Students (from left) David Tran, Steve Blum, Elisha Garg, Daniel Croymans and Marko Spasic are seeking out research experience in the lab as a way to enhance the quality of their clinical expertise at the bedside.

Photo: Patricia Williams

Having faced life-threatening illnesses, patients challenge themselves on new frontiers.
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History Lesson

By Jean-Claude M. Rwigema, MD

I was 13 years old when the genocide in Rwanda overturned my family. My father was a successful businessman in Kigali, the capital city, and we were relatively well-off. But when Hutu extremists began killing Tutsis in 1994, our lives were in danger. Both my parents are of mixed Hutu and Tutsi background, and my father was active in a moderate political party that supported shared power between Hutus and Tutsis. That made us a target.

We went into hiding. Leaving the country would have been too difficult. Instead, friends of my parents tried to get us to a safe area that was guarded by U.N. soldiers. But our family was too large to move together, so it was decided my parents and youngest brother would try to make it to the safe haven, but first my two other brothers and I would drive with some relatives to my grandparents in the countryside.

By God’s grace, we made it there safely. But that refugee didn’t last long. Within a couple of weeks, the danger was closing in on my grandparents’ home. We had to be on the move again. My grandparents didn’t have a car, so we gathered what food and other necessities we could carry and started to walk. Each day we tried to reach another village or small city, but sometimes we couldn’t, and we had to hide and sleep in the forest along the side of the road.

Some days we had nothing to eat. We would go to deep hunger and wake up hungry and then to have to walk another 20 miles with our bellies rumbling. One time we managed to get some food together. We prepared it and were about to eat when we heard gunfire and explosions. We ran and left everything behind.

This is how it went for about five weeks. Always on the move, wondering if we would survive to the next day. What of my parents and little brother? We thought they were dead. It felt like the world was ending, and I prayed we would make it through and have a normal life again.

Finally, we reached a safe area in the southwest part of the country that was under French control. We were not being chased anymore. We had food. And while we were there, Tutsi rebels liberated the country and stopped the genocide. When it was safe enough, we decided to go back to my grandparents’ home to try to start over.

Life did return to normal. My parents and brother, we learned, were not dead. They had found refuge in the Hotel des Mille Collines, which was made famous in the movie Hotel Rwanda. In fact, my father now was minister of education in the new unity government, and later he would become the prime minister. When we were reunited, it was like everything that had been lost was coming back. I returned to school and studied hard. I learned English while attending high school in South Africa and earned my undergraduate and medical degrees from the University of Pittsburgh. Now here I am, at UCLA.

More than anything else in my life, this experience shaped me as an individual and as the kind of physician I want to be. I can never forget what we went through and the suffering we saw. I would ask myself, “How can this happen to people?” I prayed a lot, and I made a promise to God that if I got out of this alive, I would dedicate my life to helping other people who have suffered.

I wanted so much when I was a child to be able to make the suffering around me stop. Now, as a physician, I can identify with a patient’s pain, and I have the skills to try to alleviate it. Even if it is beyond cure, I feel that I must connect with her, to give her encouragement. I was blessed by being allowed to survive, and by helping others, I am working toward satisfying a debt that I know can never fully be repaid.
What happens to a dream deferred? “Does it dry up like a raisin in the sun … or does it explode?” Now, because of David Geffen, many aspiring medical students will not have to face this provocative question.

Mr. Geffen, the world-renowned entertainment executive and philanthropist after whom our medical school is named, has once again made a transformative gift to medical education. This time he has established a $100-million scholarship fund that will cover the entire education costs for a significant portion of students entering the David Geffen School of Medicine at UCLA. This new fund is about more than just money. No more dreams deferred; this gift is about helping students to pursue their dreams.

Many medical students face a sizable financial burden upon graduation. Nationally, 86 percent of new doctors finished school in 2012 with an average debt of $170,000. While the average debt for UCLA students is not this high, it will, without intervention, continue to rise as the costs of tuition, fees and other expenses escalate. The projected four-year cost for medical students entering UCLA in 2013-14 is more than $300,000. Not surprisingly, studies show that debt has a significant influence on what field medical graduates pursue and where they develop their professional careers.

At this time of great societal need and unprecedented opportunity for improving health, it is critical that more medical students find relief from career-dictating debt. Freed to make career choices based on their passions, students are expected to pursue aspirations better aligned with the evolving healthcare needs of an ever-changing society.

Our ultimate goal is to provide optimal support for every student in our school. Mr. Geffen’s extraordinary gift is a tremendous boost to our efforts. Coupled with other new student-support endeavors, like the Leaders of Tomorrow Scholars program, which covers tuition for students, and the increased alumni support provided through the 60th Anniversary Challenge for Medical Scholarships, we are well on our way.

On behalf of everyone in the David Geffen School of Medicine at UCLA and UCLA Health, I express our deepest gratitude to Mr. Geffen for his vision and continued efforts to revolutionize medical education. Because of him, fewer of our students will have their dream deferred – to the benefit of the lives they will save in the years to come.

A. Eugene Washington, MD, MSc
Vice Chancellor, UCLA Health Sciences
Dean, David Geffen School of Medicine at UCLA
Gerald S. Levey, MD, Endowed Chair

No More Dreams Deferred
A generous gift by entertainment executive and philanthropist David Geffen will ensure that a cohort of the very best medical students will have the means to pursue their careers unburdened by debt.
Once-Fragile Newborns Return to Give Thanks

Daniel Quezada entered the world more than three months early. Born at 25 weeks, the micro-preemie weighed only 2 pounds and was so small, he could fit into his father’s palm. Praying for their third child, his parents weren’t sure he would survive.

In the Neonatal Intensive Care Unit (NICU) at Mattel Children’s Hospital UCLA, Daniel was placed in a special incubator, hooked up to myriad tubes and monitors, and cared for by a team of experts who specialize in treating medically fragile newborns. Their goal: to keep Daniel alive so that he could continue to develop as if he were still in his mother’s womb.

Three years later, Daniel is a smart, feisty pre-kindergartner nicknamed “The Boss.” He and his parents returned to UCLA in October 2012 to reunite with the NICU doctors and nurses who cared for him for 15 weeks after his birth. “The NICU saved his life,” says Daniel’s father, Manuel Quezada. “They are the best. They knew him when he was a tiny little baby with tubes coming out everywhere. It’s fun to see the nurses again, so they can see him running around like any other kid.”

Daniel was among some 400 children and their families, graduates from the Mattel or UCLA Medical Center, Santa Monica NICUs, attending the biennial reunion. “The reunion creates a special moment to highlight the sacredness of what occurred in the lives of these children at the moment of their births,” says Shohreh Samimi, Mattel NICU director. “Now, months and years later, they come together with the staff that gave them a second chance at life. This occasion is a celebration of the love, devotion and joy that only babies can evoke.”

All three of Stacey Kinsey’s children – daughter Lucy, born in April 2010, and twins Jake and Ruby, born in August 2012 – stayed in the NICU. The Simi Valley mom said she and her husband were overjoyed to show how well their kids are doing and to personally thank the NICU team.

Not all guests were recent NICU grads. Sara Van der Linden, 34, of Santa Paula, was in the NICU for 59 days, starting in December 1977. She has attended more than 20 reunions. The highlight for Van der Linden was walking around with her former NICU nurse, Joyce Keeler. The pair talked with nurses and families to offer hope and encouragement that NICU graduates can grow up and become successful.

“It’s so much fun to see how well our former patients are doing,” says Nancy Kearsley, a Santa Monica NICU nurse. “It is really a chance for us to reconnect with the parents and hear their words of appreciation.”

Above left: Daniel Quezada began his life as a two-pound preemie in the NICU at Mattel Children’s Hospital UCLA. Today, with parents Manuel and Beatriz, he is known as “The Boss.” Above right: Sara Van der Linden (left) spent 59 days in the NICU. At the reunion, she and nurse Joyce Keeler offered words of encouragement to families. Bottom: Like their older sister Lucy, Jake and Ruby Kinsey started their lives in the NICU.

Photos: Amy Albin
A Better Way to Make Bone

UCLA scientists who purified stem cells derived from fat tissue and used them to grow bone discovered that the new bone formed faster and was of higher quality than bone created using traditional methods. The finding may one day eliminate the need for painful bone grafts that use material taken from patients during invasive procedures.

Adipose, or fat, tissue is thought to be an ideal source of mesenchymal stem cells – cells capable of developing into bone, cartilage, muscle and other tissues – because such cells are plentiful in the tissue and easily obtained through procedures like liposuction, says Chia Soo, MD, vice chair of research for the UCLA Division of Plastic and Reconstructive Surgery and a member of the Eli and Edythe Broad Center of Regenerative Medicine and Stem Cell Research at UCLA.

The study was published in Stem Cells Translational Medicine.

 Rather than culturing stem cells, a team led by Dr. Soo and Professor of Orthopaedic Surgery Bruno Péault, PhD, used a cell-sorting machine to isolate and purify human perivascular stem cells (hPSC) from adipose tissue and demonstrated that those cells worked far better than other cell lines in creating bone. They also showed that a growth factor called NELL-1, discovered by a member of the UCLA dentistry faculty, enhanced bone formation in their animal model.

"People have shown that culture-derived cells could grow bone, but ours are a fresh cell population, and we didn’t have to go through the culture process, which can take weeks," Dr. Soo says. "The best bone graft is still your own bone, but that resource is in limited supply and sometimes not of good quality. What we show here is a faster and better way to create bone that could have clinical applications."

Drs. Soo and Péault’s team grew the hPSCs together with NELL-1 in a muscle pouch, a place where bone is not normally grown, and used X-rays to determine that the cells did indeed become bone. "The purified human hPSCs formed significantly more bone in comparison to (other lines) by all parameters," Dr. Soo says. "And these cells are plentiful enough that patients with not much excess body fat can donate their own fat tissue."

"An Abundant Perivascular Source of Stem Cells for Bone Tissue Engineering,“ Stem Cells Translational Medicine, September 5, 2012

Keep It Clean with Copper

Hospital-acquired infections are a huge public-health burden, and hospital environments play a key role in harboring potentially deadly bacteria such as E. coli, C. difficile and methicillin-resistant Staphylococcus aureus. These microbes may persist for extended periods in the hospital, on surfaces such as bed rails, doorknobs, chairs, tray tables, toilet seats and even call buttons in patient rooms.

Copper surfaces, which are not routinely used in hospitals, are known to kill bacteria on contact, and studies have found much lower levels of bacteria living on copper surfaces than on standard hospital surfaces.

An interdisciplinary team from UCLA is now conducting a randomized clinical trial to determine if the reduction of surface bacteria due to the use of copper will result in a decreased number of hospital-acquired infections. Two intensive care units at Ronald Reagan UCLA Medical Center will be outfitted with copper, sham stainless steel or conventional surfaces such as plastic or other types of coatings. Over a four-year period, all three surface types will be sampled for bacteria levels, and patient-infection outcome rates will be compared among the three surfaces.

"We will be studying if lowering the level of bacteria on hospital surfaces results in reduced infection rates in patients, better outcomes and even lower costs," says Daniel Uslan, MD, director of the Antimicrobial Stewardship Program for UCLA Health.

The initial idea for the hospital-based study came from research by Peter Sinsheimer, PhD ’09, executive director of the UCLA Sustainable Technology and Policy Program, on the viability of alternatives to lead-based copper piping in delivering safer drinking water.

"Finding effective interventions to reduce hospital infection rates in a cost-effective manner is an emerging priority for U.S. hospitals," says Gerald Kominski, PhD, director of the UCLA Center for Health Policy Research. "This study will provide valuable information on whether or not copper-touch surfaces are a cost-effective technology for achieving this goal."
Sex addiction is no laughing matter. Relationships are destroyed, jobs lost, lives ruined. Yet psychiatrists have been reluctant to accept the idea of out-of-control sexual behavior as a mental-health disorder.

Now a UCLA-led team of experts has tested a proposed set of criteria to define “hypersexual disorder” as a new mental-health condition. Rory Reid, PhD, assistant professor of psychiatry at the Jane and Terry Semel Institute for Neuroscience and Human Behavior at UCLA, headed a team of psychiatrists, psychologists, social workers and marriage and family therapists that found the proposed criteria to be valid in helping mental-health professionals accurately diagnose hypersexual disorder.

The study was published in the Journal of Sexual Medicine, and its results will influence whether or not hypersexual disorder should be included in the forthcoming revised fifth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5).

“The criteria for hypersexual disorder that have been proposed, and now tested, will allow researchers and clinicians to study, treat and develop prevention strategies for individuals at risk for developing hypersexual behavior,” Dr. Reid says.

The criteria, developed by a DSM-5 sexual-and-gender-identity-disorders work group for the revised manual, establish a number of symptoms that must be present. They include a recurring pattern of sexual fantasies and urges and behaviors that last six months or longer that are not caused by other issues, such as substance abuse, a medical condition or manic episodes associated with bipolar disorder. Also, individuals who might be diagnosed with this disorder must show a pattern of sexual activity in response to unpleasant mood states, such as feeling depressed, or a pattern of repeatedly using sex as a way of coping with stress. Part of the criteria also states that individuals must be unsuccessful in their attempts to reduce or stop sexual activities they believe are problematic.

Another significant finding of the study, Dr. Reid says, was that patients who met the criteria for hypersexual disorder experienced significantly greater consequences for their sexual activities, compared with individuals with a substance-abuse diagnosis or a general medical condition.

Among the patients involved in the study, 17 percent had lost a job at least once, 39 percent had a relationship end, 28 percent contracted a sexually transmitted infection and 78 percent had interference with healthy sex.

“It’s not that a lot of people don’t take sexual risks from time to time or use sex on occasion to cope with stress or just escape, but for these patients, it’s a constant pattern that escalates until their desire for sex is controlling every aspect of their lives, and they feel powerless in their efforts to change,” Dr. Reid notes.

Fitness Training for the Brain

UCLA researchers found that older adults who regularly used a brain-fitness program played on a computer demonstrated significantly improved memory and language skills. The team studied 59 participants with an average age of 84, recruited from local retirement communities in Southern California.

The volunteers were split into two groups. The first group used a brain-fitness program for an average of 73.5 20-minute sessions across a six-month period, while a second group played it less than 45 times during the same period. Researchers found that the first group demonstrated significantly higher improvement in memory and language skills, compared to the second group.

Age-related memory decline affects approximately 40 percent of older adults and is characterized by self-perception of memory loss and decline in memory performance. The study’s findings add to the field, exploring whether or not such brain-fitness tools may help improve language and memory and may ultimately help protect individuals from the cognitive decline associated with aging and Alzheimer’s disease.

Previous studies have shown that engaging in mental activities can help improve memory, but little research has been done to determine if the numerous brain-fitness games and memory-training programs on the market are effective. This study is one of the first to assess the cognitive effects of a computerized memory-training program.

How to Prove a Sexual Addiction

“Report of Findings in a DSM-5 Field Trial for Hypersexual Disorder,” Journal of Sexual Medicine, November 2012
Sleep, Perchance to Remember

UCLA researchers have for the first time measured the activity of a brain region known to be involved in learning, memory and Alzheimer’s disease during sleep. They discovered that this region, called the entorhinal cortex, behaves as if it’s remembering something, even during anesthesia-induced sleep – a finding that counters conventional theories about sleep-time memory consolidation.

The research team simultaneously measured the activity of single neurons from multiple parts of the brain that are involved in memory formation. The technique allowed them to determine which brain region was activating other areas and how that activation was spreading.

In particular, Mayank R. Mehta, PhD, professor of neurophysics, and his team looked at three connected brain regions in mice – the neocortex, or “new brain;” the hippocampus, or “old brain;” and the entorhinal cortex, an intermediate brain that connects the new and the old brains.

The study was published in the journal Nature Neuroscience.

While previous studies have suggested that the dialogue between the old and the new brain during sleep was critical for memory formation, researchers had not investigated the contribution of the entorhinal cortex to this conversation, which turned out to be a game-changer, Dr. Mehta says. His team found that the entorhinal cortex showed what is called persistent activity, which is thought to mediate working memory during waking life – for example, when people pay close attention to remember things temporarily, such as a phone number or following directions.

“The big surprise here is that this kind of persistent activity is happening during sleep, pretty much all the time,” Dr. Mehta says. “These results are entirely novel and surprising.”

It had been shown previously that the neocortex and the hippocampus “talk” to each other during sleep, and it is believed that this conversation plays a critical role in memory consolidation, the establishing of memories; however, no one had been able to interpret the conversation. Dr. Mehta and his team developed an extremely sensitive monitoring system that enabled them to follow the activities of neurons from each of the three targetted portions of the brain simultaneously. This allowed them to decipher the precise communications, even when the neurons were seemingly quiet.

In Vitro Fertilization Linked to Increased Risk of Birth Defects

In vitro fertilization (IVF) may significantly increase the risk of birth defects, particularly those of the eyes, heart, reproductive organs and urinary system, according to a UCLA study.

Despite the increasing use of IVF in the United States, links between birth defects and IVF are poorly understood, the researchers said. The management of birth defects accounts for a large part of pediatric surgical care and demands significant healthcare resources. According to the Centers for Disease Control and Prevention, California has the highest rate of IVF usage in the country.

For the study, the researchers looked at infants born in California from 2006 to 2007 following the use of assisted-reproductive technologies – fertility treatments involving the manipulation of both eggs and sperm – primarily IVF. They examined the mother’s age, race and the number of times she had previously given birth, as well as the infant’s gender, year of birth, if the infant was part of a multiple birth (twins, triplets, etc.) and the presence of major birth defects.

“Our findings included a significant association between the use of assisted-reproductive technology, such as certain types of in vitro fertilization, and an increased risk of birth defects,” says general-surgery resident Lorraine Kelley-Quon, MD ’08, who conducted the research at Mattel Children’s Hospital UCLA.

Among the 4,795 infants born after IVF and 46,025 naturally conceived infants with similar maternal demographics examined in the study, the researchers identified 3,463 infants with major birth defects.

They found that birth defects were significantly increased for infants born after IVF, compared with naturally conceived infants (9.0 percent vs. 6.6 percent), even after controlling for maternal factors. Specifically, IVF infants had greater rates of malformations of the eye (0.3 percent vs. 0.2 percent), heart (5.0 percent vs. 3.0 percent) and genitourinary system (1.5 percent vs. 1.0 percent).

Overall, IVF infants’ odds of having birth defects were 1.25 times greater than those of naturally conceived infants with similar maternal characteristics.

The researchers also looked at infants born following fertility treatments that, unlike IVF and other assisted-reproductive technologies, do not involve the manipulation of both eggs and sperm, including artificial insemination and ovulation induction. They found that the risk of birth defects for these infants was not significant.

“For parents considering in vitro fertilization or other forms of assisted-reproductive technology, it is important that they understand and discuss with their doctor the potential risks of the procedure before making a decision,” Dr. Kelley-Quon says.

To view a video of Dr. Lorraine Kelley-Quon discussing the increased risk of birth defects with in vitro fertilization, go to: uclahealth.org/invitrorisk
Imaging the Impact of High-Impact Sports

Despite the devastating consequences of traumatic brain injury and the large number of athletes playing contact sports who are at risk, no method has been developed for early detection or tracking of the brain pathology associated with these injuries. Now, UCLA researchers have taken pictures of the abnormal tau proteins associated with such injuries in five living National Football League (NFL) retirees. Previously, confirmation of the presence of this protein, which is also associated with Alzheimer’s disease, could only be established by an autopsy.

The preliminary findings of the study are reported in the American Journal of Geriatric Psychiatry. For the study, the researchers recruited five retired NFL players with a history of one or more concussions and cognitive or mood symptoms. They used positron emission tomography (PET) to view and identify the locations in the brain of amyloid beta “plaques” and neurofibrillary tau “tangles” that had been stained with a chemical marker, FDDNP, that binds to the deposits. When the researchers compared the scans to those of healthy men of comparable age, education, body mass index and family history of dementia, they found that the NFL players had more of the FDDNP in the amygdala and subcortical regions of their brains – regions that control learning, memory, behavior, emotions and other mental and physical functions. Those players who had experienced a greater number of concussions were found to have higher FDDNP levels.

The NFL players also had more depressive symptoms than the healthy men and demonstrated greater evidence of cognitive loss.

“Early detection of tau proteins may help us to understand what is happening sooner in the brains of these injured athletes,” says Gary Small, MD, the Parlow–Solomon Professor on Aging and professor of psychiatry and biobehavioral sciences at the Jane and Terry Semel Institute for Neuroscience and Human Behavior at UCLA. This non-invasive method also may be “a critical first step” in developing interventions to prevent symptom onset and progression of chronic traumatic encephalopathy – a degenerative condition caused by buildup of tau protein that is associated with memory loss, confusion, progressive dementia, depression, suicidal behavior, personality changes, abnormal gait and tremors.

To view a video about the study, go to: uclahealth.org/nflconcussion

Potential New Treatment to Stop Alzheimer’s Disease

UCLA researchers in March 2012 reported the development of a molecular compound called CLR01 that prevents toxic proteins associated with Parkinson’s disease from binding together and killing the brain’s neurons. Building on those findings, they have now turned their attention to Alzheimer’s disease, which is thought to be caused by a similar toxic aggregation or clumping, but with different proteins, especially amyloid-beta and tau.

What they’ve found is encouraging. Using the same compound, which they’ve dubbed a “molecular tweezer,” in a living mouse model of Alzheimer’s, the researchers demonstrated for the first time that the compound safely crossed the blood-brain barrier, cleared the existing amyloid-beta and tau aggregates, and also proved to be protective to the neurons’ synapses – another target of the disease – that allow cells to communicate with one another.

The report was published in the journal Brain.

“This is the first demonstration that molecular tweezers work in a mammalian animal model,” says Gal Bitan, PhD, associate professor of neurology. “Most important, no signs of toxicity were observed in the treated mice.”

Molecular tweezers are complex molecular compounds capable of binding to other proteins. Dr. Bitan and his colleagues have been working with a particular molecular tweezer called CLR01.

The situation for humans is more problematic than for mice because the neurons gradually die in Alzheimer’s disease, Dr. Bitan said. “That’s why we must start treating as early as possible. The good news is that the molecular tweezers appear to have a high safety margin, so they may be suitable for prophylactic treatment starting long before the onset of the disease.”

“Protection of Primary Neurons and Mouse Brain from Alzheimer’s Pathology by Molecular Tweezers,” Brain, November 26, 2012
Redirect Wasted Healthcare Dollars to Transform America

The national Institute of Medicine estimates that $750 billion is lost each year to wasteful or excessive healthcare spending. This sum includes excess administrative costs, inflated prices, unnecessary services and fraud – dollars that add no value to health and well-being. If those wasteful costs could be corralled without sacrificing healthcare quality, how might that money be better spent?

Frederick J. Zimmerman, PhD, chair of the Department of Health Policy and Management at the UCLA Jonathan and Karin Fielding School of Public Health, and colleagues have some suggestions.

“If cut from current healthcare expenditures, these funds could provide businesses and households with a huge windfall, with enough money left over to fund deficit reduction on the order of the most ambitious plans in Washington,” Dr. Zimmerman says. “The money could also cover needed investments in transportation infrastructure, early childhood education, human-capital programs, rural development, job-retraining programs and much more. And it could transform America with little-to-no reduction in the quality of, or access to, healthcare actually provided.”

The conclusions of Dr. Zimmerman and his colleagues were published in the American Journal of Preventive Medicine.

In the study, the research group presented one scenario of how that money could be used. More than $410 billion per year – or 55 percent of the savings – could be returned to the private sector for individuals and companies to use as they please. Another $202 billion (27 percent) could go toward deficit reduction, yielding a greater reduction than the congressional “super committee” sought and failed to achieve. An additional $104 billion (14 percent) could support additional investments in human capital and physical infrastructure.

Two percent of the savings ($18 billion) could promote urban and rural quality of life by improving the built environment surrounding schools, expanding and modernizing public libraries, improving wastewater treatment and providing rural development grants to every small town in the nation. Job-training opportunities would be affordable for nearly 50,000 unemployed persons. And under the research group’s scenario, the remaining 2 percent of the savings would be devoted to fully funding an extensive wish-list of transportation projects to alleviate road congestion and promote mass-transit alternatives.

Freeing up this money would not be easy. These excess expenditures are spread across many groups, and the financial beneficiaries are coordinated, clear-minded and powerful, says Jonathan Fielding, MD, professor of health policy and management and director of the Los Angeles County Department of Public Health. Overcoming resistance will require a concerted collective action on the part of many economic sectors, governmental agencies and other organizations that are not used to seeing themselves as sharing interests.

“If cut from current healthcare expenditures, these funds could provide businesses and households with a huge windfall, with enough money left over to fund deficit reduction on the order of the most ambitious plans in Washington.”

But whatever one’s values and preferences, Dr. Zimmerman says, “eliminating excess medical-care costs provides a monumental opportunity to reallocate those resources to strengthen our international competitiveness, enhance our well-being and build a healthier nation.”

“A Health Dividend for America: The Opportunity Cost of Excess Medical Expenditures,” American Journal of Preventive Medicine, December 2012
Going Viral to Kill Zits

Doctors soon may have a new weapon against acne: a harmless virus living on our skin that naturally seeks out and kills the bacteria that cause pimples.

“Acne affects millions of people, yet we have few treatments that are both safe and effective,” says principal investigator Robert Modlin, MD, professor of microbiology, immunology and molecular genetics. “A virus that naturally preys on the bacteria that cause pimples could offer a promising new tool against the physical and emotional scars of severe acne.”

The findings by scientists at UCLA and the University of Pittsburgh were published in the American Society for Microbiology’s journal mBio.

The scientists looked at two microbes that share a big name: Propionibacterium acnes, a bacterium thriving in our pores that can trigger acne, and P. acnes phages, a family of viruses that live on human skin. The viruses are harmless to humans but are programmed to infect and kill the P. acnes bacteria.

Using over-the-counter pore-cleansing strips, the researchers lifted acne bacteria and the P. acnes phages from the noses of both pimply and clear-skinned volunteers. When the team sequenced the phages’ genomes, they discovered that the viruses possess multiple features that make them ideal candidates for a new anti-acne therapy.

“Phages are programmed to target and kill specific bacteria, so P. acnes phages will attack only P. acnes bacteria but not others like E. coli,” notes Laura Marinelli, PhD, a postdoctoral researcher in Dr. Modlin’s laboratory. “This trait suggests that they offer strong potential for targeted therapeutic use.”

So why, if the phages naturally attack the P. acnes bacteria, do people still get acne? One hypothesis, the researchers say, is that those with healthy skin may have a population of phages that helps keep the P. acnes bacteria in check, while in others, the phage activity is insufficient to prevent the bacteria from aggravating the immune system.

Acne affects nearly 90 percent of Americans at some point in their lives, yet scientists know little about what causes the disorder and have made narrow progress in developing new strategies for treating it. Dermatologists’ arsenal of anti-acne tools—benzoyl peroxide, antibiotics and Accutane—hasn’t expanded in decades.

The research team plans to isolate the active protein from the P. acnes virus and test whether or not it is as effective as the whole virus in killing acne bacteria. If laboratory testing proves successful, the researchers will study the compound’s safety and effectiveness in combating acne in people.

“Propionibacterium acnes Bacteriophages Display Limited Genetic Diversity and Broad Killing Activity against Bacterial Skin Isolates,” mBio, September/October 2012
Mini Med School
May 6, 13 & 20

UCLA Health is proud to present a three-evening lecture series for the general public featuring distinguished professors from the David Geffen School of Medicine at UCLA. Mini Med School covers the basics of medical science and advances in the biomedical and clinical sciences.

May 6, 2013  Alternatives to Surgery
May 13, 2013  Anesthesia 101
May 20, 2013  Advances in Surgery

The David Geffen School of Medicine at UCLA is a leader in patient care, medical research and teaching, and our faculty train the healthcare leaders of tomorrow. Mini Med School is taught by the same professors who teach UCLA medical students and offers an introduction to basic science as it relates to medicine, disease, health and aging. Although you will not receive a medical degree, you’ll leave with a better understanding of the human brain and body.

For more information and to register, search for "Mini Med School" at uclaextension.edu
David Hayes-Bautista, PhD

Why, in spite of lower incomes, fewer years of education and less access to healthcare, do Latinos overall have better health outcomes than the population at large?

David Hayes-Bautista, PhD, makes a point when spelling his name to emphasize the hyphen. “I put it in to keep the family tree straight,” he says. “Actually, in Latin America you don’t have to hyphenate. But here, people mess it up and they drop one or another of my names, or they reverse the order, and it mixes up the family tree. So, that hyphen is very important.” Such distinctions are indeed very important to the nationally recognized medical sociologist, who, in spite of advice he received when he began his academic career to not study “this Chicano-health stuff … it’s not important … nobody is interested,” has spent 40 years examining the dynamics and processes of the health of the Latino population. His Center for the Study of Latino Health and Culture combines these research interests with teaching medical students, residents and practicing providers to best manage the care of Latino patients. In 2012, he received the Herbert W. Nickens Award from the Association of American Medical Colleges for “outstanding contributions to promoting justice in medical education and health equity in the United States.” He spoke with U Magazine editor David Greenwald.

What have you learned that surprises you?

Dr. Hayes-Bautista: I was very surprised by what we now know as the Latino epidemiological paradox. When I was doing my graduate work at UC San Francisco, I was taught the minority-health-disparity model, which says that a population that has a lower income, less education, less access to care compared with the larger population is going to have worse health outcomes. According to that model, one would expect to see more heart attacks, more cancers, more stroke, more infant mortality, shorter life expectancy, more alcoholism, more smoking, etc. There weren’t, however, any data specifically on the Latino population. Then in the 1980s we started to get some data based on recent census results. I was expecting to see that Latinos would have more heart attacks, more cancers, more strokes, shorter life expectancy, and all that. And I saw just the opposite. Initially I saw the data just for Los Angeles County, and Latinos had about 30 to 35 percent fewer heart attacks, 25 percent fewer strokes, 40 percent fewer cancers, lower infant mortality, longer life expectancy.

What did you think was going on?

Dr. Hayes-Bautista: My first thought was there’s a problem with the data. The Hispanic indicator for the census was new; maybe people forgot to check it off, or something like that. But I also thought, if these data are good, it completely explodes everything I was taught. Since then, I’ve looked across the country. This is an accurate finding. There are 55-million Latinos in the United States. It doesn’t matter whether they’re in New York, Illinois,
Florida, Texas, California, or if they are Cuban, Mexican, Puerto Rican, Salvadoran. They all vary around this paradoxical norm.

Why is understanding this paradox so important?
Dr. Hayes-Bautista: If we can more completely understand the mechanism that yields the Latino epidemiological paradox we can apply that knowledge to save close to 400,000 to 500,000 lives every year in the United States from heart disease, cancer and stroke. It seems that the researchers who are most interested in looking at the Latino epidemiological paradox tend to be Latinos. Your personal experience, your personal biography in many ways informs what you choose to research. By having greater diversity in the medical-research field, we will have more diversity in the questions that are being asked. If there had been more diversity in the past, perhaps we would know the answer by now.

What do you feel is behind the paradox?
Dr. Hayes-Bautista: Clearly it is not a random outcome. And it’s not misclassification or an inaccurate observation. I’ve heard some crazy suggestions for why this finding can’t possibly be true – that most sick Latinos go home to die so they don’t show up in the data, things like that. It’s
nonsense. What we are looking at is a very large, stable population. There is nothing random here; there is something at work. Is it diet, frijoles and tortillas? Is it strong families? Is it spirituality? In answer to your question, I don’t know.

You have been engaged in trying to bring more Latinos into medical research. What are some of the tactics to accomplish that?

Dr. Hayes-Bautista: This is something I’ve actually been working on since I was a student at UCSF and we formed a group called Chicanos in Health and Education. Then we helped to form a national group, the National Chicano Health Organization. At UCLA, which I came to in 1987, we created Chicanos/Latinos for Community Medicine, a Latino pre-health-professional group, and, after we documented a shortage in Latino physicians in 2000, we created a community-college pipeline program, Medicos Para el Pueblo/Medical Preparation and Education Pipeline (MEDPEP). We learned that 90 percent of Latinos start their post-secondary education in community college, so that is where we decided to focus our effort. The program currently links 10 or so community colleges to the UCLA medical school. MEDPEP identifies underrepresented minority students with an interest in graduate health-science education, offers conference and research participation, provides academic workshops, engages in leadership development, gives parent/family support, and makes available community-service and job-shadowing opportunities. Since its implementation, more than 200 students have transferred to four-year universities, many of whom are practicing in the healthcare field, attending health-professional schools, and receiving prestigious achievement awards and honors.

We have talked about encouraging underrepresented minority students to pursue careers in medical research. What is the need to bring more into clinical practice?

Dr. Hayes-Bautista: Most of the students who come through the MEDPEP pipeline actually are interested in clinical practice as family physicians or working in community medicine. So we need to reach out and encourage students from areas where there is a shortage of physicians, because it is those students who are most likely to return to those underserved communities to provide care. The truth is that most non-Latino students are not going to learn Spanish so they can work in underserved Latino communities where there is a need. When I speak to students in Bakersfield or Porterville or Visalia, I know they are more likely to return to practice in those areas. It’s not 100 percent, sure, but students that come from those areas are more likely to go back. If I am speaking to a student from Long Beach or Manhattan Beach or Redondo, and I ask them how they would like to go practice in Visalia or Turlock, I don’t generally get the same positive
response. Again, this shows the importance of diversity. A more diverse population of physicians will service a more diverse population of patients.

**When you look at Latino physicians, do you find a difference in the way they approach the practice of medicine relative to their colleagues from other backgrounds?**

**Dr. Hayes-Bautista:** We’ve actually done a lot of work looking at that, going back to that period in 2000 when we identified the increasing shortage of Latino physicians. At that time, there were maybe 300 Latino physicians working in Southern California, and our idea was to write a book that would be helpful to non-Latino physicians who might work with a Latino-patient population. We looked at a large Latino independent practice association (IPA), and we identified the doctors within the IPA who were considered by their fellow physicians to be very good, the ones who were skilled doctors and who had really good relations with their patients. We wanted them to work on a chapter for our book. Most of the physicians, as it turned out, were International Medical Graduates – they had been trained in Latin American countries and then obtained their licenses to practice here. If I can summarize from the book what it is these Latino providers do that our current medical education in the U.S. does not really prepare its graduates for – and it sounds on the surface to be so simple, yet it can be really hard – is to treat each of their patients as unique individuals, each with unique issues in their lives beyond their medical conditions. One physician described for us two sisters, both of them diabetic. One was compliant, happy, outgoing. The other was noncompliant, morose, depressed. They came from the same family background. They ate the same kinds of foods. They had the same disease. But he would not have thought to treat them alike. He treated them as individuals.

**That does sound like a very simple approach. Don’t we teach that in medicine?**

**Dr. Hayes-Bautista:** Not really. When dealing with minority patients there is a real tendency to say, “All Latinos are alike so tell me the three or four things I need to do with every Latino patient so I can say I’m culturally competent.” The same would be true for patients from other ethnic backgrounds. Does a plastic surgeon in Beverly Hills approach his patients like that? No, each one is taken as an individual. As I said, on the surface it seems very simple – treat everybody like an individual. But it is far more difficult to do it in practice. There are classic narratives about race and ethnicity in this country. Those narratives are current in medicine just as they are in other areas of society. We have to get beyond those narratives.

“If we can more completely understand the mechanism that yields the Latino epidemiological paradox, we can apply that knowledge to save close to 400,000 to 500,000 lives every year in the United States from heart disease, cancer and stroke.”

“There are classic narratives about race and ethnicity in this country. ... Those narratives are current in medicine just as they are in other areas of society. We have to get beyond those narratives.”
Having survived the challenge of a life-threatening illness, some patients seek ways to challenge themselves in other areas of their lives.

By Mona Gable
At 4:30 p.m. in early December, it is dark outside and about 5 degrees above zero. Standing in ankle-deep snow behind a plywood shack in a remote, thickly wooded area north of Fairbanks, Alaska, Cindy Abbott is cutting up frozen fish with a bandsaw. Nearby are rows of wooden dog houses, where the mixed-breed huskies that will pull her on the 1,000-mile Iditarod sled-dog race sleep on beds of straw. “It takes a lot of food to feed this many animals,” Abbott says, tossing the chunks of Arctic char into a 55-gallon drum of bubbling broth for the dogs.

At 54 years old, Abbott is slender and athletic, with short blonde hair. Dressed in black, she’s wearing thick gloves, a beanie under a hooded jacket, snow pants and heavy white “bunny boots.” Her hands are strong and calloused. Living in an unfinished 8-by-12-foot storage shed with only a small oil stove for heat, she is a very long way from the comforts of home in Orange County, where she teaches health sciences at California State University Fullerton, and lives with her husband in Irvine. Last season, she completed the Yukon Quest 300, one of the toughest trail races in Alaska. To qualify for the Iditarod, which runs each year in March between Anchorage and Nome, she still has to complete two more races. Watching her, you’d never know that she’s blind in her left eye and that sometimes she’s in so much pain that she can’t bend over to feed the dogs. Or that she has a rare and fatal disease called Wegener’s granulomatosis, a disorder that causes inflammation of the blood vessels.

It is so rare that when Abbott began losing her vision, doctor after doctor couldn’t tell her why. She was told, mistakenly, that she had multiple sclerosis. In August of 2007, after 14 years of searching for answers, she was finally diagnosed by UCLA rheumatologist Alan Gorn, MD, after suffering a retinal vascular occlusion, which became the clue to unraveling the puzzle.

Despite the debilitating effects of her disease, Abbott had a formidable goal: climb Mount Everest. A few months before her diagnosis, she was watching a show on the Discovery Channel, Everest: Beyond the Limit, when the idea seized her. Never mind that she had never climbed a mountain in her life. She wanted to use the climb as a forum, to bring awareness to her little-known disease. She trained with a high-altitude expert and ascended some of the world’s tallest mountains, including Mount Aconcagua in the Andes – at 22,841 feet, the highest peak in both the Western and Southern hemispheres – during which she broke her leg in a fall. In May of 2010, she became the 40th American woman to summit Everest. It took 54 days to reach the top, where she unfurled a banner for the National Organization for Rare Disorders, a federation of groups focused on helping the 30-million Americans with so-called “orphan” diseases.

Her feat accomplished what she hoped it would. After seeing her on the news, many people who had lost loved ones to the disease or who themselves had it contacted her. Inspired by their stories, Abbott set herself an even bolder goal: to be the first woman to both climb Mount Everest and complete the grueling Iditarod. And like climbing, she had to start from scratch.

“Last year, I had no idea how to do something like this, what it was like taking care of dogs in the Alaskan wilderness on your own, with all the wildlife and the extremes of Alaska,” she says. “The only way you get to find out is to do it.”

Asked why she takes up such difficult challenges, she responds, “We don’t have to let obstacles in our lives stop us. ... I want to show people they can take control of their lives.”

- Cindy Abbott

To read more about Cindy Abbott and see additional images, click on the link to this article at: magazine.uclahealth.org
MD, and Allan Kreiger, MD, her ophthalmologists, and David E. Fish, MD, assistant program director of the Pain Medicine Fellowship at UCLA. Even as she’s in Alaska, Dr. Gorn has been adjusting her Wegener’s medication. And just before she left for Alaska, Abbott underwent several pain-management procedures. “Without his treatments, I would not be able to function,” she says. “Dr. Fish is a miracle worker.”

Because of her limited vision, Abbott is using a bright headlight to see at night. She’s been experimenting with a unique style of prescription goggles, trying to find ones to protect her eyes, allow her to see at distance and still let her see her dogs’ feet up close. So far, they’ve all fogged up almost immediately, but she is working on that. She’s ordered harnesses from Norway with reflectors along their length so she’ll be able to see how her dogs are moving, even if she can’t see the animals themselves.

How does training for the Iditarod compare with the Everest expedition? “This is a lot harder,” she says. “There are a lot more variables. On Everest, it was just me, and in this race I have the team. The time away from family and home also is a lot more significant and difficult.”

Abbott and her husband plan to produce a documentary about her Iditarod journey, and a film crew will accompany her. They hope to use the film to teach and inspire medical and healthcare professionals, patients and their families that a rare, incurable disease like hers doesn’t mean the end of the world. In some ways it can be a beginning. As the quote published on Abbott’s website reads: “I have a mountain to climb.”

**Virginia Garner**

In September of 2000, Virginia Garner received a fundraising brochure in the mail. It featured photos of triumphant runners and a pitch inviting her to “come to a team-in-training meeting for the Leukemia & Lymphoma Society.” Garner wasn’t a runner, but she was curious, so she went.

By the end of the meeting, she’d decided to run the L.A. Marathon. Granted, she was in remission from chronic myeloid leukemia (CML), a rare blood disease that little more than a year before had nearly killed her. But she wanted to feel strong again.

“I really didn’t get anybody’s permission,” she says. When she finally did ask Charles L. Sawyers, MD, a former UCLA scientist who was instrumental in the clinical trials for the anti-cancer drug imatinib that saved her life, he didn’t react much. “He said, ‘Oh, yeah.’ I think he was flabbergasted.”

That was 12 years ago. Since then, the 67-year-old former high-school teacher has run two marathons and 28 half-marathons and raced in numerous 5Ks. She’s also become a prolific fundraiser for the Leukemia & Lymphoma Society and sits on her local chapter’s board of trustees. Her husband, Van, who overcame metastatic melanoma, is no slouch either. A former dean of the College of the Extended University at Cal Poly Pomona, he has completed 30 marathons and 45 half-marathons. Together, they have...
raised $260,000 for leukemia research.

On a rainy October night, they're sitting in a booth at Conrad's, a local fixture in Pasadena. Ginny, a lively woman with short brown hair and glasses, is wearing a LiveStrong band on her wrist and a purple T-shirt with the words "honored teammate" in white. She's nursing a glass of beer. Van, a quiet man of 67 with a kind face and thinning white hair, sips a Diet Pepsi as she talks.

Chronic myeloid leukemia strikes about 5,000 people a year in the United States. It's caused when, for reasons that are not fully understood, two chromosomes swap pieces of DNA, creating an aberrant gene. "It was like a jet plane hit me," she recalls. "I heard the word 'leukemia' and it seared through my soul." She was told she had three-to-five years to live. An AP English teacher, she stayed in the classroom. It kept her going.

Every day she had to give herself a shot of interferon, the only approved treatment at the time. She developed horrible mouth sores. Sometimes they were so bad she couldn't talk. Her hair fell out. She was nauseous. Her weight plummeted. After 30 years of marriage, Van started doing all the grocery shopping. Every night he tried to feed her, lifting a fork to her mouth. "Here's the airplane," he would say to her tenderly. "Open up the hangar." "If he hadn't been with me," she says, her eyes tearing, "I think I would have died."

There was no Google then, but Van searched for answers online. He found a chat group for leukemia patients. A friend referred them to the leukemia specialists at UCLA. Garner was told the only cure was a bone-marrow transplant. When a match became available, she decided against the transplant because she had only about a 30-percent chance of surviving the treatment.

In April 1999, a clinical trial opened at UCLA for a revolutionary new therapy for CML. A drug had been developed by oncologist Brian J. Druker, MD, at Oregon Health Sciences University, with funding from the Leukemia Foundation. It was called imatinib, commercially known as Gleevec, and it worked by targeting the genetic defects of the cancer, while leaving the healthy cells alone. Many cancer experts had thought Dr. Druker's idea improbable, crazy even. The development of imatinib was a paradigm shift in cancer treatment. Not only did it work for CML, but it also turned out to be effective against other forms of cancer. At UCLA, one of three clinical-trial sites, there was room for only 30 patients. Garner was one of them. Two months into the trial, the blood cells in her bone marrow were normal. Within a year she was in major remission.

When it was clear the drug worked, she remembers Dr. Sawyers giving her the news. "In my mind’s
To have this happen — it felt like somebody pulled me out of the water when I was drowning."

Today, she wants people to know there’s always hope. That’s why she has devoted herself to talking with patients and raising money for leukemia research. Her email signature offers a quote from Gandhi: “Be the change you want to see in the world.”

Richard “Steelo” Vasquez

This past May, Richard Vasquez stood backstage watching his crew, the Groovaloos, do head spins and flips in front of a live audience on Dancing with the Stars. In a few minutes, he would join them, performing before millions of fans of the hit TV show.

His appearance on stage drew thunderous cheers and applause from the audience. Since suffering a series of ruptured brain aneurysms in June of 2011, “Steelo,” as he is known in the dance world, had to relearn to do everything again — to walk, to talk, to eat. Few thought the talented b-boy, who’d toured as a breakdancer with Gwen Stefani and performed on TV and videos and Off-Broadway, would ever dance again. He was just 32 years old.

When he sauntered onstage to a thumping beat, Vasquez had been out of the hospital only six months. But his body remembered the routine. When the song ended, he stood there listening to the roaring applause and chants of “Steelo!” Tears welled from his eyes. After that momentous night, his motivation to get better and dance took off. “It has done so much for his recovery to be on that show,” says his wife, Penni. “Before, I had to tell him every little thing to do. Now, he has surpassed everyone’s expectations of where he’d be in his recovery.”

The abandoned enthusiasm he received was “amazing,” Vasquez says, now seven months later, his long body folded into a chair. It’s a Wednesday afternoon, and he’s in a conference room at the Centre for Neuro Skills in Encino, where he does rehabilitation therapy five days a week, seven hours a day. A handsome man with dark eyes, he is wearing a black beret, black trousers, a black sweatshirt with comic-strip panels that a friend designed, and black sneakers with red accents. Friendly and warm, he gives a stranger a big hug.

Before his brain injury, he was different: loud, take-charge and confident.

His speech is still fuzzy. He tells his story, sometimes repeating himself, a sign of his brain injury. He was in church praying on Father’s Day with Penni and their little boy, Elijah, when he suddenly felt dizzy and collapsed. He was rushed to a nearby hospital, and then transferred to UCLA. He has a sense of irony about the timing. “365 days in a year, on Father’s Day in church,” he says.

Neil A Martin, MD, chairman of the Department of Neurosurgery, performed emergency surgery. For five days before the aneurysms ruptured, Vasquez had been walking around with a headache and vomiting. He was preparing to leave for a big dance competition in Korea. He had just started acting. “We were just
enjoying our life,” says Penni, a petite, pretty woman of 29 with long brown hair and big brown eyes. He proposed to her when they were dancing onstage with Gwen Stefani. “We had a new baby. He was in the middle of filming a movie.”

Vasquez doesn’t remember much about the hospital. “I know my wife, my friends were praying for me,” he says. “For me, prayer is key. I gotta pray.”

He pivots to his career. When he was 13 and living in Puerto Rico, where he was born, a well-known dancer taught him to breakdance. When he moved to Los Angeles in 1999, his mentor got him a job at a club on Melrose. After his surgery, he was afraid to do certain moves. But now he springs out of his chair and down to the carpet. Balancing on one hand, he kicks his leg out and then switches limbs.

In October, he danced and spoke at the Visionary Ball, a fundraising event for the UCLA Department of Neurosurgery. A short video of Vasquez’s life played, but most of the audience at the Beverly Wilshire Hotel was still getting settled in their seats. As he walked offstage, TV entertainment reporter Maria Menounos, who’d competed on Dancing with the Stars, held him back. “You guys need to see his video,” she told the crowd. “You guys need to see what an amazing story this man has. The reason he’s able to dance today is because of what Dr. Martin did.”

Vasquez doesn’t remember much about the hospital. “I know my wife, my friends were praying for me,” he says. “For me, prayer is key. I gotta pray.”

For me, prayer is key. I gotta pray. ...

My ministry is huge now because of what happened to me.”

- Richard “Steelo” Vasquez

Louise Cooper

In April of 1998, Louise Cooper was training for an adventure race in Ecuador. 48 Hours, the CBS News show, was going to shadow her. The event was happening in September, so the elementary-school teacher would miss the first few weeks of class. Although racing was an integral part of her life, when Cooper told her principal about the trip, “she was very upset with me because of the timing.”

It was a warm morning in late October, and Cooper was sitting on the patio of a Starbucks in Encino telling her story. Her frosted blonde hair gleamed in the sunlight. “I remember saying to her, ‘God forbid if I were sick, what would you say to me? You would tell me to take all the time I need.’”

In the end it didn’t matter. There would be no race.

Within days of that conversation, Cooper felt a lump in her breast. What followed next was as grueling a challenge as the athlete had ever faced. Cooper’s mammogram came up clean, but she knew something was off. So she called one of her closest friends, an oncologist who lived near her in the San Fernando Valley community of West Hills. His wife said he was out of town. Was something wrong? No, everything’s cool, Cooper said. Five minutes later, the phone rang. It was her friend, Dennis Slamon, MD, PhD, director of the Revlon/UCLA Women’s Cancer Research Program. He quickly got her in to see UCLA oncologic surgeon Helena Chang, MD.

A lumpectomy revealed that Cooper did indeed have breast cancer. It was a particularly virulent variety that Dr. Slamon had been targeting in his research and against which he had been working to develop an effective drug. After three surgeries, including a partial mastectomy, Cooper started chemotherapy. Midway through her treatments, Dr. Slamon put Cooper on the new drug, Herceptin. He fine-tuned her treatment. Because Cooper was so fit, he gave her a higher dose of chemo than most people received. 48 Hours filmed it all, along with four other people battling fatal diseases.

Cooper’s weight ballooned from the heavy steroids. She got weak. She lost her hair. One day, she tried to pretty herself up for an event with her adventure-racing friends. “I had this long skirt, I was going to wear a little beret,” she recalls. But she couldn’t zip up her boots, and when she looked in the mirror, she saw looking back at her “a chubby bald Buddha,” and she began to cry. That lasted about a minute. Then she put on her beret and went out anyway. “What else was I going to do? I wasn’t going to hide in my house,” she says.

She started treating her medical regimen like it was a training program. She crossed off the doses of each chemo session on her calendar. She made herself get up and walk. Gradually, she returned to running. Her racing friends encouraged her every step. “When
something is taken from you, your body has failed you, and you don’t have any control, I thought, ‘It’s not going to take everything from me. I will keep up my training,’” she says.

Still, it was hard. “I had lost all my muscle mass. I had no energy at all. You’re just so fatigued,” she says. “The nutrition is not what it should be. Everything tastes of metal. You’ve got ulcers in your mouth. I lost all my nails. I had Band-Aids on my fingers.”

But she endured. A month after she finished chemotherapy and radiation, she ran the Catalina Marathon. Five months after that, she completed the Badwater Ultra Marathon, a 135-mile race through Death Valley. “I wanted something challenging, because I hadn’t been doing anything challenging other than seven months of chemo,” she says. She finished the race in 40 hours, the second woman to cross the finish line. “That’s when I thought, ‘I’m back.’”

She never stopped teaching. When school began, they asked Cooper to wear a hat so her bare head wouldn’t frighten her students. The first day, a little girl asked her, “What’s under the hat?” Did the kids want to see? They did. “You look really cute,” they told Cooper. One child said, “You look like a Kew Pie doll.” The hat stayed off, and Cooper’s students painted designs on her head.

She tears up thinking about their kindness. Two boys shaved their heads in solidarity. Others measured her hair as it inched back. “I let the kids dictate how it was going to be at school, but I was always in control of what I was doing. It made me feel I’m not at the mercy of everyone else,” she says.

Her positive attitude got her through the ordeal. “I never let cancer define me or my life,” she says. “It just reinforced that I’d always been doing the right thing. It’s important to have goals and to allow people to help you. So often, you feel like you don’t want to be a burden. I never reached out as much as I should have.”

Now 59 years old, she has a new athletic passion: a desire to climb high peaks all over the world. So far she has climbed volcanos in Ecuador, Mount Kilimanjaro in Tanzania, Mount Elbrus in Russia, Mount Aconcagua in Argentina and missed summiting Mount Denali in Alaska due to an avalanche. She also has become involved with Project Athena, an organization that helps women who have overcome medical setbacks to realize their athletic dreams.

“This is my way of trying to inspire other women,” she says. “Hey, you had cancer. That’s not who you are. What do you want to do?”

Mona Gable is a blogger and freelance writer in Los Angeles. Alaska-based writer Julie Stricker reported on Cindy Abbott from Fairbanks.

“When something is taken from you, your body has failed you, and you don’t have any control, I thought, ‘It’s not going to take everything from me.’”

- Louise Cooper
Elisha Garg has yet to begin her first clinical rotation, but the UCLA medical student’s full-time participation as an investigator in a pair of closely watched clinical trials has her thinking ahead.

After completing her first two years, Garg is on leave from the David Geffen School of Medicine at UCLA to participate in a prestigious fellowship from the Howard Hughes Medical Institute. She is among 70 students from across the country in the HHMI Medical Research Fellows Program, a $2.5-million annual initiative to increase the training of future physician-scientists by sustaining medical students through an intensive year-long laboratory experience. The fellowship supports Garg’s work in the lab of Roger Lo, MD, PhD, assistant professor of medicine/dermatology and molecular and medical pharmacology.

Garg is a key contributor to the effort by Dr. Lo’s group to find ways to overcome resistance among patients with advanced melanoma to new drugs that target a mutation in the BRAF gene, V600, which is associated with about half of the cases of metastatic melanoma. BRAF inhibitors have been successful in treating patients with late-stage metastatic melanoma with this mutation, but inevitably these patients develop resistance and other unwanted side effects to the drugs. Garg is part of a team seeking to determine how the melanoma cells are eventually able to escape the effects of the drugs that target mutations in both BRAF and another implicated gene, MEK – work that could lead to improved targeted therapy.

After completing her research fellowship, Garg looks forward to returning to medical school for her third year, during which she will begin seeing patients and making connections between her laboratory experience and clinical practice. But she’s also taking the longer view. “There are so many diseases that we don’t understand or have cures for, and it’s exciting to be contributing to finding answers that are going to affect patients in a very real way,” Garg says. “In a couple of years, I’ll be a physician seeing these patients, and I might have to tell them we have no good therapy for them. But because of all the research going into understanding the disease, by the time I’m 40 or 50 and seeing similar patients, I may be able to tell them that we do have a new drug that can help. That’s very rewarding.”

In her pursuit of research experience, Garg is far from alone among her peers in medical school. Ninety percent of UCLA medical students participated in meaningful research in 2012, says Sarika Thakur, EdD, research director for the David Geffen School of Medicine at UCLA. That’s a much higher percentage than at most other medical schools, says Dr. Thakur, who advises and assists students in identifying research opportunities and applying for programs and fellowships, many of which are funded by the dean’s office of the...
From left: Elisha Garg is investigating ways to overcome resistance among patients with advanced melanoma to new drugs; David Tran is examining the impact of social networking on adolescents undergoing treatment for substance abuse; and Daniel Croymans looks at how healthy lifestyle choices affect metabolic and cardiovascular disease.

medical school. Many of the students get their feet wet under the tutelage of postdoctoral fellows and faculty principal investigators, while some go on to independent studies. Many students end up as authors on peer-reviewed journal publications.

And some take it a step further. After spearheading a study in the Lincoln Heights community of East Los Angeles in which he found that exposure to online social networking sites had a negative impact on adolescents undergoing substance-abuse treatment, fourth-year student David Tran was selected as the only student among 300 MDs and PhDs to orally present his research at the American Psychiatric Association’s 2012 meeting in Philadelphia. Tran, who conducted the study under the mentorship of Keith Heinzerling, MD, a UCLA internist and addiction-medicine specialist, was also chosen to participate in a media briefing on the findings. “David was able to combine a pursuit of scholarly research activities with providing community service and representing the university in an underserved neighborhood,” says Dr. Heinzerling. “One of UCLA’s purposes is to improve the quality of life for people living in Los Angeles, and students working in the community represent a very effective means for UCLA to make that vision real.”

Third-year student Marko Spasic joined the laboratory of neurosurgeon Isaac Yang, MD, shortly after Dr. Yang established his research program to better understand and develop new therapies for glioblastoma, a deadly form of brain cancer. Spasic became the first UCLA medical student in years to receive two prestigious awards – the American Association of Neurological Surgeons Summer Research Fellowship and the Alpha Omega Alpha Carolyn L. Kuckein Student Research Fellowship – and he has played an active role in Dr. Yang’s lab, working on a variety of projects that have led to nine published papers, with several more that have been accepted and numerous others in progress.

“Marko got a grant to study nanoparticles in brain tumors and then used that experience to take the research in a new direction, looking at stem cells that he was able to isolate in brain cancer,” Dr. Yang explains. “He is the quintessential example of the ideal UCLA medical student – incredibly smart, compassionate and pushing the envelope of what medicine can do.”

“Given the amount of information that needs to be covered during medical school, there is minimal time in class dedicated to questioning things,” says third-year student Daniel Croymans. “Research is a great way to dive into topics that you might get to touch only on the surface during your medical education, a way to develop analytic and critical thinking skills with the hope that you will enhance our current knowledge base. That’s why I was attracted to it.”

As part of the medical school’s Pathways in Clinical and Translational Research certificate program, which connects students with mentors and offers educational opportunities as a way of building skills and promoting clinical and translational research, Croymans studies the efficacy and mechanisms by which healthy lifestyle choices prevent metabolic and cardiovascular diseases. For the last five years – beginning as a UCLA undergraduate and continuing through his master’s program – Croymans has worked in the lab of Christian Roberts, PhD, a physiologist in the UCLA School of Nursing. As the first member of Dr. Roberts’ lab, “Daniel has helped
Dr. Roberts is a strong proponent of medical students participating in the research process. “It’s one thing to attend a class and read a study on a given topic,” he says. “However, with a clear understanding of the basis for the ultimate conclusion of the research, one’s frame of reference completely shifts. In addition, those who have significant research experience can gain a much deeper appreciation for everything that is involved in the research process, from the germination of an idea until the completed study is published.”

Like many UCLA medical students who become intimately involved in research, Croymans is eyeing a career in academic medicine, and he says the Pathways in Clinical and Translational Research program has provided invaluable exposure to mentors whose footsteps he hopes to follow. But even for students who don’t plan to make research part of their career, the experience provides a foundation for becoming an outstanding clinician, notes Owen Witte, MD, President’s Chair in Developmental Immunology, Microbiology, Immunology & Molecular Genetics and director of UCLA’s Eli and Edythe Broad Center of Regenerative Medicine and Stem Cell Research.

“The best clinicians I know are the ones who are both scientifically literate and scientifically practiced,” Dr. Witte says. “The genetics, physiology and biochemistry involved in decisions about prescribing a drug or ordering a diagnostic test are much better understood when the physician’s training includes the conduct of science rather than just reading about the results of science. That’s why we’re seeing more and more students becoming involved in research. It helps them later, as the complexity of medicine changes due to the influx of more scientific principles.”

It should come as no surprise that students interested in obtaining significant research experiences would be drawn to UCLA by its standing among the world’s elite academic medical centers. But more than merely being located in a research-centered environment, UCLA offers students myriad opportunities and support designed to encourage them to take part.

For the summer after their first year, students can apply for any of approximately 20 UCLA-funded fellowship programs that support research, as well as one of the national summer fellowships. “Students receive a stipend that enables them to gain exposure to a variety of research experiences early on,” Dr. Thakur explains. At that time, many find their niche and decide to prolong their association with a lab in some form.

Second-year students are eligible for funding to attend the annual Western Student Medical Research Forum in January, where they can present their work to faculty and other medical students from as many as two-dozen universities throughout the United States. Students who enroll in the MD/PhD program take time after their second year to complete their PhD before returning to the medical-school curriculum. The Student Affairs Office assists all students in the process of applying for the research fellowships, whether they’re funded by UCLA or an outside source.

Because many students’ stints in the lab are short and it takes time to train them, Dr. Witte tends to view bringing students in as more of an investment in the future of science and medicine than as a benefit to
his lab. "But there are exceptions," he says. "When it does help, it’s not in the provision of labor, but in the provision of a different point of view. People who are trained in the medical arena bring a certain type of questioning and interest to basic-research problems and a perspective on how to take the basic research back to the clinic."

One such exception is Steve Blum, a second-year medical student who began attending meetings and learning procedures and protocols for Dr. Witte’s lab in January of his first year, then hit the ground running in May, working full-time in the lab as one of 33 recipients of the Howard Hughes Medical Institute Summer Scholars program award. Blum knew Dr. Witte prior to medical school, having met him when Blum worked for a firm that evaluated and developed early-stage biotechnology companies. After seeing research at all phases from his perch in the biotech field, Blum decided he wanted to go to a medical school where he would be prepared to address clinical questions through research.

“Dr. Witte was a great mentor for me when I was applying, and when I began searching for research opportunities, he helped me to explore a number of prospects before I determined that his lab was an ideal choice for me,” Blum says.

Blum’s summer project focused on studying the DNA of tissues removed from cancer patients to determine if prostate and ovarian tumors contained a mutation in the gene encoding Trop2 – a protein shown by Dr. Witte’s lab to be involved in the development and proliferation of certain tumors. He has continued to work part-time in Dr. Witte’s lab during the school year. “Steve is exceptional at many levels,” Dr. Witte says. “He is doing all that I would hope a medical student working part-time could do – interacting well with others, picking up new technologies, and finding a niche for himself where he can be a valuable component of the team.”

The time spent in Dr. Witte’s lab has confirmed Blum’s desire to pursue a career in academic medicine, balancing research and patient care. “In the past, I had done more theoretical types of projects,” Blum says. “One of the things I’ve gained from this experience is the opportunity to work with clinical material and questions that are closer to human biology. It’s been rewarding to learn the basic-science approach to clinical issues – how you talk through the problems, formulate questions and take on the challenges. The great thing about this type of research is that when you solve a problem you can translate it into something that can help patients. That’s very motivating.”

Marko Spasic finds himself drawn to research for similar reasons. “I love the camaraderie and the challenge of problem-solving and answering questions,” he says. “But what really pushes me is the knowledge that we’re answering questions that can have an impact on patient care.”

He joined Dr. Yang’s lab in the fall of his first year and, with his two fellowship awards, has helped to move the lab closer to its goal of developing an effective therapy for glioblastoma, the most common primary malignant brain tumor, which is associated with a life expectancy of a little more than a year and has few treatment options. One of the focuses of the lab is to assess the potential of new immunotherapy strategies for treating glioblastoma, including the use of vault nanoparticles – naturally occurring structures in the body that appear to be effective in helping to direct immune cells to tumors. Spasic’s projects have ranged from laboratory studies assessing the impact of targeting glioblastoma stem cells that include CD133, a marker for more aggressive malignant cells, to clinical research evaluating the efficacy and side effects of new therapies for brain tumors.

Beyond the research experience per se, Spasic and other students interested in blending research and clinical practice in their careers benefit from mentors who are doing just that. “I love dissecting the problems, but I also love interacting with patients, and it will be challenging to find the right balance between the two,” Spasic says. “Dr. Yang is a great example of that. He leads a productive lab and is incredibly dedicated to mentoring students, and at the same time he is constantly making himself available to patients. He serves as an inspiring example for what I want to become.”

The inspiration goes both ways. “Medical students bring so much energy, enthusiasm and fresh ideas to research,” says Dr. Heinzerling. Tran is one such student. He has kept himself busy on a number of research projects in addition to the study on the effects of social media on adolescents in substance-abuse treatment. Tran is one of the lead researchers in designing and running a longitudinal study measuring the knowledge and attitudes of UCLA medical students regarding gay, lesbian, bisexual and transgender persons; co-principal investigator of a qualitative study exploring the experiences and perspectives of black males pursuing a career in medicine; and was one of the lead researchers on the Diversity Initiative Executive Research Team, which developed a statement reflecting the values and goals for UCLA Health on diversity and inclusion issues.
Tran, who received the Albert Schweitzer Fellowship and Jeanne Spurlock Research Fellowship in Substance Abuse and Addiction from the American Academy of Child and Adolescent Psychiatry Association to support the social-media study, worked with Dr. Heinzerling to identify potential triggers that could cause recovering addicts to experience a relapse, and decided to investigate the impact of social-networking sites. As a follow-up, the research team is studying the feasibility of harnessing the power of social media into something positive by creating online support groups through Facebook.

As an undergraduate, Tran engaged in basic research; while he enjoyed it, he found his calling at UCLA when he was introduced to community-based health-services research. He is concurrently pursuing a master’s degree in public policy and is part of the UCLA-PRIME program, which trains future physicians who will address the needs of medically underserved communities, with plans to complete a residency in psychiatry and pursue a career in which he can influence mental health policy. “To be able to think about a problem and try to identify outside-the-box solutions is exciting,” he says. “Studying ways to improve health at the community level provides a great complement to learning things like basic pathophysiology.”

Under the guidance of Dr. Roberts in the UCLA Exercise and Metabolic Disease Research lab, Croymans has parlayed work he began as a master’s student – including leading a small clinical trial examining the effects of resistance training on arterial function, glucose tolerance and overall metabolic health; and a cross-sectional study assessing the relationship between training status, body composition and metabolic-disease risk – into independent studies that are being submitted to and published in peer-reviewed journals. He is interested in ultimately taking his findings into the community in an effort to explore how interventions to increase exercise can best lead to meaningful change.

“It used to be that to be a good physician, you just needed to know everything,” Croymans says. “But the knowledge base has grown so dramatically that that’s no longer the case, and now the real power is in being able to critically appraise and evaluate the knowledge that’s put before us toward an evidence-based practice that improves patient outcomes and quality of life. Research sets a strong foundation to do that, and more than other programs I looked at, UCLA provides the freedom and support to become involved in research in meaningful ways.”

Dan Gordon is a regular contributor to U Magazine.
IFTEEN YEARS AGO, Nestor R. Gonzalez, MD, was at the beginning of a promising medical career in his native Colombia. He was just 26 years old and teaching medical ethics and the history of medicine at Bogota’s University of El Rosario School of Medicine, where he was an associate professor, while completing his residency in diagnostic radiology. And he had just received the prestigious National Radiology Award, conferred by the Colombian Radiology Association for best original research.

But Dr. Gonzalez’s life in Colombia during the 1990s overlapped a difficult and dark period for his country. The decades-long conflict that had raged between Colombia’s government and groups of rural guerrillas was especially intense. Citizens ached from bombings, indiscriminate killings and other violence. Medical and other professionals were particularly vulnerable to kidnapping by paramilitary or guerrilla organizations, leading Colombia to become known as the kidnap capital of the world. One of Dr. Gonzalez’s professors while he was a student, the dean of the medical school, was kidnapped for ransom and killed.

“It was a dangerous period in Colombia for educated professionals,” says Dr. Gonzalez, now 41 and an assistant professor of neurological surgery and interventional neuroradiology, he now is recognized as one of the most innovative clinicians and researchers in the country.

BY MARINA DUNDJERSKI  ☺  PHOTOGRAPH BY MARK BERNDT
Radiological sciences at UCLA and holder of the Ruth and Raymond Stotter Endowed Chair in Neurosurgery. “It was a scary time, when the future was not very clear, and you couldn’t count on knowing if you were going to be alive the next day.”

Many Colombians left the country, Dr. Gonzalez among them. He came to the United States, where he believed “one could work hard and make one’s own path.” The national award he had won brought Dr. Gonzalez to the attention of UCLA’s director of interventional neuroradiology, Fernando Vinuela, MD. With Dr. Vinuela’s encouragement, Dr. Gonzalez accepted an appointment in 1999 as a visiting assistant professor in the Division of Interventional Radiology at UCLA.

“I had the option of staying in Colombia and trying to practice medicine in a very limited environment in a country that was unstable and where one’s life was threatened almost every day,” Dr. Gonzalez says. “Or, I had the opportunity to come to the United States and achieve more training and be able to practice medicine at the level that I wanted.”

For two years, Dr. Gonzalez worked side-by-side with UCLA interventionalists and neurosurgeons, treating vascular problems of the brain. Their dedication and close interaction with patients convinced Dr. Gonzalez to make “one of the best decisions of my life.” He decided to complete a residency in neurological surgery and then to pursue a fellowship in endovascular neurosurgery, also known as interventional neuroradiology.

By 2007, Dr. Gonzalez achieved the unique distinction of having completed two separate and distinct residency programs. Today, he is one of a few specialists in the country with the skills to treat cerebrovascular diseases with the use of both surgical and minimally invasive endovascular techniques.

“Due to his dual training, Nestor has the ability to understand the way that blood vessels behave on both the inside and the outside,” says Jeffrey Saver, MD, professor of neurology and director of the UCLA Stroke Center. “As a catheter manipulator, he has a host of tools that he can use to unclog aneurysms. But as a neurosurgeon, he also has the ability to operate on the vessels from the outside and remove tangles of abnormal blood vessels and create new plumbing by connecting brain blood-vessel pipes in new ways.

BUILDING A MENTAL 3D IMAGE of blood vessels and the anatomy of the brain is a distinct advantage in Dr. Gonzalez’s work as a neurosurgeon, which also plays a critical role in his current research. Patients who have progressive narrowing of the arteries within their brains are a particularly challenging population for doctors. They are at high risk for recurring strokes, and difficult-to-reach vessels make surgery complex and difficult.

“We have failed with multiple treatment efforts over the last decade,” says Dr. Saver, who collaborates on research with Dr. Gonzalez. “Treatments like aspirin and Coumadin only work to a small degree, and using balloon angioplasty and stenting recently failed in a nationwide trial. So Nestor has developed a new approach to creating a low-pressure network of new blood-vessel connections between the blood vessels of the scalp and those of the brain. It is really a radically new and promising strategy for these patients.”

Called encephalo-duro-arteriosynangiosis surgery (EDAS), the procedure reroutes arteries from in front of the ear that normally go to the scalp inside the skull to encourage the formation of new connections between them and the brain tissue. Rather than trying to fix the malformation of a specific artery, Dr. Gonzalez moves a healthier one – like ivy tendrils that climb up a wall – guiding it to grow where needed. “When time passes, they naturally create new connections and start bringing blood from an alternative route,” Dr. Gonzalez says. “Basically, we help nature to provide additional collateral flow to the brain through these arteries, which otherwise would not be able to do it, as they are separated by the bone and other barriers from the arteries of the brain.”

Because the vessels grow organically from the scalp arteries toward the brain tissue in response to the brain’s demands for oxygen, the procedure, unlike bypass surgery, does not disrupt the patient’s native brain arteries, and the risk of stroke is low.

This procedure had been used successfully with pediatric patients in Japan, but it had not been widely applied or tested in adults. Dr. Gonzalez’s work has put UCLA at the forefront in the application of this technique. A recent study of approximately 20 of his patients who received the surgery showed good results and demonstrated the safety and effectiveness of the surgery in patients with atherosclerotic disease. Based on the results of upcoming trials with a larger population, the next step would be to conduct a phase-3 multicenter trial that includes other institutions across the country.

His work has attracted national attention. “Nestor’s research is certainly innovative and very promising, and he is courageous enough to undertake it,” says Mario Zuccarello, MD, chairman of the Department of Surgery at the University of Cincinnati. “It’s the application of this approach to those patients that clearly shows he is a forward thinker. He has a very inquisitive mind and asks questions that not everyone asks.”

In addition, Dr. Gonzalez is working with Luisa Iruela-Arispe, PhD, in UCLA’s Department of Molecular Biology, to understand the molecular biology underlying the growth of blood vessels in response to increased blood flow. “If we can better understand the
molecules that are involved in the growth of those new arteries,” says Dr. Gonzalez, “then we could manipulate them to make that growth happen faster or stimulate them in patients who are typically not responsive.”

AS PASSIONATE AND DRIVEN AS HE IS TODAY, Dr. Gonzalez had no clear career path growing up. As a youth, he excelled in mathematics and considered becoming an engineer like his father. But he was also artistic, like his mother, and enjoyed painting and building models. “I was also good in biology and found the complexity of living systems amazing,” Dr. Gonzalez recalls. “It was a conundrum because I didn’t know what to do.”

Then, the answer appeared with certain clarity: If he became a doctor, he could combine all three of his passions. “You use the same scientific approach you would in mathematics and biology but are also able to be creative and do things with your hands,” he explains. “Nothing else offered me the possibility of putting all three things together.” The concept of practicing medicine was not new within his family; his grandfather had been a doctor.

After earning an undergraduate degree at the age of 16, he enrolled in medical school. The University of El Rosario was founded in 1653, and it is known as “the cradle of the republic” for its significance in Colombian history. More than two dozen of the nation’s presidents were schooled there. The medical school only accepts about 50 students per year, and approximately half graduate with each class. When Dr. Gonzalez graduated at the age of 22, he had earned the highest grades ever attained by a student in the history of the medical school.

Following graduation, Dr. Gonzalez interned in the surgery department of the Fundacion Santa Fe de Bogota, where he became particularly interested in vascular surgery; however, he realized as his internship was coming to its end that the introduction of new technology and procedures was dramatically altering the field. “Endovascular surgery – operating on veins and arteries from the inside – was going to change the way surgery was done,” Dr. Gonzalez says. He decided to pursue a career in radiology.

Simultaneous to completing his residency in radiology, Dr. Gonzalez had an interest in medical history and ethics that led him to enroll in the University of El Rosario’s School of Law where, in 1996, he received a diplomate in medical legislation. He was appointed editor of the Heraldo Medico, a journal devoted to legal and ethical issues in medicine, and he further cultivated that knowledge by teaching medical ethics and the history of medicine.

“History teaches us the mistakes and the successes of our predecessors,” Dr. Gonzalez says. “By reapplying those lessons in a new way, one can change the field of medicine; however, everything we do needs to be governed by a deep commitment to be good to other fellow humans; everything we do should be for the benefit of our patients.”

Along with Jose F. Patiño, MD, a key leader in the modernization of medicine in Colombia, and members of the surgery department at the Fundacion Santa Fe de Bogota, Dr. Gonzalez helped produce a manual on procedures for operating rooms. It was groundbreaking and became widely adopted throughout Latin America.

DR. GONZALEZ ANTICIPATES BECOMING A U.S CITIZEN in 2015. But he has not forgotten about his homeland, and he has continued to help develop the field of medicine in Colombia.

After a decade in the United States without returning to Colombia due to safety concerns, Dr. Gonzalez went there for his brother’s wedding in 2011. That visit spurred an invitation from Dr. Patiño to help establish the Center of Excellence for the Management of Acute Stroke in Bogota – the first center of its kind in the country. Dr. Gonzalez led a series of conferences and lectures on stroke-related issues, and he has helped create a public-service announcement on stroke awareness that aired on Colombian television.

His cumulative work has gained Dr. Gonzalez an international reputation that only promises more for the future, says Dr. Giuseppe Lanzino, MD, professor of neurosurgery at the Mayo Clinic. “He is one of the few surgeons of his generation to be very successful in performing some true research,” Dr. Lanzino says. “Considering his relatively young age, that’s a big achievement.”

Bewilderment and anxiety often shadow patients following a diagnosis of cancer.

By Shari Roan
Illustration by David Senior
In the days that followed the discovery of a mass in her abdomen, Judith Carden was stunned and frightened. After awakening from surgery and learning she had ovarian cancer, her feelings vacillated, and she felt determined to fight. But midway through her chemotherapy treatments, she was sad and exhausted.

That was just the beginning of an emotional journey that has paralleled and, to some extent, overtaken Carden’s physical battle with cancer. Despite superior medical care and a good prognosis, the retired nurse’s life was upended by a range of baffling, intense emotions. Even after completing treatment, a bout of depression hijacked her return to a normal life.

“The anxiety and depression are so bewildering,” says Carden, who was 67 when she was diagnosed in 2008. “You feel frustrated because in your mind you’re saying, ‘I’m so lucky to be alive.’ I wanted to get out and do things. But I wasn’t able to.”

The emotional toll of cancer, such as Carden experienced, can be devastating for patients. Addressing that toll has emerged as a vital aspect of treatment and recovery, says Anne Coscarelli, PhD, director of the Simms/Mann UCLA Center for Integrative Oncology, which helps patients and family members focus on wellness during cancer treatment and recovery. New research shows a cancer diagnosis can reroute an individual’s emotional life journey and even affect the success of treatment and survival.
“When I started working in the field 32 years ago, there was little attention paid to the psychological issues people had during treatment,” Dr. Coscarelli says. “The focus was on how to get the cancer under control. Now we’re paying attention to the whole person with cancer. There is a greater awareness that cancer affects more than just the body.”

Depression, anxiety, fear and sadness are common emotions following a diagnosis, according to the American Cancer Society (ACS). Psychological distress tends to affect men and women equally, and is often more common among younger people with cancer and those who endure long and complicated treatments. While some people experience minimal angst, a majority of patients experience what is often called “reactive depression,” a period of anxiety and worry that eventually eases as the patient adjusts, according to the National Cancer Institute (NCI). Still others face more serious emotional distress, such as profound sadness that can last for weeks or months. About one-quarter of cancer patients develop clinical depression, the ACS estimates – a rate that that is two-to-three times higher than in the general population.

“Sixty-six percent of cancer patients have what we call an adjustment disorder,” says David K. Wellisch, PhD, professor of psychiatry and biobehavioral sciences. “It’s very common. The issue becomes, is it transient, or does it persist and become clinical depression?”

People who have had a previous bout with depression appear more likely to suffer depression following the diagnosis, while those who seem resilient to life’s hardships tend to cope somewhat better.

“The style to which people are involved in life psychologically is going to be very much the style to which they react to cancer,” Dr. Wellisch says. “If they are a chronically anxious person, then the reaction is going to be severe anxiety. If one is a depressive type, they are likely to be depressed. If they are active copers – gathering support and actively approaching their problems – that is how they will likely respond.”

But it’s a myth that emotional suffering is an inevitable part of the cancer experience, says Annette Stanton, PhD, professor of psychology and senior research scientist at the UCLA Norman Cousins Center for Psychoneuroimmunology. “The first myth is that depression is a natural consequence of cancer. But most people, in fact, do not get clinically depressed,” she says. “The second assumption is that as you recover, your depression will recover, too. We don’t really know that that’s true.”

Since it’s not always clear who will become emotionally distressed or how long those feelings might last, a growing number of experts refer patients to places like the Simms/Mann Center, which is part of UCLA’s Jonsson Comprehensive Cancer Center, for psychological support during cancer treatment.

That emotional fallout from cancer is understandable. Despite greatly improved survival rates from even 15 years ago, cancer remains a feared disease. And cancer treatment, while vastly improved, is typically harsh and prolonged.

Tests. Biopsies. Surgery. Radiation. Chemotherapy. Physical therapy. Pills. Prosthetics. Transfusions. It can be a daunting experience for even the most stout of heart, says Dr. Coscarelli. She refers to the emotional fallout as Coscarelli’s Law: “For every physical effect, there is an equal reactive psychological effect.”

Cancer upends one’s current and future plans in the rudest fashion. Suddenly, an individual is forced to confront mortality. Changes in physical appearance can diminish self-esteem. People worry that they will become a burden to their loved ones. Work and financial insecurities emerge. Family members are affected. Dealing with the changes creates constant stress.

“There are all these other things that happen to people as a result of a cancer diagnosis,” Dr. Coscarelli says. “Their lives are turned upside down.”

Then there is the impact of treatments that cause pain, sap energy, dull the taste of food and interrupt sleep. “Cancer clearly is a threat to one’s survival,” says Michael Irwin, MD, director of the Cousins Center for Psychoneuroimmunology. “To survive, the patient has to undergo these treatments that are quite severe and interfere with his or her ability to enjoy life.”

Patients who are experiencing psychological distress should first undergo a comprehensive physical evaluation, says Thomas Strouse, MD, medical director of the Stewart and Lynda Resnick Neuropsychiatric Hospital at UCLA and an expert in the psychiatric aspects of medical illness and cancer-pain management. About half of the patients referred to him for possible depression actually have under-managed or unmanaged pain or other side effects of treatment.

“It’s easy for the clinician to call it something like depression, but that may not correctly or helpfully summarize what’s really happening,” Dr. Strouse says. “I tell the patient, ‘Let’s get your pain under control and talk again in a few days.’ Often, what I find myself doing is not prescribing Prozac but helping optimize the anti-nausea regimen or the anti-pain regimen or the anti-fatigue regimen.”

There is some evidence that depression can be caused by the cancer itself. Inflammation, triggered by the immune system as a natural response to illness, alters substances in the brain that play key roles in mood and cognition, Dr. Irwin says. The process involves over-production of cytokines, protein messengers that regulate the immune system and, as researchers have only recently learned, affect these neurotransmitters.

“A lot of immunologists were skeptical that these cytokines would have any effect on the brain,” Dr. Irwin says. “Indeed, these effects are robust and immediate. They actually can activate changes in the brain and the central nervous system that produce these
behavioral changes.”

“Understanding who is at risk to over-produce inflammatory cytokines following cancer diagnosis and treatment is critical. A past history of depression and sleep disturbance may make people sensitive to activation of the inflammatory process and also increase the chances of having a depression,” Dr. Irwin says. “For some people, cancer treatment activates these biological signals, and they can’t easily be shut down.”

Inflammation can also contribute to other common side effects of cancer treatment that occur with depression, including fatigue and cognitive complaints. Research conducted by Julienne Bower, PhD ’98, associate professor of health psychology and a research scientist in the Cousins Center and UCLA’s Jonsson Comprehensive Cancer Center, has shown that inflammation may underlie the persistent fatigue that occurs in approximately one-third of cancer survivors.

The cancer-depression connection is a two-way street, it seems. Resolving psychological distress may affect recovery, remission or survival, Dr. Wellisch says. “Depression or anxiety can seriously interfere with one’s ability to tolerate treatment. It interferes with the quality of life of the family. It interferes with a patient’s ability to readjust and go on without immobilizing fears that he or she is going to get cancer again.”

There is also evidence that poor mental health has an independent effect on the outcome of treatment and survival. A 2012 study, published in the journal PLoS, looked at 217 cancer patients and found 23 percent of people were depressed. Those people did not survive as long as similar patients who were not depressed, even after doctors controlled for factors related to their disease.

The depressed patients also had different patterns of cortisol secretion. Cortisol is a hormone produced by the adrenal gland in response to stress. Research has shown chronic stress causes the body to become less sensitive to cortisol, and the hormone loses its effectiveness in regulating inflammation.

The potential for depression to affect treatment outcomes has led some major medical centers, such as UCLA, to provide mental-health screenings to many patients as a routine part of cancer care. Dr. Irwin calls such an emotional assessment the “sixth vital sign” – one of a handful of key measures that show how a patient is faring.

A mental-health check-up might be helpful at the conclusion of cancer treatment, too. Perhaps one of the most startling realizations to come out of research on cancer and psychological distress is that many people hit the mat, emotionally, in the recovery phase.

That’s what happened to Carden. She embraced six cycles of chemotherapy and seven weeks of daily radiation. “I felt I had a job to do,” she says. “It was like, wow, I’m in there fighting. I can do this. It’s a good feeling.”

But months after finishing treatment, a friend prodded her to seek counseling at the Simms/Mann Center. The once-confident clinical-research nurse had become withdrawn and lacked the energy to pursue activities she once enjoyed.

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**WARNING SIGNS OF CLINICAL DEPRESSION**

About one in four people with cancer will experience clinical depression, a level of depression that causes significant distress and interferes with daily functioning. The symptoms include:

- Sad or empty mood for most of the day.
- Loss of interest or pleasure in most activities.
- Major weight loss or weight gain without intending it.
- Feelings of lethargy or restlessness or agitation most of the day, so much so that others notice.
- Extreme tiredness and loss of energy.
- Trouble sleeping, including waking too early, sleeping too much or inability to fall asleep.
- Trouble thinking, focusing, concentrating, remembering things or making decisions.
- Guilty, hopeless and worthless feelings.
- Frequent thoughts of death or suicide, making suicide plans or suicide attempts.

Some of these things, such as fatigue, can be caused by the cancer treatment. But if you have five or more of these symptoms every day for two weeks or more, talk to a healthcare professional.

Source: American Cancer Society
“When I became untethered from treatment, I kind of fell apart,” she says. “I became less confident and depressed. I wasn’t in control anymore.”

After the crisis has passed, people with cancer realize that their lives have changed, says Josephine McNary, MD, a psychiatrist at the Simms/Mann Center. From 60- to 70- percent of people who seek psychological treatments do so after completing cancer treatment.

Carden was dismayed that some physical symptoms, such as fatigue, lingered long after her last cancer treatment. An NCI-funded study, published in October 2012, found that one-third of cancer survivors have mental problems or physical side effects such as pain or fatigue that affect emotional well-being long after the cancer is treated. Ten percent of cancer survivors reported poor mental health compared to 6 percent among adults without cancer, according to the study, published in the journal Cancer Epidemiology, Biomarkers & Prevention.

“We talk about the new normal of life after cancer,” Dr. McNary says of the post-cancer emotional recovery. “People who expect to get their life back in the same way and resume life as normal – they are the ones who have a hard time adjusting. They don’t realize it’s a life-changing experience.”

At the Simms/Mann Center, experts identify the source of the patient’s distress and help them establish equilibrium for themselves. A wide variety of psychological and social support is offered because people differ regarding what they like and need, Dr. Coscarelli says. How an individual copes and what she needs depends on age, life stage, other events going on, past history of depression and experience in the past dealing with trauma or difficult circumstances, among other factors. “It’s an individual equation for each person,” she says.

For people diagnosed with major depression, psychotherapy and medication are typically recommended. More cancer patients would likely benefit from medications, such as antidepressants, according to the NCI; about 25 percent of cancer patients are depressed, but only 16 percent receive medication for depression.

Both psychotherapy and medication can be effective, says Dr. Stanton, who recently conducted a study, published in the Journal of the National Cancer Institute, on the treatment of depression in cancer patients. Among the various types of psychological treatments, one form called cognitve behavioral therapy – designed to help people understand and manage the thoughts and feelings that influence their behavior – seemed most effective.

But more research is needed to determine if cancer patients with depression would benefit from a more-specialized approach and what factors increase the risk of developing depression, she says. For example, Dr. Irwin and Dr. Stanton each have NCI grants to study risk factors, such as sleep disturbance and specific coping processes, that may lead to depression in breast-cancer patients.

The Simms/Mann Center provides individual counseling and support groups for patients and family members. “It is about identifying the problem, intervening and finding resources acceptable to the family,” Dr. Wellisch says. “It’s more acceptable now to admit you are stressed, anxious or depressed because you have cancer. It’s not such a shame.”

In addition to counseling, the center holds lectures and classes on nutrition, art therapy, mindfulness, relaxation, meditation, guided imagery, yoga, tai chi and other forms of exercise. According to Dr. Irwin, activities that involve both movement and a meditation, such as tai chi, may be especially helpful to reduce inflammation.

Mindfulness therapy – a practice derived from Buddhism that focuses on looking at life with an open and nonjudgmental attention – is also emerging as a powerful tool to steer people through the rigors of cancer treatment, Dr. McNary says.

Patients at the Simms/Mann Center who are interested in complementary medical therapies such as vitamins, herbs or Eastern medical practices like acupuncture – can also have a consultation with a medical doctor who specializes in those therapies. Complementary medical practices often give patients a feeling of taking control of their battle with the disease, Dr. Coscarelli says. But safety should be considered. For example, St. John’s wort, an herb touted for its antidepressant properties, can dilute the effectiveness of certain cancer drugs.

“Patients have known about and embraced complementary and alternative therapies, Dr. Strouse says. “Nowadays, doctors have a much more collaborative outlook. We want to know about it, too. We want to make sure it’s not going to hurt you. We want to make sure there aren’t drug interactions, for example, that might be harmful. But we welcome it.”

Most of the services at Simms/Mann are free, the result of philanthropic support from the community and patient donations. While the center can’t produce statistics on the number of lives saved, patients often report that treatment for their psychological distress was essential to their recovery, Dr. Coscarelli says.

She recalls a member of the center’s board of directors who put it this way: “Medicine is not enough.”

“I think that phrase coins what this center means to people,” she says. “We provide these services because we think medicine alone is not enough. The goal is to make it easier for people on what is already a difficult journey.”

It was with such support that Judith Carden found her way out of the long and dim tunnel of cancer and depression. She was counseled at the Simms/Mann Center, began taking an antidepressant medication and started exercising and doing volunteer work.

“It was so helpful to speak to people who understand what you’re going through,” she says. “I got myself out of my shell and back out in the world. I have days when I’m exhausted. But I’ve learned how to deal with it and not feel guilty or isolated or fearful. Cancer is a life-changing experience. And now, I feel very grateful for my life.”

Freelance writer Shari Roan covered medicine and healthcare for the Los Angeles Times.
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Dr. Magic

By Kim Kowsky

To help break the ice with nervous patients, Arash Naeim, MD ’95, PhD, has a couple of tricks up his sleeve. Literally.

Dr. Naeim is an oncologist by day, but in his spare moments, he’s an illusionist who specializes in prestidigitation – close-up magic with cards, common objects and mentalism. “I like working with cards more than anything else because they are ubiquitous, and there are a lot of things you can do with cards that require minimal practice,” says Dr. Naeim, director of UCLA’s Geriatric Oncology Program, the Hematology-Oncology Fellowship Program and the Jonsson Comprehensive Cancer Center Informatics Program.

When Dr. Naeim was training at UCLA in the mid-’90s, a friend gave him a birthday gift of a class at the Magic Castle in Hollywood. “It was a good distraction from the hectic training of residency,” Dr. Naeim says. “I took another class after that one, and I was hooked.”

Several months and a few more classes later, Dr. Naeim was skilled enough to audition for membership in the Magic Castle in Hollywood. “It was a good distraction from the hectic training of residency,” Dr. Naeim says. “I took another class after that one, and I was hooked.”

A good-natured man with a magician’s goatee and dexterous hands, Dr. Naeim says magic and medicine have more in common than might meet the eye. For instance, the strategies a magician uses to focus or misdirect an audience’s attention for an effect are similar to those he might employ to focus a patient during a medical consultation.

“Managing a patient’s expectations or sense of hope is not that different from managing an audience’s expectations,” Dr. Naeim says. “The connection you need to have with people doing an interactive hobby like magic is not that different from the connection you need to have in a room with a patient.”

While some illusions require a high level of technical skill, the two ingredients that are essential to pulling off even the simplest effects are confidence and the ability to tell a good story, he says. “You have to be able to tell a linear, sequential story. You can’t be disjointed if you want people to follow along. And you have to be confident to keep your audience focused on what you want them to focus
on. Medicine and magic both require a focus on communication, empathy and delivering an explanation that is not filled with jargon and is something the lay person can understand.”

The son of a pathologist and a social worker, Dr. Naeim was born in Iran and speaks broken Farsi with an American-English accent. His family moved to Boston when he was an infant and then to Los Angeles when he was a young child.

Over the years, he has collected a wealth of magic paraphernalia, including cups and balls and ropes and cards, which he keeps in a bedroom drawer that attracts the interest of his children and an occasional complaint from his wife. While his family loves a good magic trick, “the home audience is the toughest because they are harder to fool and very attuned to what to look for,” Dr. Naeim says. He prefers trying out new magic on strangers.

His compact office at UCLA is filled with paperwork related to his research into cost-effectiveness and decision-making among older cancer patients and the use of electronic databases and medical records for outcomes-research and healthcare interventions. The only evidence of his interest in sleight of hand is an unopened pack of playing cards that sits as a permanent fixture atop an old poker table he found on Craigslist and now uses as a conference table.

While Dr. Naeim spends about a quarter of his time seeing patients, he doesn’t reveal his passion for magic to most because he doesn’t want to appear to be trivializing their illness. But, he says, there are moments when an appropriately placed trick can give patients a needed respite from their illness. He once performed card magic for an elderly patient with lung cancer who suffered nausea in anticipation of her chemotherapy. The distraction of the tricks helped to calm her and elicit some welcome levity.

“Now that you worked your magic to help me with my nausea,” she told him, “let’s see what you can do about my cancer.”

Kim Kowsky is a freelance writer in Los Angeles.

### Awards/Honors

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<tr>
<th>Award</th>
<th>Details</th>
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<tr>
<td>Dr. Abbas Ardehali, director of the UCLA Lung and Heart-Lung Transplant Program</td>
<td>was honored by State Sen. Sharon Runner (R-Antelope Valley) with a resolution recognizing him for lifetime achievements in medicine and significant contributions to humanity.</td>
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<tr>
<td>Dr. Molly Coye, chief innovation officer for UCLA Health</td>
<td>has been named an adviser to the California Health and Human Services Agency’s Let’s Get Healthy California program.</td>
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<td>Dr. Sherin U. Devaskar, physician-in-chief of Mattel Children’s Hospital UCLA</td>
<td>was elected to the Institute of Medicine of the National Academies.</td>
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<td>Dr. Lawrence “Hy” Doyle, executive director of the Program in Medical Education (PRIME)</td>
<td>was honored by the California Wellness Foundation as a 2012 Champion of Health Professions Diversity.</td>
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<td>Dr. Brandon Koretz, professor of geriatric medicine, received the UCLA Academic Senate’s Eby Award for the Art of Teaching.</td>
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<tr>
<td>Dr. Baxter Larmen, professor of emergency medicine and founding director of the UCLA Center for Prehospital Care</td>
<td>received the 2012 Distinguished Service Medal from the State of California Emergency Medical Services (EMS) Authority.</td>
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<td>Dr. Zhaoping Li, director of the Center for Human Nutrition at UCLA</td>
<td>received awards from the California Legislative Assembly, the City of Los Angeles and the California Department of Veteran Affairs for her care of veterans and work with MOVE, a national weight-management program for veterans.</td>
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<td>Dr. Tanya Paparella, PhD ’00, associate clinical professor in the Division of Child Psychiatry</td>
<td>co-authored More Than Hope: For Young Children on the Autism Spectrum (Quick Link Learning).</td>
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<tr>
<td>Dr. David Ross, professor of pulmonology and medical director of the UCLA Lung and Heart-Lung Transplant Program</td>
<td>was honored by State Sen. Sharon Runner (R-Antelope Valley) with a resolution recognizing him for lifetime achievements in medicine and significant contributions to humanity.</td>
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<tr>
<td>Dr. Nina L. Shapiro, director of pediatric ear, nose and throat</td>
<td>published Take a Deep Breath: Clear the Air for the Health of Your Child (World Scientific Publishers).</td>
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<tr>
<td>Dr. Alcino Silva, professor of neurobiology and psychiatry</td>
<td>was named a fellow of the American Association for the Advancement of Science for his “pioneering research in the field of molecular and cellular cognition.”</td>
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### Grants

| Funding agency: California Institute for Regenerative Medicine | Grant duration: 4 years |
| Grant amount: $20 million |
| Principal investigator: Dr. Antoni Ribas, professor of medicine |
| Summary: To regenerate a cancer-fighting immune system using a patient’s own stem cells that are modified to produce T cells that specifically recognize and kill cancer cells. |

| Funding agency: National Institute of Allergy and Infectious Diseases | Grant duration: 5 years |
| Grant amount: $15.6 million |
| Principal investigator: Dr. William H. McBride, professor of radiology oncology |
| Summary: To develop novel medical countermeasures to mitigate the effects of radiation exposure. |

### In Memoriam

Dr. Leonard Apt, professor of ophthalmology emeritus, died February 1, 2013. He was 90 years old. Initially trained as a pediatrician, Dr. Apt switched to ophthalmology and was the first physician to be board-certified in both specialties. He established the first division of pediatric ophthalmology at a U.S. medical school at UCLA, and he was among the five founders of UCLA’s Jules Stein Eye Institute. Dr. Apt also was a pioneering researcher whose innovations saved the eyesight of countless children, and he endowed a chair and fellowship in his field at UCLA.
Postcard from Kenya

Allison Diamant, MD, completed her residency in internal medicine at UCLA in 1995. Currently, she is associate professor in the Division of General Internal Medicine and Health Services Research at the David Geffen School of Medicine at UCLA. Dr. Diamant has strong research and clinical interests in eliminating disparities in access to and receipt of healthcare to ultimately improve health. She studies access and quality of care for underserved and vulnerable populations. She also evaluates programs for low-income and uninsured populations, including breast-cancer care, racial and ethnic disparities and the effect of sexual orientation on access to quality of care as well as health status. In addition, Dr. Diamant is a practicing primary-care physician.

I first traveled to Kenya in 1987, after completing a Peace Corps assignment in Botswana. In December 2011, I had the opportunity to return as a member of a volunteer team of American and Kenyan physicians and nurses organized by Medical Missions Kenya (MMK) and Hunger Relief. For two weeks, we traveled to rural areas north of Nairobi and provided basic healthcare services to underserved communities.

My favorite parts of our trip were traveling to the villages of Gaitheri and Wamba, where we provided care to all comers, first seeing patients in the remnants of a stone church and then in a school beyond the outskirts of the village. Accessing healthcare in rural Kenya is always a challenge and even more so during the doctors’ strike at the time. Clinical care was a collage of the sing-song of different languages, the pain of musculoskeletal aches from long hours and years of working, simple remedies for colds and allergies and more-severe diagnoses and treatments.

In addition to Partners in Hope/EQUIP, I continue working with my CITW colleagues. We have established a nutrition program in a rural community in northern Malawi. Two major program components have been initiated: a communal garden for community education and shared cultivation of crops for the local villages and family gardens for specific guardians and caregivers of orphans and vulnerable children and the neediest families. Since the inception of this program, the nutrition gardens have helped more than 60 families and several hundred children. In the coming year, it is expanding to include school-based nutrition education.

The challenges in Malawi are endless. However, I am very lucky to be working with people who are making inroads.

For more information on MMK and upcoming medical missions, go to: medicalmissionskenya.org

In His Own Words: Chi Y. Chung, MD, FACS

In July 2012, Chi Y. Chung, MD, FACS (UCLA residency in general surgery, 1996-2004), resigned as assistant chief of surgery at Kaiser Permanente Riverside Medical Center to serve as assistant program director of the Pan-African Academy of Christian Surgeons (PAACS) in Ethiopia. His responsibilities include training general surgeons at the Myungsung Christian Medical Center (MCM) and teaching at the newly opened Myungsung Medical College (MMC) in Addis Ababa.

If you believe that there is a physician shortage in the United States, you must consider the ratio in the rest of the world. In Ethiopia, there is one physician for approximately 35,000 people. In rural areas, only one surgeon may be available for more than 2-million people. This problem is exacerbated by the “brain drain” of medical graduates from Africa.

Since 1996, PAACS has been a small but effective response to the surgical-care deficit in Africa. Through Bible study and American-based surgical training in their home environment, all 20 PAACS graduates are still serving the needy. Another 40 residents are currently in training, with the goal to train 100 African surgeons by the year 2020.

I was asked to volunteer with PAACS to open a new training program at the MCM. Saying yes meant selling our home in Orange County, raising funds for our
The UCLA Program in Global Health has a strong collaboration with the Partners in Hope (PIH) Medical Center in Lilongwe, Malawi. PIH is a Malawian nongovernmental organization founded by Perry Jansen, MD. Dr. Jansen completed his residency in family practice at UCLA in 1994. PIH provides free HIV education and care to Malawi’s poor and treats more than 5,000 patients per month.

In 2007, the UCLA Program in Global Health and the Department of Medicine established a formal clinical-rotation experience in Malawi. During a grand rounds at UCLA, Thomas Coates, MD, director of the UCLA Program in Global Health, asked Dr. Jansen, “With all the challenges, what keeps you in Malawi?” Dr. Jansen replied, “It is a combination of God’s calling in my heart as well as the joy of seeing patients everyday who would not be alive without the help that PIH brings.”

According to Dr. Jansen, “PIH has grown beyond what we could have imagined. In addition to outpatient and inpatient care at PIH, the staff is providing training and mentoring at a number of mission hospitals and rural health centers throughout central and northern Malawi. We have an urgent need for additional physicians, nurse practitioners and physician assistants.”

If you are interested in a short-term or long-term medical mission at PIH, contact John Hamilton, administrative director, PIH, at jhamilton@mednet.ucla.edu.

For more information on Partners in Hope Medical Center, click on “Countries” at: globalhealth.med.ucla.edu

Medical Mission Opportunities in Malawi

The traditional on-campus MAA reunion has been revamped for 2013. It now requires a passport. The MAA 2013 reunion will be a seven-night cruise to the Greek Isles, with UCLA Professor of History Ronald Mellor, an expert in Greek and Roman history. From October 17-25, graduates from the classes of 1955-’63 and ’88 are invited to explore some of the most important landmarks in Western civilization. The journey on Oceania Cruise Line launches from Istanbul, Turkey, and travels to Kusadasi, Rhodes, Crete, Santorini and Mykonos. Explore storied sites connected to the Minoan, Greek, Roman and Venetian cultures, including ancient temples, walled cities, medieval churches and famed amphitheaters, before concluding the Aegean odyssey in Athens. The cost is from $2,199 including airfare from Los Angeles; other departure cities are available upon request. Space is limited. For more information, contact UCLA Alumni Travel at (310) 206-0613 or travel@alumni.ucla.edu.

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The 2012 Visionary Ball, held on October 25, 2012, at the Beverly Wilshire Hotel, celebrated the UCLA Department of Neurosurgery and its patients and luminaries in the fields of medicine, space travel and entertainment. The annual event recognized the nearly $3 million raised in 2012 to support research, education and the development of treatments to help patients with complex diseases of the brain and spine.

The evening was emceed by Maria Menounos, Extra host, and spotlighted patients such as Richard “Steelo” Vazquez who danced with the Groovalos. With the care at UCLA, he survived three aneurysms. Jengi Martinez, a 37-year-old pilot in the U.S. Air Force, shared the story of her brain tumor removed by Dr. Marvin Bergsneider. She is airborne again, serving our country.

The following are 2012 award recipients:
- **Visionary Award**: Elon Musk, CEO/CTO of Space X, made history this year by launching the first commercial space-cargo aircraft to dock with the International Space Station. As CEO of Tesla Motors and Solar City, he is designing electric cars and promoting renewable energy to solve our planet’s critical problems.
- **Medical Visionary Award**: Barbara Natterson-Horowitz, UCLA cardiologist and author of Zoobiquity: What Animals Can Teach Us about Health and the Science of Healing, has invented a new science that unites doctors and veterinarians to unlock the mysteries of diseases affecting humankind and the animal kingdom.
- **Luminary Award**: Ted Gagliano, president of Feature Post Production at 20th Century Fox, brings a new lease on life to patients through his generous donations and brings the magic of cinema to moviegoers.
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As a gift to UCLA for saving her life, Ms. Berg launched the first Visionary Ball after-party, called the LAB Party, to encourage the next generation – her contemporaries – to get involved in philanthropy and support UCLA.

**A Visionary Evening**

On Sunday, April 28, 2013, The Friends of the Semel Institute will host a gala entitled “Music and the Mind.” The evening will celebrate and explore the rich relationship among music, the mind and mental illness. Robert Gupta, Los Angeles Philharmonic violinist, founder of the Street Symphony and senior TED fellow, will perform and speak about his TED talk, “Music Is Medicine, Music Is Sanity.” The event honors philanthropists Renee and Meyer Luskin, UCLA’s Dr. Andrew Leuchter and Emmy-Award-winning actor Eric McCormack, who stars in the new television series Perception.

To learn more about the “Music and the Mind” gala or about The Friends of the Semel Institute, go to: friendsofnpi.org

**For additional photos from 2012’s event and details on the 2013 Visionary Ball, go to:** www.visionaryball.org
The UCLA Health Board Inaugural Meeting was held November 1, 2012, at Ronald Reagan UCLA Medical Center. Board chairman Henry Gluck, Vice chancellor and Dean Dr. A. Eugene Washington and UCLA Health President Dr. David Feinberg welcomed guests to an afternoon featuring presentations by three distinguished physicians and a reception with a musical performance and demonstrations of various health-related programs.

As a result of the strategic plan for UCLA Health and the David Geffen School of Medicine at UCLA, efforts are underway to build upon the unity of four highly recognized and honored hospitals and more than 100 outpatient and urgent-care clinics. The creation of the board was integral to this endeavor. It comprises members at large, who have demonstrated their dedication through community leadership, as well as members from existing hospital boards, which include those at Ronald Reagan UCLA Medical Center; UCLA Medical Center, Santa Monica; Mattel Children’s Hospital UCLA; and Stewart and Lynda Resnick Neuropsychiatric Hospital at UCLA. All board participants are ambassadors who uphold UCLA Health’s purpose to heal humankind, one patient at a time, by improving health, alleviating suffering and delivering acts of kindness.

At the first board meeting, Dr. Kodi Azari spoke on his work in transplantation and UCLA Operation Mend, a program that supports reconstructive surgery, mental-health services and more for U.S. military personnel wounded in Iraq and Afghanistan. Dr. Paul Vespa demonstrated the remarkable Robot of the Neuro-Intensive Care Unit (RONI) and how such technologies enable doctors to care for patients remotely. Dr. Mark Morocco provided an overview of emergency medicine and what to expect in the Emergency Room. During the reception, board members participated in demonstrations of Urban Zen Integrated Therapy programs, such as yoga and Reiki, and interacted with pets of the People-Animal Connection, which aids in the comfort and healing of patients and their families. Music at the Med, a concert series established by UCLA Health and students from the UCLA Herb Alpert School of Music, entertained the attendees.

For more information on the UCLA Health Board, contact Tina Minh at (310) 206-0079 or tminh@support.ucla.edu.

Phillip L. Williams, long-time chairman of the Board of Visitors for the David Geffen School of Medicine at UCLA, passed away on November 18, 2012, at age 90. Born in St. Louis, Missouri, he earned his bachelor’s and master’s degrees in business from Harvard. He was assigned to a U.S. Naval destroyer during World War II and also served in the Korean War. After 11 years at Owens-Corning Fiberglass Corp., Mr. Williams joined Times Mirror Co. as vice president in 1969 and then held several senior executive posts before becoming vice chairman of its board in 1986. He retired from the company in 1993. Mr. Williams had numerous UCLA, community and philanthropic affiliations, including being a founder and director of the Children’s Council of Los Angeles County and director of the Los Angeles Chamber of Commerce. Mr. Williams’ wife, Margaret Jane Williams, died in 2007. He is survived by daughters Margaret and Diane, sons Fred and Jim, four grandchildren and three great-grandchildren.

Barbara Kort, supporter of breast-cancer research at UCLA and the Barbara Kort Women’s Imaging Center at UCLA Medical Center, Santa Monica, passed away at age 68 on October 20, 2012. Mrs. Kort was born in Canton, China, and grew up in Hong Kong. Together, she and her late husband, Fred Kort, built Imperial Toy Corporation. Their philanthropy included establishment of a program at Israel’s Bar-Ilan University to create educational ties with China and funding for the Language Studies Building. They were founders of the National Holocaust Memorial Museum in Washington, D.C., and Mrs. Kort was active in the Museum of the Holocaust in Los Angeles. She was involved with the Tel Aviv Foundation and the Jewish Federation and supported the Wallis Annenberg Center for the Performing Arts in Beverly Hills. Mrs. Kort is survived by her daughter, Susie Kort-Wasserman, granddaughter Liana, two brothers, two sisters, a sister-in-law and 12 nieces and nephews.
Gifts

On December 13, 2012, a reception and check presentation were held at the Frank Clark Urology Center at the Peter Morton Medical Building (200 UCLA Medical Plaza) in celebration of a $4.6-million gift to the Department of Urology from the Frank W. and Dorothy H. Clark Estate. According to Mr. Matthew Grossman, trustee, this amount represents approximately half of the bequest. UCLA will receive the remainder when the estate is settled.

Mr. and Mrs. Clark played a critical role not only in the creation of the Clark Urology Centers in Westwood and Santa Monica, but also in the establishment of the Division of Pediatric Urology. Mr. Clark was the major donor to the Clark-Morrison Children’s Urological Center and was a close advisor to the Department of Urology throughout his life.

George and Ruth Moss made a generous donation to the Jules Stein Eye Institute (JSEI) to benefit ophthalmic-oncology research and treatment. The Mosses’ gift supports the work of Dr. Tara A. McCannel, assistant professor of ophthalmology and director of JSEI’s Ophthalmic Oncology Center. During a routine eye examination in 2006, Mr. Moss’s ophthalmologist discovered an ocular melanoma – a malignant tumor – and Mr. Moss was referred to Dr. McCannel for treatment. She is one of the few surgeons in the nation with expertise in a less-radical surgical option – destroying the tumor through high doses of radiation while trying to save the eye. Mr. Moss did lose sight in the treated eye, but he is cancer-free. Dr. McCannel says, “Because of this support, research can be conducted that results in discovery, progress in the care and treatment of patients, and cures within the field.”

The Department of Urology has received $385,000 from the Jean Perkins Foundation. Specifically, $210,000 was awarded to Dr. Leonard S. Marks for 1) the purchase of a state-of-the-art ultrasound machine to be used for guidance of tissue-destructive fibers into the prostate gland to destroy cancerous lesions deemed appropriate for focal therapy and 2) support of a biomedical engineering graduate student for two years. The engineering aspects of this new treatment modality will be a major portion of the student’s PhD thesis material. In addition, the foundation awarded $175,000 to Dr. Isla Garraway to develop novel tissue regeneration models that will allow for the further evaluation of prostate tumors induced by cells of origin. Understanding the developmental state of the prostate cell that is most susceptible to tumor initiation will enable biomarkers to be identified and evaluated as tools for predicting cancer risk and severity, which could improve the interpretation of prostate biopsies. The Jean Perkins Foundation has provided critical resources to equip Dr. Garraway’s laboratory and support personnel since 2006.

Phase One Foundation has awarded $452,350 to the UCLA Department of Urology to fund two research projects in keeping with the foundation’s mission to transform a terminal illness into one where patients can live a full and productive life. Dr. Karim Chamie, assistant professor of urology, will receive $142,350 over two years to investigate the use of a novel polymer in the detection and treatment of urothelial carcinoma. Dr. Joseph Riss, assistant professor and director of research for the Kidney Cancer Program, will receive $310,000 over three years to study how the efficacy and applicability of a novel vaccine for metastatic renal-cell carcinoma can be enhanced. UCLA has benefited greatly due to grants from Phase One Foundation, which has allowed UCLA urologists to make excellent progress toward better treatments for urologic cancers.

The David Geffen School of Medicine at UCLA has received a gift of more than $2 million from the estate of Robert T. Vigen, BA ’61, MD ’67. In keeping with Dr. Vigen’s wishes, this contribution will advance translational melanoma research under the direction of Dr. Antoni Ribas at the Jonsson Comprehensive Cancer Center.

The Jane and Terry Semel Institute for Neuroscience and Human Behavior at UCLA has received a $5.5-million bequest from the Wilder Family Trust. Two-million dollars will establish the Billy and Audrey Wilder Endowed Chair in Psychiatry and Neuroscience. The remaining $3.5 million will be allocated to the Wilder Family Trust Fund, with revenue supporting research, senior psychiatry residents and postdoctoral fellows, as well as capital programs at the discretion of the director of the Semel Institute.
I was 13 years old when the genocide in Rwanda overtook my family. My father was a successful businessman in Kigali, the capital city, and we were relatively well-off. But when Hutu extremists began killing Tutsis in 1994, our lives were in danger. Both my parents are of mixed Hua and Tutsi background, and my father was active in a moderate political party that supported sharing power between Hutus and Tutsis. That made us a target.

We went into hiding. Leaving the country would have been too difficult. Instead, friends of my parents tried to get us to a safe area that was guarded by U.N. soldiers. But our family was too large to move together, so it was decided my parents and youngest brother would try to make it to the safe haven, but first my two other brothers and I would drive with some relatives to my grandparents in the countryside.

By God’s grace, we made it there safely. But that refugee didn’t last long. Within a couple of weeks, the danger was closing in on my grandparents’ home. We had to be on the move again. My grandparents didn’t have a car, so we gathered what food and other necessities we could carry and started to walk. Each day we tried to reach another village or small city, but sometimes we couldn’t, and we had to hide and sleep in the forest along the side of the road.

Some days we had nothing to eat. We would go to deep hungry and wake up hungry and then to have to walk another 20 miles with our bellies rumbling. One time we managed to get some food together. We prepared it and were about to eat when we heard gunfire and explosions. We ran and left everything behind.

This is how it went for about five weeks. Always on the move, wondering if we would survive to the next day. What of my parents and little brother? We thought they were dead. It felt like the world was ending, and I prayed we would make it through and have a normal life again.

Finally, we reached a safe area in the southwest part of the country that was under French control. We were not being chased anymore. We had food.

And while we were there, Tutsi rebels liberated the country and stopped the genocide. When it was safe enough, we decided to go back to my grandparents’ home to try to start over.

Life did return to normal. My parents and brother, we learned, were not dead. They had found refuge in the Hôtel des Mille Collines, which was made famous in the movie Hotel Rwanda. In fact, my father now was minister of education in the new unity government, and later he would become the prime minister. When we were reunited, it was like everything that had been lost was coming back. I returned to school and studied hard.

I learned English while attending high school in South Africa and earned my undergraduate and medical degrees from the University of Pittsburgh. Now here I am, at UCLA.

More than anything else in my life, this experience shaped me as an individual and as the kind of physician I want to be. I can never forget what we went through and the suffering we saw. I would ask myself, “How can this happen to people?” I prayed a lot, and I made a promise to God that if I got out of this alive, I would dedicate my life to helping other people who have suffered.

I wanted so much when I was a child to be able to make the suffering around me stop. Now, as a physician, I can identify with a patient’s pain, and I have the skills to try to alleviate it. Even if it is beyond cure, I feel that I must connect with her, to give her encouragement. I was blessed by being allowed to survive, and by helping others, I am working toward satisfying a debt that I know cannot fully be repaid.
Students (from left) David Tran, Steve Blum, Elisha Garg, Daniel Croyman and Marko Spasic are seeking out research experience in the lab as a way to enhance the quality of their clinical expertise at the bedside.

Pushing It

Having faced life-threatening illnesses, patients challenge themselves on new frontiers.