory on multiple levels — the genetic, protein, cellular, circuitry — with a particular emphasis on the genetic basis of learning and memory. “We look at how you can trace the story from molecules to behaviors,” he says.

Some of Dr. Silva’s early work focused on how genes regulate the changes in connections between brain cells. Just as changing hard discs is critical for a computer’s memory, he says, changing these connections between neurons is critical for learning and memory.

That work has led to promising breakthroughs for people with genetic disorders that affect memory and learning. Dr. Silva’s team studies neurofibromatosis, Noonan syndrome, tuberous sclerosis and other genetic conditions that have an impact on learning. Previously, scientists assumed that since these conditions stifled brain development so early in life, it was impossible to restore cognitive function later in life.

But in studies of mice, Dr. Silva’s team found ways to repair large learning and memory deficits in adults with the condition. That led to clinical trials in human adults that are beginning to show promise. “This gives us hope that these neurodevelopmental disorders may not be as hopeless as people have thought,” Dr. Silva says.

Another focus of Dr. Silva’s work has been studying memory allocation, the way the brain stores memories. It’s known that different parts of the brain handle different types of memory. The prefrontal cortex, for example, is crucial for working memory, the ability to remember and use relevant information while in the middle of a task, while explicit memory — conscious, intentional recollection — depends heavily on the hippocampus, and emotional memory is tied to the amygdala.

“What we’ve shown is that the way the brain allocates information to specific cells is not random, but highly regulated. This is important because by regulating what cells have which memory, we can link memories across time, so that one memory reminds us of another,” Dr. Silva says.

Since he’s immersed in memory research, I ask Dr. Silva about what people most misunderstand about memory. He explains that our memories are both far less reliable and far less comprehensive than most people assume. “Memory is more about forgetting than it is about remembering, actually,” he says.

By way of example, he explains how different your brain’s memories of a trip to Paris can be from the images in the hundreds of photos you might take. You might remember seeing the Eiffel Tower or enjoying a fine meal, but not the man in the black scarf you saw walking across the Champs-Élysées or the waiter who breezed by you during dinner at Tour d’Argent. “When our memories become too faithful,” he says, “they become a burden to us.”

It is a profound thought — and one that makes me a little less disturbed about that morning I’ll never remember.


To read about how to maintain memory as one ages, click on the link to this article at: magazine.uclahealth.org
First-year medical students Melanie Cargle (left) and Gabriel Mendoza (right) learn about the spiritual side of medicine as UCLA Chaplain Andrew Couch prays with a patient and her husband at Ronald Reagan UCLA Medical Center.
UCLA medical students see the spiritual side of care as they spend time with chaplains on their hospital rounds.
The patient’s eyes lift and brighten when Chaplain Andrew Couch walks into her room at Ronald Reagan UCLA Medical Center. Her mouth widens in a smile — it is small and tight, but a smile nonetheless. The woman has been in the hospital for nearly two months, waiting for a liver transplant.

“How are you feeling today?” Chaplain Couch asks.

“Today is a difficult day,” her husband quickly responds. He rarely has left his wife’s side since she was hospitalized. “We are strong and trying to keep positive,” he says.

“Why is it a tough day?” Chaplain Couch asks, looking to engage directly with the patient. It’s clear he has developed a strong rapport with the couple during his frequent visits, and today he senses more emotional distress than usual.

“It’s the waiting,” she says. “It just takes so long.” With that, she breaks down and sobs. After a few minutes, her tears subside. “Why the tears?” Chaplain Couch asks in a comforting tone. She says she wants to go home and feels trapped in her room. Although she has been given permission to go outside, she has chosen not to. “Why?” She says that she’s afraid that if she does go outside, “I would want to keep walking and not come back.”

Chaplain Couch talks to the woman and her husband about their faith, and later he asks if they would like to pray with him. They welcome his offer, and the three gather together in a circle. Afterward, the patient’s husband tells the chaplain: “When you come in and pray with us, it gives us a sense of reassurance and hopefulness in our hearts.”

SUCH MEETINGS WITH PATIENTS ARE DELICATE AND USUALLY PRIVATE, taking place beyond the eyes of medical staff. But on this day, two first-year students in the David Geffen School of Medicine at UCLA — Melanie Cargle and Gabriel Mendoza — join Chaplain Couch to receive a rare glimpse into the role that spirituality plays in patient-centered care. They are participants in UCLA’s Doctoring 1 course, which requires first-year medical students to spend time with a chaplain on his or her rounds.
This also is the pair’s first interaction with a patient, and the visit catches them off-guard. They are visibly moved — Cargle discreetly wipes away a tear when the patient starts to cry. “I can only imagine what she’s going through,” she says. “She has the option to stand up and walk outside and feel the breeze, but there are strings attached. It’s almost like a prison, and Chaplain Couch and God are her liberators.”

Before entering the room, Chaplain Couch spoke with the two students about what they might see and hear. Both students bowed their heads slightly, standing outside the intimate circle, as he prayed with the couple. Afterward, the students briefly talked with the couple. “For them, the spiritual care was as important — or perhaps more important — than the medical care,” Mendoza later reflected in the personal essay he wrote for Doctoring 1. “From their verbal and nonverbal display of gratitude, it was clear that Chaplain Andrew had been a crucial part of their care at the hospital.”

For more than 15 years, UCLA medical students have participated in chaplain rounding, spending a half-day shadowing a chaplain as he or she meets with and comforts patients. The experience, the students say, is eye-opening, if not life-changing. Participation in the rounds and writing a short reflection on their experience are a mandatory part of their doctoring course – a unique feature of UCLA’s curriculum that opens a window on how other forms of care contribute to healing.

“Chaplain rounds are an extraordinary opportunity for medical students in their first year to put human faces and human stories to the illnesses and diseases they are learning about,” says the Rev. Karen Schnell, director of UCLA’s Department of Spiritual Care. “As the chaplain explores the impact and meaning of the patient’s diagnosis on that person’s life, spirit and soul, the medical students cannot help but be profoundly affected as they observe.”

While Chaplain Couch meets privately with a patient who requests a one-on-one visit, the medical students take a breather in the corridor. Cargle is the daughter of a pastor, and she grew up going to church four-to-seven times a week. She says she is spiritual but no longer religious, and she initially viewed this assignment as “a burden or annoyance that I was required to check off of my weekly to-do list.” But her preconceived notions dissolved this day with her first patient encounter. “I never thought a doctor would, like, write a prescription for a chaplain,” Cargle says. “But Rev. Couch told us to use him like a tool in our tool bag — like medicine to take care of that emotional/spiritual side that so many people rely on through difficulty and adversity. It’s, like, give me 55 ccs of Rev. Couch stat!”

And she notes that the pace of such meetings was much slower than the usual pell-mell rush of a medical student. “It was nice to be on that slower wavelength and tune in to where people are emotionally and spiritually,” she says.

ANOTHER PATIENT DURING THE ROUNDS also is having a difficult day and calls out to Chaplain Couch as he passes by her room. “I’m on a pill boycott today,” the patient says. As the chaplain and medical students enter her room, she sends her husband to bring her a piece of pepperoni pizza from the cafeteria. Surely that’s not on her approved diet, an astonished Mendoza whispers in a quiet aside. The patient recounts other antics of noncompliance, but she then becomes curious about her two young visitors, asking them questions about medical school and their personal backgrounds. But her remarks aren’t focused, and Chaplain Couch tries to center her.

“Why are you having such a rough day? Tell me what’s going on,” he asks. Grateful for the company, she says that she’s not receiving as many visitors as she’d like and feels lonely. She also says she feels anxious and has enormous guilt about decisions and actions that she believes may have led to her current medical status. And she worries about the burden she feels may be to her family. They talk about a biblical reference that the patient brings up, and

“As the chaplain explores the impact and meaning of the patient’s diagnosis on that person’s life, spirit and soul, the medical students cannot help but be profoundly affected as they observe.”
Chaplain Couch then begins to counsel her on how one must love oneself before others can love them. In the end, Chaplain Couch prays with her, and she asks him — and God — to help carry the burden with her. By the end of the visit, she is visibly more calm and focused — and medically compliant.

“It’s interesting that a patient may be more likely to take medications or follow doctor’s instructions if they utilize spiritual care,” Mendoza says later.

“IT’S INTERESTING THAT A PATIENT MAY BE MORE LIKELY TO TAKE MEDICATIONS OR FOLLOW DOCTOR’S INSTRUCTIONS IF THEY UTILIZE SPIRITUAL CARE,” MENDOZA SAYS LATER.

Outside the patient’s room, Mendoza asks Chaplain Couch if physicians request his services for patients. Yes, the chaplain responds, however, it is more often the nursing staff who call for a spiritual consult.

In his essay later, Mendoza wrote: “The physicians that I have observed rarely have mentioned spirituality when talking to their patients and have been more focused on the biological causes of the disease. Nonetheless, after seeing how much the patient valued Chaplain Andrew’s presence … I believe many patients would benefit and that their outcomes would improve.”

In fact, a study published last year in *Academic Psychiatry* analyzed 166 essays by students and found that medical students noted an increased willingness to refer patients to a chaplain following their experience on rounds. “Chaplains provide a lot more than performing last rites, baptisms and other religious ceremonies,” one student wrote. “They really offer valuable counseling services to all patients, regardless of faith (or absence of faith).”

Another student wrote directly: “I definitely plan to utilize chaplains and their services when providing my patients with whole-person care.”

Other themes found in the qualitative study were clustered into four categories, says Margaret L. Stuber, MD (RES ’82, FEL ’84), assistant dean of student affairs for well-being and career advising and co-author of the study. The most prominent theme focused on the importance of spiritual care; 63 percent of the students wrote that spiritual care needed to be addressed to fully treat the patient. Forty-three percent observed that meeting spiritual needs was therapeutic for the patient, and a third of the students noted that “all doctors should make spiritual care available to all their patients.” The other prominent themes included the significance of the chaplain’s role in the clinical setting, personal introspection and doctors and compassion.

Addressing spirituality in medical school can be challenging, as students may have preconceived notions or not understand how it fits into the context of patient-centered care, says the Rev. Schnell, who also is a co-author of the study.
But having students shadow the chaplain during rounds appears to have a profound effect on the students going forward. “Hearing the chaplain-patient conversation often elicits compassion for the patient in the medical student,” she says. “The overall experience reinforces the first-year medical students’ internal determination to give compassionate care in their calling as physicians.”

Exposure to spiritual aspects of care is not limited to Doctoring 1’s required chaplain rounds. Other courses, like the semester-long selective “Living and Dying: Medical, Psychosocial and Spiritual Approaches to End-of-Life Care,” address these issues.

During the chaplain rounds, students also learn about interview technique. The Joint Commission, which accredits healthcare organizations in the United States, recommends that a spiritual assessment be part of the admission process for patients in hospital settings.

“The impact of a spiritual assessment is huge because a lot of students don’t see spirituality as a medical component when interviewing patients when they first arrive,” says Sheila Naghshineh, MD (RES ’10), chair of the Doctoring 1 program. “They think medication is important, family history is important, genetics is important. But getting a spiritual history also is important in terms of how it affects a patient’s health. Do they find it motivating to pray? Does it affect chronic pain? Do they have the support of their community? Or is it a deterrent in taking certain medications such as antidepressants?”

Adds Dr. Naghshineh: “The unique part of the chaplain rounding is that students are put in this space when people are thinking, feeling, crying, reaching out to whomever they believe in and seeing firsthand how the chaplains are, in a sense, meeting the patient where they are and helping them through the healing process.”

**THE NEXT PATIENT ON CHAPLAIN COUCH’S ROUNDS** is a man who has received his liver transplant and is hoping to be released soon from the hospital. However, there’s a rare complication. “I know whatever happens, I am at peace,” he tells the chaplain, whom he is meeting for the first time. They then pray together, and the patient asks Chaplain Couch to come back the next day.

“I realized that the healing these patients needed in those intimate moments could never come from a doctor,” Cargle later wrote in her personal essay about the day. “The chaplain is perhaps the only person that the patient can truly be honest with because they are the right balance of ‘keep fighting’ and ‘what will be will be.’ They straddle the line between family friend and perfect stranger. If we are to treat patients holistically, then chaplains must be like balms of Gilead and indispensable resources to the field of medicine.”

Marina Dundjerski is a regular contributor to U Magazine.

“Chaplain Rounds: A Chance for Medical Students to Reflect on Spirituality in Patient-centered Care,” Academic Psychiatry, June 2015
The path that Mark Morocco, MD (RES ’02), took to emergency medicine began with a near-death experience. It was in January of 1988. He was a working actor, a few years out of Yale, recently married and had just been cast in a play. The night before rehearsals were to start, he and a friend went to dinner in suburban Philadelphia. Driving home on a snowy road, they got into an accident, and he was badly injured.

He suffered two lacerated arteries in his abdomen and nearly bled to death. “When I woke up in an ICU a day later, everything seemed glaring and white,” he recalls. The surgeon who saved his life was standing over his bed. “He had a big shock of white hair and introduced himself as Dr. White. I thought to myself: ‘Clearly, I have died and gone to heaven.’”

It took a year to recover, after which he returned to New York and the theater. He taught at New York’s famed High School for the Performing Arts, but Hollywood soon beckoned, and he and his wife Lisa Waltz, whom he met when they played opposite each other on the stage, moved to Los Angeles. Drama, not medicine, still was at the forefront of his mind. He wrote spec scripts and played guest roles on several television shows. But as he continued to pursue his entertainment career, his thoughts drifted back to his close call with death — to the doctor with the shock of white hair and the inherent life-and-death drama of the hospital environment.

“I realized emergency medicine was incredibly compelling and socially meaningful work,” Dr. Morocco says. “The people who did it seemed engaged and passionate, the way artists are engaged and passionate.”

And so, the dramatic arc of his life story took a sudden turn; he would become an emergency-room physician. He went back to school to complete requirements for medical school, earned his MD from USC and completed his residency training at UCLA.

Another dramatic turn occurred while Dr. Morocco was in medical school. His literary agent called and put him in touch with another TV writer-turned-physician, Neil Baer, MD, who was working on a hospital-themed television drama, ER. The two hit it off, and when, during Dr. Morocco’s last year of residency, there was an opening on the show’s medical-consulting staff, he was offered the job. “You’re sort of a perfect match,” Dr. Morocco recalls Dr. Baer telling him. “You’ve worked with actors. You’ve worked with writers. You’re interested in film.”

It would be his job to make sure that the actors, prop makers, writers and producers on the hit series got the science exactly right. How could he turn down something like that? Dr. Morocco went to his UCLA residency directors and talked with them about this once-in-a-lifetime opportunity to help shape the accurate portrayal of emergency-room
medicine for a mass audience. “I don’t want to drop out of my residency,” he told his supervisors. “Can we figure out a way that I can do this?”

Indeed, there was something they could do — extend his residency. “I was pretty much working 24/7 for a good year-and-a-half,” Dr. Morocco says. He worked full time on the TV show from Monday through Friday, and he did shifts in the hospital on weekends and during hiatus. Residency is difficult enough; this combo was grueling. But the challenge of the television work coupled with the excitement of his hospital training energized him. He spent five seasons on ER, consulting, supervising and eventually writing.

Some 15 years later, Dr. Morocco trains new generations of ER physicians but still sometimes finds himself facing a camera. He’s often called upon to speak about medical issues and breaking medical-news stories. When a MetroLink commuter train and a freight train collided in the San Fernando Valley in 2008, he spoke with the media about UCLA’s role in providing emergency treatment to injured passengers. He has been a medical consultant for Fox News and the Associated Press, and for five years he wrote a series of columns for the Los Angeles Times.

And there still are times when he collides with the life on stage that he left behind. Several years ago, he was in Philadelphia, Pennsylvania, to give the commencement address to the graduating class at Drexel University College of Medicine. As he walked along Philadelphia’s Avenue of the Stars past the Wilma Theater on his way to the ceremony, he glanced through the glass doors into the atrium. There, among the collection of images from past shows on the lobby walls, was a huge full-face close-up of him from a 1986 production of Three Guys Naked From the Waist Down. “It was truly a bizarre juxtaposition — an out-of-body moment seeing my face up there from a different life and different dreams,” he says, with a smile.

It’s another story to go into the mix, a lifetime of experiences that Dr. Morocco says have given him a unique perspective and skills that he can apply both as a clinician and an educator. “I strive to teach that the performance-art of medicine — what a doctor says and how he or she says it — is nearly as important as the researched and evidence-based content,” he says. It is an “odd niche” that he fills among the medical school faculty, “but it is one that is really fun and really rewarding.”

Robin Keats is the author of three nonfiction books, has written for numerous magazines and creates nonfiction TV programming.

Dr. Ulrich Batzdorf (RES ‘65), professor emeritus of neurosurgery, and Dr. Elizabeth Neufeld, professor emeritus of biological chemistry and assistant dean for academic affairs in the David Geffen School of Medicine at UCLA, received the 2016 Carole E. Goldberg Emeriti Service Award.

Dr. Ronald W. Busuttil (RES ‘77), Distinguished Professor of Surgery, executive chair of the Department of Surgery and William P. Longmire, Jr. Chair in Surgery, will receive the Society of University Surgeons 2016 Lifetime Achievement Award at the organization’s Academic Surgical Congress in February 2017.

Dr. James D. Cherry, Distinguished Research Professor of Pediatrics, has been awarded the 2016 Bill Marshall Award, the highest honor awarded by the European Society for Paediatric Infectious Diseases.

Dr. Jack L. Feldman, Distinguished Professor of Neurobiology, was chosen to deliver the biennial Hodgkin-Huxley-Katz Prize Lecture for 2017 in recognition of his outstanding achievements in the physiological sciences.

Dr. Gregory W. Hendey (RES ‘93) is inaugural chair of UCLA’s Department of Emergency Medicine. He came to UCLA from UC San Francisco School of Medicine, where he was professor of clinical emergency medicine and chief of emergency medicine at UCSF Fresno.

Dr. Leonid Kruglyak, professor of human genetics and biological chemistry, has been awarded the 2016 Edward Novitski Prize by the Genetics Society of America for his body of work in genetics.

Dr. Mark S. Litwin, chair of the UCLA Department of Urology, has been awarded the 2016 Barringer Medal from the American Association of Genitourinary Surgeons in recognition of outstanding work in the field of genitourinary cancer surgery.

Dr. Carol M. Mangione, Barbara A. Levey, MD, and Gerald S. Levey, MD, Endowed Chair, has been appointed to the U.S. Preventive Services Task Force, an independent, volunteer panel of national experts in prevention and evidence-based medicine.

Dr. Kelsey C. Martin, interim dean of the David Geffen School of Medicine at UCLA, has been elected to the American Academy of Arts & Sciences, one of the country’s oldest learned societies and independent policy-research centers.

Dr. Emeran A. Mayer, professor of medicine, physiology and psychiatry and biobehavioral sciences, has published The Mind-Gut Connection (Harper Wave, July 2016). Dr. Nina L. Shapiro, director of pediatric otolaryngology, is the co-editor of 50 Studies of Medicine for a mass audience. “I don’t want to drop out of my residency,” he told his supervisors. “Can we figure out a way that I can do this?”

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Top: Dr. Mark Morocco (right) in the Syracuse Stage production of The Foreigner, 1984. Bottom: In Sweeney Todd at Pittsburgh’s Hartwood Acres Theater on the Green, the show during which Dr. Morocco met his wife, actress Lisa Waltz (right), 1983.

Photos: Courtesy of Dr. Mark Morocco

Every Pediatrician Should Know (Oxford University Press, May 2016).

Dr. Steven J. Shoptaw (MD ’90), executive director of the Center for Behavioral and Addiction Medicine and professor of family medicine and psychiatry and biobehavioral sciences, gave an invited address at a meeting of the United Nations Office on Drugs and Crime in Vienna, Austria.

Dr. Stephen G. Young, Distinguished Professor of Medicine and Human Genetics, has been elected to the National Academy of Sciences, one of the highest honors that a scientist can receive.
Ka-Kit Hui, MD ’75 (RES ’78, FEL ’79), founder of the UCLA Center for East-West Medicine, Wallis Annenberg Chair in Integrative East-West Medicine and chair of the UCLA Collaborative Centers for Integrative Medicine, is an educator and researcher with a broad-based knowledge of comprehensive medical care that stems from his specializations in internal medicine, clinical pharmacology, geriatrics and integrative medicine. His basic and clinical investigations have provided him with unique insights into both Western and traditional Chinese medicine.

My entire journey has been a miracle. My birthplace is Hong Kong, but UCLA and Los Angeles have been my home for almost half a century. I arrived at UCLA in 1969 to study chemistry, with the aspiration of introducing to the Western world a new drug from the Chinese herbal pharmacopoeia — like what the 2015 Nobel Prize Winner Tu Youyou did in introducing the antimalarial drug artemisinin.

Instead, my dream during medical school turned to creating a new medical model, blending the best of modern Western medicine and traditional Chinese medicine to make healthcare more effective, safe, affordable and accessible to all. My vision of establishing this integrative-health model of comprehensive care, with emphasis on health promotion, disease prevention, treatment and rehabilitation through an integrative practice of East-West medicine, has been realized at UCLA. My form of integrative medicine is not an international buffet from which a provider randomly picks from among a disjointed assortment of therapies such as acupuncture or massage to add to a drug therapy. Instead, our practice at the UCLA Center for East-West Medicine (CEWM) is like a well-planned dinner menu, with the best and most appropriate therapies from the West and the East selected and targeted to the specific needs of each patient. This model has been extremely successful, and
we receive referrals from more than 500 UCLA physicians from different specialties to help care for patients who have different refractory medical problems. At CEWM, we also teach hundreds of students annually through our many educational programs, including a summer course for trainees from around the world, medical-student courses, resident rotation and two-year East-West primary-care and specialty fellowships. On the basis of this incredible scientific and clinical success, we now are moving into primary and population care and expanding our collaboration and teaching into the larger local medical and patient communities.

This goal has been achieved over my 47 years of academic life at UCLA with much effort, strategic thinking and contributions from so many people. There is not enough space to list the numerous family members, patients, colleagues, friends, donors and foundations that helped me to achieve my goals, but a short list must include Dean Emeritus Sherman Mellinkoff, MD, who has been my mentor for the last 40 years, and Alan Fogelman, MD 66 (RES ’71, FEL ’73), chair of the Department of Medicine, who enabled me to launch the center in 1993. Both have provided tremendous encouragement and support. Without the early support of Janet Stein of the Balm Foundation from New York, the endowed chair from Wallis Annenberg and Charlie Weingarten at the Annenberg Foundation, as well as the continuing support of Gail and Gerald Oppenheimer and Andrew and Peggy Cherng, and too many others to list, my vision would not be a reality. The Beatles were correct — we all need a little help from our friends.

And then there is my beloved late wife Shirley Hui. Her support allowed me to devote my full energy to realizing this dream. I believe that the stress of these early efforts contributed to the breast cancer that took her from me, but integrative medicine helped to keep her going for more than 11 years to enjoy our five beautiful grandchildren.

Crisis creates opportunity. In today’s healthcare environment, we are provided with a golden opportunity to transform the current system into one that is patient- and public-oriented and will provide us and future generations with healthcare that is safe, effective, accessible and affordable for all. It is my next dream to globalize this person- and healing-centered, self-empowering and prevention-focused model by disseminating it through innovative educational approaches to benefit people throughout the world.
Marie Crandall, MD ’96, MPH, completed a general-surgery residency at Rush University/Cook County Hospital in Chicago, Illinois, and a critical-care fellowship/MPH in Seattle, Washington, solidifying her skills in evidence-based patient care and research. After her fellowship, she joined the faculty at Northwestern Memorial Hospital in Chicago as an academic trauma surgeon. She spent the first 12 years of her attending career researching aspects of gun violence, intimate-partner violence, outcome disparities and tools of epidemiology and geographic information systems (GIS). Currently, Dr. Crandall is professor of surgery and medical director of surgical research for the University of Florida College of Medicine-Jacksonville. She is a trauma surgeon whose clinical practice includes emergency general surgery, critical care and trauma surgery. Her research focuses on community violence and disparities in trauma care.

I interviewed for medical school on April 29, 1992. I was particularly interested in the Charles R. Drew/UCLA Medical Education Program because of its mission to address the needs of the underserved communities of South Central Los Angeles. As a product of a deeply caring, social-justice-focused family, Head Start and Detroit public schools, I followed my path naturally to public service and, eventually, medicine. Drew/UCLA was one of a handful of programs that would provide mentorship, solid preclinical training, clinical excellence and a committed faculty.

I emerged from the interview enthusiastic about the program. I turned on the radio of my 1987 diesel Escort and heard the verdict of the Rodney King trial. I was horrified and so deeply saddened, but never did I think, as I was driving out of Watts, that it would profoundly alter the fabric of South Central forever: 53 people dead, 2,000 injured and $1 billion in damages. Watching the city burn made me passionate about addressing the economic and social disparities that were the true tinder of the riots.

I would say my research with the greatest impact has been on the effect of transport times on mortality in urban trauma patients. In 2013, we published the results of 11 years of Chicago data that found a 23-percent increased risk of dying after a gunshot wound, even controlling for injury severity and other covariates, when the shooting occurred more than five miles from a trauma center. GIS mapping found that there was a “trauma desert” on the south and southeast sides of Chicago, where the entire area was outside of a five-mile radius of a trauma center. Not coincidentally, these also are some of the most economically distressed areas of the city. Supplemental work supported these findings, and, partly as the result of community activism and political efforts, the University of Chicago will open a new Level I trauma center on the south side of Chicago in 2017.

In 2015, I left Chicago for an opportunity at the University of Florida College of Medicine-Jacksonville as professor of surgery and director of surgical research. The University of Florida has a strong clinical-research legacy, and I look forward to helping foster and expand the ongoing research activities of our faculty and trainees. I thank Drew/UCLA for the essential steps along this incredibly rewarding path.
Standing on the Shoulders of a Giant

Kin Wai Tony Hung, MD ’13 (RES ’16), completed his residency in internal medicine at Olive View-UCLA Medical Center, where he pursued his interest in oncology and integrative East-West medicine and healthcare innovation. In the fall of 2015, he launched iCareX. The non-profit’s first program, Project Health Coach, trains undergraduate students as health coaches to enhance the value of clinical care for underserved populations.

Five years ago, I traveled to Beijing, China, where, immersed in the richness of the culture and surrounded by the ancient Great Wall, I explored traditional Chinese healing in a personal attempt to integrate the best of medicine from the East with the West.

My journey actually began at UCLA years before and can be attributed to my mentor, Ka-Kit Hui, MD ’75 (RES ’78, FEL ’79), founder and director of the UCLA Center for East-West Medicine (CEWM). Dr. Hui inspired me to see medicine through two lenses and to unify the finest of both worlds of healing.

Like the unique expression of language, with the West’s alphabet and the East’s characters, medicine has its distinctive expression between the polar paradigms. In a synergetic harmony, integrative East-West medicine brings the two worlds together. As Albert Einstein wrote of quantum mechanics and the duality of particles and waves, “It seems as though we must use sometimes the one theory and sometimes the other, while at times we may use either. … Separately, neither of them fully explains the phenomena of light, but together they do.” So, too, East and West medicine can compliment each other.

“Optimal healthcare that is effective, safe, accessible and affordable should become the priority of every country’s healthcare system,” said Dr. Hui at the 2000 World Health Organization International Symposium in Japan. With the emerging need to redesign our current healthcare system, I, too, believe that a concerted effort of collaboration among the various stakeholders, as well as the courageous spirit to think differently and to see and appreciate the value of innovative models of practice beyond the conventional standard of care, is what will underpin its success.

That is what iCareX is all about, I now tell my UCLA undergraduate students as we launch our own Project Health Coach. As I move forward on my journey as an aspiring leader in medicine, and I reflect on Dr. Hui’s influence on my growth, I think of Sir Isaac Newton’s famous quote: “If I have seen further, it is by standing on the shoulders of giants.”

For more information about iCareX and Project Health Coach, go to: icarexhealth.com
UCLA Joins Parker Institute Collaboration to Advance Cancer Immunotherapy Research

UCLA, already a national leader in cancer immunotherapy, has joined forces with five of the nation’s leading cancer centers and the Parker Institute for Cancer Immunotherapy to maximize the potential of research in cancer immunotherapy. The Parker Institute was created through a $250-million grant from The Parker Foundation; it is the largest single contribution ever made to the field of cancer immunotherapy. The Parker Institute for Cancer Immunotherapy Center in the David Geffen School of Medicine at UCLA will receive $20 million, with initial funding of $10 million and an additional $10 million over four years.

UCLA scientists, led by Dr. Antoni Ribas (FEL ’98, ’01), professor of medicine and director of the tumor immunology program at the UCLA Jonsson Comprehensive Cancer Center, will collaborate with other leading researchers, clinicians and industry partners from across the nation to harness the power of the body’s own immune system to speed the path toward immunotherapies that have the potential to turn cancer into a curable disease.

“Cancer immunotherapy is one of the most important medical advances of our time, and there is now widespread scientific consensus that the immune system is a powerful mechanism to defeat cancer,” says Dr. John C. Mazziotta (RES ’81, FEL ’83), vice chancellor of UCLA Health Sciences and CEO of UCLA Health. “With the pioneering work being done at UCLA and the Parker Institute’s paradigm-shifting research model, we can dramatically accelerate the development of new treatments and potentially save the lives of millions of people.”

In addition to the UCLA entity, the Parker Institute comprises new centers at UC San Francisco, New York’s Memorial Sloan Kettering Cancer Center, Stanford Medicine, the University of Pennsylvania and The University of Texas MD Anderson Cancer Center. The Parker Institute for Cancer Immunotherapy unites more than 40 laboratories and more than 300 researchers from the six institutions. Each Parker Institute affiliate receives funding and will have access to dedicated research, clinical resources and the key technologies it needs to fuel discovery in cancer immunotherapy. In a unique agreement among the consortium members, the administration of intellectual property will be shared, granting investigators direct access to a broad set of core discoveries.

“This is an exciting time for cancer immunotherapy research,” Dr. Ribas says. “Now, through this initiative between UCLA and the Parker Institute, we have the potential to broaden immunotherapy’s benefits to help more patients. Working with our colleagues from across the nation, we hope to be able to develop the next generation of cancer immunotherapies and test them in the clinic.”

For more information, contact Stephanie Witte at:
(310) 206-3878
In a special ceremony on May 6, 2016, UCLA Chancellor Gene D. Block awarded lifelong friends of UCLA Carol and Jim Collins The UCLA Medal, the highest honor given to individuals in recognition of extraordinary achievements that illustrate the university’s highest ideals. “Tonight we celebrate Carol and Jim’s profound influence on our university,” said Chancellor Block at the ceremony. “Their generosity goes hand-in-hand with their personal commitment to UCLA, and we deeply appreciate their many years of inspired and impactful support of UCLA and their personal involvement in furthering the mission of this great university.”

For more than 50 years, Carol and Jim Collins have been actively involved with UCLA. As a child, Carol Collins attended the university’s laboratory elementary school and Bruin football games with her father. The couple met while attending UCLA, and three of their four children also studied at the university. Jim Collins, who earned his Bachelor of Science degree in Civil Engineering at UCLA in 1950, opened a hamburger stand in 1952, which he built into an international food corporation. Partners in philanthropic endeavors, the Collinses made their first gift to UCLA in 1963 and have supported diverse areas across campus, such as medicine, athletics, business, the humanities and education. Through The Carol and James Collins Foundation, they also give opportunities to underserved youth and their families. They are honorary fellows of the UCLA College of Letters and Science as well as life members of the UCLA Alumni Association and UCLA Fund. Jim Collins currently serves on the executive committee for The Centennial Campaign for UCLA, and Carol Collins is a member of UCLA’s Women & Philanthropy and previously served on its board.

In addition to the medal presentation, the gathering celebrated the couple’s gifts that established two endowed chairs in the David Geffen School of Medicine at UCLA. The evening included the formal induction of the inaugural chair holders: Dr. S. Thomas Carmichael (FEL ’01), professor and vice chair for research and programs in the UCLA Department of Neurology and co-director of the UCLA Broad Stem Cell Research Center, as the Carol and James Collins Chair, and Dr. Brandon Koretz (RES ’99, FEL ’00), co-chief of the UCLA Division of Geriatrics and interim CEO of the UCLA Faculty Practice Group, as the Carol and James Collins Endowed Chair in Geriatric Medicine. Drs. Carmichael and Koretz and their families were in attendance to thank Carol and Jim Collins and honor their significant investment.

“Research is vital to advancing medicine, and we are grateful for Jim and Carol’s ongoing support,” Chancellor Block said. “These are important areas of medicine, and we can be certain that the Collinses’ endowment of these chairs will produce medical advances that will help many in the future.”

“Our family has a long and memorable history with UCLA, and it has been gratifying to see our contributions make a difference in people’s lives,” said Carol Collins. “Jim and I are honored to receive The UCLA Medal, and we thank you. We are also pleased to celebrate these incredible physicians and look forward to continuing our connection to the UCLA community.”

For more information, contact Karen Colimore at: (310) 267-0496

Top: (From left) Dr. John C. Mazziotta (RES ’81, FEL ’83), vice chancellor of UCLA Health Sciences and CEO of UCLA Health; James and Carol Collins; and Chancellor Gene D. Block. Bottom Left: Collins family members shared the celebration with Jim and Carol Collins (seated). Bottom Right: (From left) Dr. Brandon Koretz, the inaugural Carol and James Collins Endowed Chair in Geriatric Medicine; Carol and James Collins; Chancellor Block and Dr. S. Thomas Carmichael, the inaugural Carol and James Collins Chair.

Photos: Todd Cheney/UCLA Photography
On April 4, 2016, Laurie Davis Gray hosted the Max Gray Fellows in Mood Disorders Salon in the Dr. S. Jerome and Judith D. Tamkin Auditorium at Ronald Reagan UCLA Medical Center. Gray, who lost her 25-year-old son to depression in 2013, began an 18-month fundraising effort. With the support of friends and family, the Max Gray Fund in Depression Research is supporting two fellows in mood disorders. Dr. Peter C. Whybrow, director of the Jane and Terry Semel Institute for Neuroscience and Human Behavior at UCLA, introduced the Max Gray Fellows to the guests. Dr. Thomas B. Strouse (RES ’91), medical director of the Stewart and Lynda Resnick Neuropsychiatric Hospital at UCLA and Maddie Katz Chair in Palliative Care Research and Education, moderated a discussion featuring the fellows’ faculty supervisors Drs. Michael Gitlin (RES ’79) and David Miklowitz (PhD ’85). The Max Gray Fellowships increase UCLA’s capacity to treat patients in the

Residents of West Los Angeles and beyond will soon reap the benefits of Arline and Henry Gluck’s philanthropy. In an effort to minimize the long-term effects of stroke, the Glucks have established the UCLA Arline and Henry Gluck Stroke Rescue Program in the Department of Neurology at the David Geffen School of Medicine at UCLA. In addition to advancing stroke research, the gift will enable UCLA Health to purchase, equip and staff the first of a fleet of special ambulances with a portable computed tomography (CT) scanner and a clot-busting drug.

“I believe that the success of this state-of-the-art approach and this high level of care for stroke victims in Los Angeles will eventually be expanded to other Western states,” says Dr. John C. Mazziotta (RES ’81, FEL ’83), vice chancellor of UCLA Health Sciences and CEO of UCLA Health.

Acute stroke has a brief window for intervention. Rapid treatment is critical to restore blood flow to the brain; however, a CT brain scan often is necessary to determine the type of stroke. The UCLA Arline and Henry Gluck Stroke Rescue mobile CT unit brings brain imaging to the first point of contact, enabling the start of treatment that will restore blood flow to the brain prior to hospital arrival, lowering the risk of irreversible brain injury.

“It is an honor to partner with UCLA Health in this innovative program that — through the expertise of the UCLA Stroke Center — will become a national role model for stroke care,” says Henry Gluck, who serves as chairman of the board of the UCLA Health System.

For more information, contact Karen Colimore at:
(310) 267-0496

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For more information, contact Alan Han at:
(310) 825-1546

Taking on the Grand Challenge of Depression

Southern California community and beyond. This funding also advances UCLA’s Depression Grand Challenge, which aims to halve the health and economic impacts of depression by the year 2050.

For more information, contact Alan Han at:
(310) 825-1546

For more information, contact Karen Colimore at:
(310) 267-0496
Samuel Steinberg: Celebrating a Life of Compassion

Family members and close friends of the late Samuel Steinberg gathered for the dedication of the **Samuel Steinberg Grand Stair Lobby**, located on the B Level of Ronald Reagan UCLA Medical Center, on March 14, 2016. A generous gift from the Samuel Steinberg Family Foundation made the naming possible and established three funds focused on compassionate care in pediatrics, geriatrics and psychiatry, supporting the Children’s Pain and Comfort Care Program, the Geriatric Inpatient Care Companion Program and the Palliative Care Clinical Research Program, respectively. In his opening remarks, Dr. John C. Mazziotta (RES ‘81, FEL ’83), vice chancellor for UCLA Health Sciences and CEO of UCLA Health, expressed his deep gratitude to the Steinberg Foundation for helping UCLA to expand this area. “Palliative care is a growing field, with many possibilities for improving quality of life,” he said at the dedication. “This gift will help UCLA advance those possibilities.”

Attendees also included Johnese Spisso, MPA, president of UCLA Health and CEO of the UCLA Hospital System; and UCLA faculty. Dr. Thomas B. Strouse (RES ’91), medical director of the Stewart and Lynda Resnick Neuropsychiatric Hospital at UCLA and the Maddie Katz Chair in Palliative Care Research and Education, shared that Steinberg was dedicated to relieving suffering wherever he saw it.

The event included a moving tribute to Steinberg’s life. Born in Poland in 1928, Steinberg was 11 years old when the Nazis invaded. He endured incarceration in multiple concentration camps and was the only surviving member of his family. When the camps were liberated, Steinberg was 17 and gained sponsorship from an American family to come to Los Angeles. He later married Selma, the daughter of his sponsors. Together, they had four children, and he built a successful business as an electrician. He was characterized as a man of kindness and peace. The Samuel Steinberg Funds address issues he cared deeply about, such as providing companionship for elderly patients, comfort for critically ill children and grief support for their families.

Rabbi Baruch Kupfer, executive director of Gindi Maimonides Academy, spoke and said that the Japanese art of kintsugi, which repairs broken ceramics by filling them with gold, making the repairs the most valuable and beautiful element of the piece, provided an apt metaphor for Steinberg’s life — when he was broken by the Nazis, he did not let his experience destroy him. Steinberg rebuilt his life around love and compassion, and he left an inspiring legacy, part of which will touch the lives of UCLA patients, from the youngest to the most elderly.

For more information, contact Alan Han at: (310) 825-1546
Taste for a Cure: A Winning Event

UCLA’s Jonsson Cancer Center Foundation (JCCF) took another step toward unraveling the enigma of cancer by hosting its successful Taste for a Cure fundraiser on April 28, 2016, at the Beverly Wilshire hotel in Beverly Hills. The event raised nearly $1 million for cancer research at UCLA, specifically for seed grants for young researchers, impact grants for team collaborations and new technology.

Eileen Coskey Fracchia, a cancer survivor, presented honoree Eric Shanks, president, COO and executive producer of FOX Sports, with the 2016 Gil Nickel Humanitarian Award, named in memory of JCCF supporter Gil Nickel, who lost a courageous battle with melanoma in 2003. The JCCF’s signature event featured fine American wine and cuisine from distinguished Los Angeles chefs, an awards program, entertainment and a live auction.

Radio and TV sports personalities Colin Cowherd and Charissa Thompson emceed the elegant evening, which included a special musical performance by Kelsea Ballerini, as well as a presentation by actor Terry Crews. CAAs Joe Cohen, The Holman Group’s Jon Holman, Far Niente Winery’s Larry Maguire, UTAs Jay Sures and FOX TV Group co-chairs Gary Newman and Dana Walden served as the evenings co-chairs. Sponsors included the National Football Association, the National Basketball Association and Major League Baseball.

For more information, contact Margaret Steele at: (310) 794-5244

UCLA Neurosurgery Celebrates Tom and Nadia Davies’ Philanthropy and the Inaugural Davies Chair Holder

Nadia and Tom Davies have helped ensure that the legacy of their late daughter Alfonsina “Nina” Davies lives on by funding the Dr. Alfonsina Q. Davies Endowed Chair in Honor of Paul Crandall, MD, for Epilepsy Research. Following the passing in 2011 of their daughter, who battled intractable epilepsy throughout her life, the Davieses established the chair through a $2-million pledge to the Department of Neurosurgery in the David Geffen School of Medicine at UCLA.

During a special ceremony, the department celebrated the Davies family’s gift and the appointment of Dr. Gary Mathern (RES’91), professor of pediatric neurosurgery and director of the Pediatric Epilepsy Surgery Program, as the inaugural chair holder. The Davieses and Dr. Mathern, along with their families and friends, attended the event.

Expressing their pride at Dr. Mathern’s appointment, Nadia Davies said, “He has saved and improved the lives of hundreds of infants and children through his expertise in hemispherectomy and studying the brain cells associated with epilepsy. We established the endowed chair to accelerate research so that more patients like Nina can go on to realize their dreams. We hope the chair will raise awareness about epilepsy and eventually eliminate the stigma that surrounds this disease.”

The chair will support Dr. Mathern’s pioneering research into rare brain diseases and epilepsy. Receiving the endowment was a special honor for him, as it is named after his mentor, Dr. Paul Crandall, who founded the epilepsy-surgery research program at UCLA in 1960 and treated Nina Davies.

For more information, please contact Victoria Medford at: (310) 267-9475
On April 13, 2016, UCLA Operation Mend celebrated the opening of the clinic space for its new Intensive Treatment Program with a ribbon-cutting ceremony at the Jane and Terry Semel Institute for Neuroscience and Human Behavior at UCLA. The new six-week program is an extension of an existing one that provides advanced surgical and medical treatment and comprehensive psychological support for post-9/11 veterans and their families.

The expanded offerings, part of the Warrior Care Network partially funded by the Wounded Warrior Project, are designed for service members suffering from mild traumatic brain injury and post-traumatic stress, as well as their families. Patients will have access to highly individualized, intensive treatment that draws on UCLA’s nationally recognized expertise.

Retired U.S. Army Gen. Peter W. Chiarelli, an executive advisor to the Ronald A. Katz Center for Collaborative Military Medicine at UCLA and the former vice chief of staff of the U.S. Army, presented an overview of the new program and said, “The addition of this program to the Operation Mend portfolio makes UCLA the civilian leader in providing needed care to post-9/11 veterans. If every institution were doing the same, we could satisfy the unmet needs of veterans and their families for this critical care.”

“Our goal is to help our wounded veterans regain a sense of normalcy in their lives,” said Dr. Jo Sornborger, director of psychological health programs for UCLA Operation Mend. “A major component is to include family members, which is essential to building a healthy environment that will help the veteran succeed.”

For more information, contact Brian Loew at: (310) 794-7620
An Afternoon of Good Food and Friends at Vibiana Raises Money for Scholarships

On April 12, 2016, The Friends of the Jane and Terry Semel Institute for Neuroscience and Human Behavior at UCLA and the Stewart and Lynda Resnick Neuropsychiatric Hospital (RNPH) Board of Advisors collaborated to host Food and Friends at Vibiana, a luncheon that raised funds for the Nexus Scholarship, which supports the country’s most elite neuroscience clinicians and researchers during their MD-PhD residency training at UCLA.

Actress and RNPH board member Lisa Kudrow emceed the afternoon, as guests enjoyed a “healthy for the mind and brain” menu prepared by Iron Chef winner and owner of Redbird restaurant, Neal Fraser, in collaboration with Dr. Wendy Slusser, vice provost for the UCLA Healthy Campus Initiative. Musician and actor Rick Springfield presented musicians Pat Benatar and Neil Giraldo with the Artistic Award of Courage for their advocacy to end child abuse. The crowd enjoyed performances by Ashley Argota, Corbin Bleu and UCLA’s ScatterTones.

For more information, contact Alan Han at: (310) 825-1546
More than 1,500 cyclists participated in the Fourth Annual Tour de Pier on Sunday May 15, 2016, which raised more than $1 million to benefit three cancer charities. Two of the charities — the Hirshberg Foundation for Pancreatic Cancer Research and the Uncle Kory Foundation for brain-cancer research — provide significant support for cancer research at UCLA. This unique fundraising event takes one of the hottest indoor fitness activities, spinning, outside, where participants ride in place to move charity forward. Held on the Manhattan Beach Pier, Tour de Pier featured South Bay fitness instructors who led riders through five 50-minute sessions with energizing music. In addition to cycling, the day included a health-and-fitness expo, a Cardio Kids Fun Zone with tot-sized stationary bikes, games and activities. Gene Simmons, from the band KISS, sang the National Anthem. Event sponsor UCLA brought along Joe Bruin and the Spirit Squad to entertain and encourage riders, including UCLA Health’s radiology staff members, who rode in shifts.

“Since its inception in 2013, the Tour de Pier has quickly grown into a signature fitness philanthropic event, selling out for four years running and raising more than $2.8 million for cancer research and support services,” says Jon Hirshberg, co-founder of the Tour and Hirshberg Foundation trustee. Agi Hirshberg and her family, in memory of her husband Ronald, who died of pancreatic cancer, established the Hirshberg Foundation. The foundation has committed $10 million for pancreatic-cancer research at UCLA, and last year the Agi Hirshberg Center for Pancreatic Diseases at UCLA was named in recognition of Hirshberg’s visionary support.

Tour de Pier co-founder Heath Gregory adds, “We are incredibly grateful to our corporate sponsors and committed riders for helping us to reach and exceed the $1-million mark in our fourth tour.” Gregory and his wife Amanda founded the Uncle Kory Foundation, which has made significant contributions to the UCLA Neuro-Oncology program in memory of Amanda’s brother Kory, who suffered from glioblastoma. “There is still so much more that we can do to raise funds for cancer and heighten awareness,” Gregory says. “We are confident that the Tour de Pier will continue to do both.”
Generous Philanthropy Launches UCLA Center to Support Emotionally Healthy Children

Through an anonymous $10-million gift, UCLA has established the Child Anxiety Resilience Education and Support (CARES) Center in the Division of Child and Adolescent Psychiatry at the David Geffen School of Medicine at UCLA. The UCLA CARES Center is dedicated to the prevention and treatment of childhood anxiety and to supporting the development of resilient, emotionally healthy children.

“One-in-eight children in the United States suffers from an anxiety disorder, which places them at increased risk for school and social problems as well as later depression and substance abuse,” Dr. Piacentini says. “By opening the conversation in this area, the UCLA CARES Center will help reduce this burden for affected children and their families.”

The UCLA CARES Center has a multifaceted approach to its mission, with five specific areas of focus: education and prevention, training, innovation, research and public awareness and advocacy. The team will perform research to develop, test and disseminate new school- and community-based strategies for reducing stress and enhancing resilience among children. Based on the team’s findings, the center will advocate for a new standard of best practices in schools, local communities and other systems of healthcare.

“The center is committed to providing educational resources that will help youth, parents, schools, community members and clinicians recognize and address childhood anxiety,” Dr. Lester says. “We already are working with Los Angeles Unified School District (LAUSD) schools in the development of programs that enhance resilience and reduce stress in students and parents, and our website has an array of resources, including coaching videos, a blog and a referral network.”

In addition, CARES has partnered with the UCLA Lab School to pilot a school-wide mindfulness program. The plan is to expand classroom mindfulness programs throughout the city, from preschool through high school. CARES also is working with the Partnership for Los Angeles Schools to support the highest-need schools in LAUSD. Focusing first on the Watts neighborhood in South Los Angeles, CARES brings skills-building groups and evidence-based practices to kids and families to boost resilience and decrease stress, trauma and anxiety.

For more information, contact Joe Donahoo at: (310) 853-0563

To learn more about the UCLA CARES Center, visit: carescenter.ucla.edu
For more than 45 years, The Ahmanson Foundation has helped advance the David Geffen School of Medicine at UCLA’s clinical, research, teaching and community-engagement missions. The Foundation’s latest gift to the school’s new medical-education home, Geffen Hall, will benefit generations of aspiring healthcare leaders. Geffen Hall is among the school’s highest priorities during The Centennial Campaign for UCLA and will leverage the latest collaboration techniques and technologies to deliver a dynamic educational experience for tomorrow’s physicians and scientists.

Since 2011, UCLA Operation Mend has partnered with the New York office of Credit Suisse for its Annual Holiday Charity Initiative (HCI). At the end of every year, in conjunction with holiday celebrations, the Credit Suisse Americas Foundation provides matching support for charitable contributions made by employees toward selected causes and organizations. During its 2015 HCI, nearly 600 employees donated a total of $245,947 to Operation Mend, bringing the combined total of employee donations and corporate matching to more than $750,000.

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Leona (Lee) Silton, noted artist and philanthropist, died January 31, 2016, at the age of 84, following a two-year battle with cancer. Silton was born and raised in Dorchester, Massachusetts, and she enjoyed a successful career that spanned more than 30 years. She worked as an artist in her studio in Florida, using music as her principal inspiration. In 1999, she moved to Los Angeles and married Fred Silton. The Siltons were generous donors to UCLA and, with a lifetime gift to the university just six months before Silton’s passing, established the Fred Silton Family Chair in Movement Disorders. Silton conducted an after-school workshop at the Avalon–Carver Community Center in Los Angeles, believing that the arts have the ability to motivate people of all ages and backgrounds to begin to look at the world differently and, by doing so, to start to make a difference in their communities. She is survived by her husband; daughter Wendy Siegel; son Peter Siegel; grandchildren Josh, Matthew and Kayla; step-children Karen Balin, Debbi Cowan, Sue Silton and Jim Silton; and step-grandchildren Zach, Aevrey, Jeff, Amanda, Rachel and Blake.
After high school, I went to Emory University, in Atlanta, Georgia. It was a wonderful experience, but I struggled with my identity as a student. Instead of wide-ranging discussions like those around the dinner table in my home, the focus of all these hard-charging collegians was on ambition — becoming a doctor or a lawyer or a businessman. That was difficult for me, and I bridled some in this new environment.

I was oriented, perhaps genetically so, toward medicine, but I wanted to show off the other parts of myself that had been so important — my interests in music and social justice and the value of friendship — and shrug off the science. I thought about exploring music or working in green energy. But when it came time to consider my next steps, something intangible pushed me toward medicine.

I prepared my applications and interviewed at different medical schools, and I wrestled with my reasons for wanting to become a doctor. I asked members of my family why they became doctors, and each had his or her own reason. But there were common threads. They talked about humility and subsuming oneself into something larger as you try to heal a fellow human being. And they talked about the deep responsibility one takes on when called upon to make difficult decisions. Above all, they talked about a sense of honor and love of the work. I wanted something that would bridge my aptitude with a purpose and larger meaning, and to me this sounded wonderful. I knew that as I progressed, I would develop an even greater appreciation of the contributions that I could make.

I was accepted at UCLA and came home to Los Angeles. There was something almost surreal about returning. The buildings I had known as a child had not changed, but they felt distinctly different. The adults who squawked medical-ese now were the ones teaching me anatomy. The laboratory researchers I had known now...
were in my classrooms giving lectures to me. The hallways that had been my playground now were my workspace. The labs were places of intense learning. The adults in white coats who had thought I was a super-cute kid now called me their student. And I could no longer eat chocolate by the biohazard rooms.

Today I am a responsible member of the David Geffen School of Medicine at UCLA, and when I go home for dinner with my family, they ask me about what I have learned, and they comment on how much has changed since they were in my place. We still talk about many different things, but now they are more interested in discussing medicine with me — now it is my commitment and not just a curiosity.

As I continue on this journey, I’m asked about what I see for my future and the kind of doctor I want to become. “A good one,” I say. But that’s dancing around the inevitable. People go in all kinds of different directions when they leave medical school, as evidenced by the wildly varied careers of my family. Everything contains its own wonder, challenges and pressures. And now I am grateful that my classmates and friends don’t run to the bathroom when an esophagus is presented — and that my dad is not the one waving it around in class.

Adam Braun is a third-year student in the David Geffen School of Medicine at UCLA. He is the son of Dr. Jonathan Braun, chair of pathology and laboratory medicine, and Dr. Lynn Gordon, professor of ophthalmology and senior associate dean for academic diversity in the David Geffen School of Medicine at UCLA.
Photos: Courtesy of Adam Braun
“This program can be a powerful experience,” says Chaplain Yuko Uesugi, director of clinical pastoral education, of UCLA’s Doctoring 1 requirement for first-year students to spend time with a chaplain on hospital rounds. “By visiting patients and their families along with a chaplain, getting to know them, hearing firsthand stories of their lives and illnesses, the students can experience a profound learning about people.”