Profile: Dr. Alan Fogelman
A scientist transforms the teaching of primary-care medicine and searches for answers to why good cholesterol goes bad

New Life for Orphan Organs
UCLA doctors utilize less-than-perfect hearts, lungs, livers and kidneys to help ease chronic organ shortage

Conversation
Dr. Molly J. Coye speaks the language of innovation

Found in Translation
The Clinical and Translational Science Institute is clearing a path to quickly bring discoveries from the bench to the bedside
PATHWAYS TO THE FUTURE. Educational tracks open the door for students to receive exposure to broad areas of interest that will help to shape their careers and train the next generation of leaders in health and science.

MEDICAL AND GRADUATE EDUCATION is evolving in new and exciting dimensions as we respond to myriad breakthroughs in science, technology and medicine. The treatment and prevention of disease is changing rapidly, and we face an entire paradigm shift in healthcare delivery. New medical curricula are being developed to reflect these changes. Innovative teaching methods are made possible by cutting-edge information technology and multimedia learning resources. And programs for the development of the next generation of investigators are transformed by novel research tools with staggering analytical power.

A key feature of our response to this changing pedagogical landscape at the David Geffen School of Medicine at UCLA is the adoption of education tracks or pathways. Where we once asked medical school matriculants to contemplate a specialty, today we invite them to choose a career pathway. This approach allows for an in-depth, multidimensional exposure to an interest area, experienced over an extended time period that can range from four to eight years.

PRIME, the University of California Program in Medical Education, is one of these pathways. Focused on the development of leaders in medicine addressing policy, care and research in healthcare for the underserved, PRIME is a five-year dual-degree program, adding an M.B.A., M.P.H., M.H.A. or M.P.P. to the M.D. UCLA PRIME students enroll in one of three participating institutions: UCLA, Charles R. Drew University of Medicine and Science, or the University of California, Riverside.

The Pathway for Clinical and Translational Research allows students to experience the process of moving biomedical research findings from the bench to the bedside and then out into the community. Students participate in activities that deepen their understanding of the requisite knowledge, skills and experiences for successful clinical and translational investigation that is multidisciplinary and team-oriented.

The Global Health Pathway is yet another option. This pathway prepares students for global-health careers in the U.S. Government (e.g., the Centers for Disease Control and Prevention), at multilateral organizations (e.g., the United Nations agencies), in academic health centers at a U.S. university but focused on global health, or in a developing country where they engage in research, clinical care and/or teaching.

Finally, there is the Medical Scientist Training Program (MSTP), in conjunction with the California Institute of Technology. The MSTP is designed to provide intensive research training for students interested in careers in biomedical science and requires an average of eight years of study leading to both the M.D. and Ph.D. degrees. Students pursue Ph.D. degrees in traditional biomedical research fields as well as in engineering and chemistry, in social sciences, and in health policy through the RAND Corporation graduate program.

These education pathways represent one of the many approaches we are taking in the David Geffen School of Medicine at UCLA to prepare our medical students to seize the opportunities and meet the challenges of an increasingly dynamic and fluid profession. In adopting new approaches, we are ever mindful of our vision, as articulated in the recent strategic plan for the school and UCLA Health System, to "create world leaders in health and science" who will shape the future.

A. EUGENE WASHINGTON, M.D., M.Sc.
Vice Chancellor, UCLA Health Sciences
Dean, David Geffen School of Medicine at UCLA
Gerald S. Levey, M.D., Endowed Chair
Is Meditation Push-Ups for the Brain?

TWO YEARS AGO, researchers at UCLA found that specific regions in the brains of long-term meditators were larger and had more gray matter than the brains of individuals in a control group. This suggested that meditation may indeed be good for all of us since, alas, our brains shrink naturally with age.

Now, a follow-up study, published online in the journal *NeuroImage*, suggests that people who meditate also have stronger connections between brain regions and show less age-related brain atrophy. And significantly, these effects are evident throughout the entire brain, not just in specific areas. Eileen Lueders, Ph.D., a visiting assistant professor at the UCLA Laboratory of Neuro Imaging, and colleagues used diffusion tensor imaging (DTI) to look into the structural connectivity of the brain. They found that the differences between meditators and controls are not confined to a particular core region of the brain but involve large-scale networks that include the frontal, temporal, parietal and occipital lobes and the anterior corpus callosum, as well as limbic structures and the brain stem.

“Our results suggest that long-term meditators have white-matter fibers that are either more numerous, more dense or more insulated throughout the brain,” Dr. Lueders says. “We also found that the normal age-related decline of white-matter tissue is considerably reduced in active meditation practitioners. It is possible that actively meditating, especially over a long period of time, can induce changes on a micro-anatomical level.”

Meditation, however, might not only cause changes in brain anatomy by inducing growth, but also by preventing reduction, Dr. Lueders said. “That is, if practiced regularly and over years, meditation may slow down aging-related brain atrophy, perhaps by positively affecting the immune system,” she says.

There is a “but.” While it is tempting to assume that the differences between the meditators and non-meditators constitute actual meditation-induced effects, there is still the unanswered question of nature versus nurture. “It’s possible that meditators might have brains that are fundamentally different to begin with,” Dr. Lueders says.

Still, meditation appears to be a powerful mental exercise with the potential to change the physical structure of the brain at large, she says.
Missing the Big Picture

People Suffering from Body Dysmorphic Disorder (BDD) – a severe mental illness characterized by debilitating misperceptions that one appears disfigured and ugly – process visual information abnormally, even when looking at inanimate objects, a new UCLA study finds. Jamie Feusner, M.D. ’99, director of the Obsessive-Compulsive Disorder Intensive Treatment Program at UCLA, and colleagues found that patients with BDD have less brain activity when processing holistic visual elements that provide the “big picture,” regardless of whether that picture is a face or an object.

“No study until this one has investigated the brain’s activity for visually processing objects in people with BDD,” says Dr. Feusner. “This is an important step to figuring out what’s going wrong in the brains of people with BDD, so we can develop treatments to change their perceptions of themselves.”

The research appears online in the journal Psychological Medicine.

People with BDD tend to fixate on minute details, such as a single blemish or a crook to the nose, rather than viewing their face as a whole. The impact can be unbearable. Sufferers think obsessively about their appearance and engage in repetitive, time-consuming behaviors, such as checking their appearance in the mirror. Many won’t leave the house, some have repeated and unnecessary plastic surgeries, and still others become suicidal. BDD affects an estimated 2 percent of the population and is thought to be especially common in people with obsessive-compulsive disorder.

The study compared 14 BDD patients, both men and women, with 14 healthy controls. Researchers used a functional MRI (fMRI) to scan the brains of subjects while they viewed digital photographs of houses that were either unaltered or altered in ways to parse out different elements of visual processing. One altered set of images included very fine details, such as the shingles on the roof. The other altered images had very little detail and just showed things “holistically,” such as the general shape of the house and the doors and windows.

The researchers found that the BDD patients had abnormal brain activation patterns when viewing pictures of the less-detailed houses.

“The study suggests that BDD patients have general abnormalities in visual processing,” Dr. Feusner says. “But we haven’t yet determined if abnormal visual processing contributes as a cause to developing BDD or is it the effect of having BDD. So it’s the chicken-or-the-egg phenomenon.”

New Reconstructive Transplant Program

In a major step into a new transplantation frontier, UCLA has established a first-of-its-kind program to restore functionality and enhance quality of life for people who have suffered severe trauma or other disfiguring injuries to the upper extremities, face or abdomen.

The UCLA Section of Reconstructive Transplantation represents a multidisciplinary effort to use a new transplantation approach known as vascularized composite allotransplantation to treat patients whose tissue loss cannot be remedied through conventional techniques.

While lifesaving solid-organ transplants have become increasingly common at major centers such as UCLA, reconstructive transplantation – a complex surgery involving composite tissues (bones, tendons, arteries, nerves) – marks a new direction for the field.

“Reconstructive transplantation is where we were with solid-organ transplantation in the mid-1980s,” says liver-transplant surgeon Ronald W. Busuttil, M.D., executive chair of the Department of Surgery. “With the experience that has been accrued in several centers throughout the world with reconstructive transplantation, it is clear that for certain patients, the outcomes can be life-changing and that major transplant centers such as UCLA should be pursuing this approach.”

The reconstructive transplants will focus on hands, the face and abdominal wall. The section will be led by Kodi Azari, M.D., a pioneer in the field who earlier this year at UCLA performed the first hand transplant in the Western United States.

One of the key tenets of plastic surgery is to use similar tissues from other parts of the patient’s body in reconstruction. But for parts of the body such as hands and the nose and mouth areas, there are no similar tissues. Through advanced microsurgical techniques, Dr. Azari and his colleagues will use composite tissues to construct what the body doesn’t readily provide.

In addition to the clinical program, a robust research effort is being initiated under the direction of Jerzy Kupiec-Weglinski, M.D., Ph.D., professor of surgery, pathology and laboratory medicine and director of the Dumont-UCLA Transplant Research Laboratories. The research will focus on ways to bolster the ability of the immune system to tolerate the composite-tissue transfer in an effort to reduce the need for immunosuppressive medications.
A Roadblock to Cancer

ABOUT 50-TO-60 PERCENT OF PATIENTS WITH MELANOMA have a mutation in the BRAF gene that drives the growth of their cancer. In clinical trials, most of these patients have responded well to novel agents that inhibit the gene. Unfortunately, the response is almost always limited in duration, as the cancer develops resistance to the drugs.

In a study published in Cancer Research, scientists at UCLA’s Jonsson Comprehensive Cancer Center tested a combination of small molecules that, when used with the BRAF inhibitors, may help overcome the drug resistance and extend the lives of those with advanced melanoma.

The team, led by researcher Roger Lo, M.D., Ph.D., focused on testing only small molecules already being studied in various phases of clinical trials in the hope of developing a combination treatment that can be studied in patients much more quickly than compounds that aren’t yet being tested in humans. “The idea was to combine some of these molecules with the BRAF inhibitors and come up with something that we don’t have to wait years and years to use in patients,” Dr. Lo says.

“We need to find a way to combine these molecules so the cancer cell cannot get around them.”

Cancer operates like a criminal seeking to evade his captors, and the small-molecule inhibitors act as police barricades that seek to block the criminal’s escape. When one of the cell-signaling pathways is blocked, the cancer finds a way to activate another pathway that will drive its growth. The goal is to find a way to block all the pathways helping the cancer evade therapy, so the cancer cells die before finding a way around the drugs.

In the lab, Dr. Lo and his team applied one drug at a time to the resistant cancer cells to see what route or pathway the cancer used to escape. They would then find an inhibitor for that pathway. In the end, the researchers identified the most optimal combination of molecules to block the pathways PI3K, mTORC and MEK.

“Normal cells have physiologic safety mechanisms to avert death, and this is taken to a higher level by the cancer cell to serve its growth agenda, making single-agent targeted therapy insufficient,” Dr. Lo says. “We have to block several roads, which is what is behind our approach to developing combination therapies. The key is to figure out how to combine the molecules, so that the cancer cannot get around them. Why wait for the cancer to escape? Let’s block all the pathways right from the start.”

How Fat May Help after a Heart Attack

A MAN-MADE FAT CALLED INTRALIPID, which is used as a component of intravenous nutrition and to treat rare overdoses of local anesthetics, may also offer protection for patients suffering from heart attacks. Current treatment for a heart attack focuses on limiting the duration of the ischemic period, when blood flow to tissues is reduced, and on subsequently opening arteries to reestablish normal coronary blood flow. It is well-known that injury to the heart muscle can occur after oxygen and nutrients in the blood flow back to deprived cells, a phenomenon known as reperfusion injury, and scientists have been seeking ways to minimize such injury.

A UCLA preclinical study by Siamak Rahman, M.D., professor of anesthesiology, and Mansoureh Eghbali, Ph.D., assistant professor of anesthesiology, published online in Anesthesiology, identified how intralipid – a fat emulsion made up of a combination of soybean oil, egg phospholipids and glycerin that provides essential fatty acids – can prevent extensive heart damage and help preserve heart function.
Newts and Salamanders Can Regrow Damaged Hearts. Why Can’t We?

STEM-CELL RESEARCHERS AT UCLA have revealed why adult human cardiac myocytes – specialized muscle cells in the heart – have lost their ability to proliferate, perhaps explaining why the human heart has little regenerative capacity.

The study, done in cell lines and mice, may lead to methods of reprogramming a patient’s own cardiac myocytes to create new muscle to repair damage, says Robb MacLellan, M.D., a researcher with the Eli and Edythe Broad Center of Regenerative Medicine and Stem Cell Research at UCLA.

Unlike newts and salamanders, for example, human adults cannot spontaneously regrow damaged organs. Recent research, however, suggests that mammals do have the ability to regenerate heart muscle, but only for a very brief period, during about the first week of life.

If we had it once, Dr. MacLellan reasons, maybe it is possible to regain that ability. The study, published in Cell Biology, suggests it might be possible to turn back the cellular clock to a time when cardiac myocytes had the ability to proliferate and regrow heart muscle.

“ These salamanders and other lower organisms have the ability to de-differentiate cardiac myocytes, or take them back to an earlier, more primitive state, which allows them to reenter the cell cycle, creating new heart muscle,” says Dr. MacLellan. “In mammals, we’ve lost that potential. If we knew how to restore that, or knew the reason why adult myocytes can’t do it, we could try to figure out a way to use nature’s methods to regenerate the heart.”

Dr. MacLellan believes the reason humans can’t regrow these vital cells is simple: When myocytes are in a more primitive state, they’re not as good at contracting, which is vital for proper heart function. Because humans are much larger than newts and salamanders, we need more heart contraction to maintain optimum blood pressure and circulation. “The way we evolved, in order to maintain blood pressure and flow, we had to give up the ability to regenerate the heart muscle,” Dr. MacLellan says. “The up-side is we got more efficient cardiac myocytes and better hearts. But it was a trade-off.”

By temporarily knocking down the proteins that block the cell-cycle mechanism, it may be possible to get adult cardiac myocytes to reenter the cell cycle and revert to a state where they can again proliferate, Dr. MacLellan says.

“This is a potential mechanism to regenerate heart muscle without having to harvest or expand stem cells,” Dr. MacLellan says. “Each person would be his or her own source for cells for regeneration.”

Spit Take: You’re How Old?

SELF-CONSCIOUS ABOUT YOUR AGE? Be careful where you spit because UCLA geneticists now can use saliva to reveal how old you are.

“Our approach supplies one answer to the enduring quest for reliable markers of aging,” says principal investigator Eric Vilain, M.D., professor of human genetics, pediatrics and urology. “With just a saliva sample, we can accurately predict a person’s age without knowing anything else about him or her.”

The findings were published in the online journal PLoS ONE.

Dr. Vilain and his colleagues looked at a process called methylation, a chemical modification of one of the four building blocks that make up our DNA. “While genes partly shape how our body ages, environmental influences also can change our DNA as we age,” Dr. Vilain says. “Methylation patterns shift as we grow older and contribute to age-related disease.”

Using saliva samples contributed by 34 pairs of identical male twins between the ages of 21 and 55, UCLA researchers scoured the men’s genomes and identified 88 sites on the DNA that strongly correlated methylation to age. They replicated their findings in a general population of 31 men and 29 women between the ages of 18 and 70. Next, the scientists built a predictive model using two of the three genes with the strongest age-related linkage to methylation. When they plugged in the data from the twins’ and the other group’s saliva samples, they were able to correctly predict a person’s age within five years – an unprecedented level of accuracy.

While Dr. Vilain and his team envision the test becoming a forensic tool in crime-scene investigations, it also could be used by physicians to evaluate the risk of age-related diseases in routine medical screenings and tailor interventions based on the patient’s biological age rather than his or her chronological age.

“Doctors could predict your medical risk for a particular disease and customize treatment based on your DNA’s true biological age, as opposed to how old you are,” Dr. Vilain says. “By eliminating costly and unnecessary tests, we could target those patients who really need them.”
A Leader’s View

IN A BOOK PUBLISHED THIS SUMMER, Gerald S. Levey, M.D., dean emeritus of the David Geffen School of Medicine at UCLA and former vice chancellor of UCLA Medical Sciences, talks about the lessons he learned from nearly 16 years at the helm of one of America’s premier healthcare institutions.

Dr. Levey wrote the book as a business memoir intended to provide insights for leaders of all types of organizations. “The traits I identify are as relevant to business or government as they are to medicine,” he says. “Rather than going into details about issues like cost containment, patient satisfaction and quality of care, I wanted to share how a successful leader makes decisions and the role of the leadership team in achieving the institution’s goals.”

Never Be Afraid to Do the Right Thing: A Leadership Guide in an Age of Change and Challenge (Second River Healthcare Press) highlights the challenges Dr. Levey faced shortly after arriving at UCLA and being confronted with the damage caused by the 1994 Northridge earthquake. It soon became clear that a significant portion of Dr. Levey’s mandate would be overseeing the building of a new hospital. “In one fell swoop, the job I thought I was going to have completely changed,” he says.

The book’s title derives from Dr. Levey’s favorite business admonishment: He frequently advised members of his leadership team that more important than whether a decision turned out to be correct was whether it was “the moral, ethical and honest thing to do.” He argues that one of the most important traits of a strong leader is the ability to adapt to circumstances. “No one knows what the healthcare system will look like 10, 20 or 30 years from now,” he says. “But the leaders of that system are going to have to know how to adapt. If, for example, Medicare or Medicaid were drastically changed, they would have to figure out how to function at a high level in such a system.”


A Better View, a Better Outcome

CURRENT AND FORMER HEAVY SMOKERS screened with low-dose spiral computed tomography (CT) scanning had a 20-percent greater reduction in deaths from lung cancer than those screened with conventional chest X-rays, according to the results of a decade-long clinical trial involving more than 53,000 people. Results of the National Lung Screening Trial (NLST) study were published in the New England Journal of Medicine.

“These findings confirm that low-dose CT screening can decrease deaths from lung cancer, which is expected to kill more than 150,000 Americans this year alone,” says Denise R. Aberle, M.D., an NLST principal investigator and vice chair for research in the UCLA Department of Radiological Sciences. “This study also will provide us with a roadmap for public-policy development in terms of lung-cancer screening in the years to come.”

Participants in the study were randomly assigned to receive three annual screenings with either the low-dose spiral CT or the standard chest X-ray. Spiral CT uses X-rays to obtain multiple “slices” through the entire chest cavity during a seven-to-15-second breathhold. A standard chest X-ray requires only a sub-
The NLST was designed to answer specific questions about the screenings in older heavy smokers and was conducted at sites with sophisticated medical resources and experts.

“The NLST cannot answer all of the important questions about screening that will be significant for implementation,” Dr. Aberle says. “However, the NLST data can be used to develop mathematical models to determine how long screening should be performed and how often. In addition, the data can be used to determine whether or not other groups at risk of lung cancer, such as light smokers, those with family histories of lung cancer or individuals with lung diseases like emphysema, would benefit from screening with spiral CT scanning.”

The study was cross-sectional rather than interventional, so the researchers cannot say for certain that increasing one’s muscle mass will lower one’s risk of developing insulin resistance or pre-diabetes. But given the strong associations they found, the research demonstrates the importance of monitoring relative muscle mass to get an idea of a person’s risk for diabetes.

Beef Up to Reduce Diabetes Risk

MORE MUSCLE MASS — and not just less body fat — is critical to lowering your risk for type 2 diabetes, a new UCLA study suggests. Reporting in the Journal of Clinical Endocrinology and Metabolism, the researchers suggest there is a correlation between greater muscle mass, relative to body size, and a substantially decreased risk of developing the metabolic changes that lead to diabetes.

“Our findings suggest that beyond focusing on losing weight to improve metabolic health, there may be a role for maintaining fitness and building muscle mass,” says Preethi Srikanthan, M.D., assistant professor of medicine in the Division of Endocrinology. “This is a welcome message for many overweight patients who experience difficulty in achieving weight loss, as any effort to get moving and keep fit should be seen as laudable and contributing to metabolic change.”

For the study, the researchers used data from the National Health and Nutrition Examination Survey III, which was collected between 1988 and 1994. They studied 13,644 adults who were not pregnant and had a BMI of at least 16.5 to examine the ratio of waist size to hip size — an indirect measure of abdominal fat relative to gluteal musculature — to see how this measure correlated between higher levels of muscle mass and lower levels of insulin resistance, a precursor to diabetes.

After controlling for age, race and ethnicity, gender, generalized obesity (high BMI) and central obesity (large waist), they found that for each 10-percent increase in the skeletal muscle index (SMI) — the ratio of muscle mass to total body weight — there was a corresponding 11-percent reduction in insulin resistance and a 12-percent reduction in pre-diabetes, a condition characterized by higher-than-normal levels of glucose in the blood.

The study was cross-sectional rather than interventional, so the second breath-hold but produces just a single image of the whole chest in which anatomic structures overlie one another, perhaps obscuring a potential malignancy.

The NLST is the first trial with sufficient numbers of participants using a randomized design to enable the comparison of mortality differences between spiral CT and chest X-rays, Dr. Aberle says. While the results are encouraging and should reshape screening guidelines in the future, the scientist says, CT screening is not an alternative to smoking cessation.

Additional studies based on the NLST data set are ongoing and will include reports on the cost-effectiveness of spiral CT and the effects of the screening process on smoking behaviors over time.
Your role as chief innovative officer for UCLA Health System is an unusual position in academic medicine. There aren’t many of you in the country. Molly J. Coye: We’re still a rare breed, but I am very excited about it. Dr. Washington (A. Eugene Washington, M.D., M.Sc., vice chancellor for UCLA Health Sciences and dean of the David Geffen School of Medicine at UCLA) and the leadership of UCLA Health System invited me to come to UCLA to work with them on the transformations of the healthcare-delivery system that we will need for the future.

UCLA has a tremendous history of accomplishment in research and clinical excellence in individual specialties and primary care, but the health system itself has only begun to make major improvements in patient experience, care coordination and costs in the last few years. The experience for patients and families has reached record levels of satisfaction in our hospitals, and now we are tackling the challenges of the outpatient settings. We know there are improvements to be made in wait times for appointments, coordinating referrals more smoothly, and other processes that often frustrate patients and referring physicians. We will continue to support clinical excellence in the care we deliver, but reinforce this approach with a better experience.

What will you be focusing on?
MJC: We will be looking for ways to improve care delivery that will make a significant difference, really move the needle, in the next three-to-five years. Any significant change takes that long to spread within an organization. So our focus will be primarily on innovations that are already proven to have great benefit but have not yet been widely adopted. The success of innovation has less to do with dreaming up new ideas than with our seriousness of intent and our ability to

HILE A GRADUATE STUDENT STUDYING IN CHINA, Molly J. Coye was riveted by the stories she heard of the public-health campaigns at the end of World War II to eradicate infectious illnesses that were tormenting the lives of rural people. Those lessons were so stirring for the young scholar that, after receiving her master’s degree in Asian studies at Stanford University, she went on to earn her M.D. and M.P.H. degrees from Johns Hopkins University. “I was inspired to study medicine in order to improve community health,” she says.

Her career since then has taken her around the country, giving her a breadth of experience that overlaps academia, government and the private sector. She served as commissioner of public health for the State of New Jersey and director of health services of the California Department of Health Services, head of the Division of Public Health Practice at Johns Hopkins School of Hygiene and Public Health, and has founded and served on the boards of several prominent healthcare-related companies.

Now she is at UCLA, where she is chief innovation officer for UCLA Health System and heads the new UCLA Innovates Healthcare initiative. UCLA Medicine spoke with Dr. Coye about innovation and her goals for UCLA.
actually implement innovations broadly, to take them to scale. Many powerful innovations have been generated by researchers or clinicians at UCLA or other health systems and shown to be effective, but they languished after their initial proof. We want to turn this around. We know from quality and performance-excellence programs here at UCLA that we’re capable of realizing tremendous change in a relatively short period of time; we just have to use those change-management skills to drive major transformations.

Another area of focus will be health reform. The recent federal health-reform legislation established Accountable Care Organizations (ACO). ACOs are a little like unicorns: Everybody can describe one, yet nobody’s seen one. But we believe that these ACOs will present a great opportunity for UCLA to parlay its established expertise in population-health management into a rapidly growing service for a larger share of L.A.’s population. Our experience over the past two decades of managing populations through HMOs gives us skills that most academic medical centers don’t have. We know how to coordinate care. We know how to figure out what the costs are and try to manage them appropriately. We’ve been doing it for quite a while, and we’ve been doing it very well.

**When we speak of innovation and a culture of innovation, what are we talking about in the context of an academic medical center?**

**MJC:** Traditionally, people think of innovation as simply inventing something new, and there is no place on Earth better for that than a large academic center. But today we understand that true innovation involves being able to actually deploy that new service or technology broadly across the entire set of clinical services or populations that could benefit from this change. At UCLA, we will start with the need for transformation – what do patients, care providers, government and employers, all the different stakeholders, want in a transformed healthcare system – and then look for the innovations that could actually realize those hopes. So it’s a different approach – sort of a question of the cart and the horse – that is generally now referred to as “design-driven” innovation. We start with the design of the system that we need, and then we look for the tools to get there. Part of what will distinguish us in the future is our
ability to discern which innovations will most effectively move us forward, and then to effectively implement them.

You have worked on healthcare issues in government, the private sector and academia. Why is now the right time for you to be here, at UCLA, and why is UCLA the right place for you to be at this time?

MJC: Sometimes you are offered an opportunity to use all the skills you have acquired over your career to help realize the deepest aspirations we have for healthcare. UCLA is extraordinary in the excellence and breadth and depth of its clinical care and its influence across the country. I believe that we have a real opportunity to distinguish ourselves now for the innovations we bring to care delivery and to set patterns that many other centers will want to follow. More specifically, for the last 10 years, I led a technology-forecasting organization that researched the impact of emerging medical and information technologies to identify technologies that could support the changes in healthcare that we need. Now I have the opportunity to draw on that knowledge and to work with an organization that is well along the path to transformation.

The focus throughout your career has been on addressing the ills of healthcare. What is ailing healthcare?

MJC: I think the fundamental flaw is that we have not listened enough to patients. When we listen to patients and to patients’ families, as we have learned to do at UCLA, and we have respect for their concerns and needs, we can make the care we deliver so much more effective. We also are beginning to recognize that our clinical expertise – our ability to invent new diagnostic and therapeutic modalities – often exceeds our ability to deliver them appropriately to the patients who need them and to support the patients in doing their share of work toward recovery. Consider, for example, a patient who has had a very successful operation, but in the following weeks doesn’t care for herself appropriately and winds up back in the hospital. Or the kind of case we are focused on now – patients with congestive heart failure (CHF) who are admitted, treated and discharged, only to bounce back three months later because there was no support to make sure that the patient understood his or her meds or had a follow-up appointment with a physician. Roughly half of all the CHF patients who are readmitted have not seen a physician at all since their discharge. In such situations, we have to acknowledge that our care is not as effective as it ought to be.
What could we be doing better in that regard?

MJC: We are developing coordinated-care systems that allow us to track patients and support them throughout their care and at home. Just a few blocks away from the Westwood campus, the Veterans Administration does this tracking with a basic in-home monitoring system. When their patients with diabetes or CHF or COPD leave the hospital, they are followed into the home with a very simple device that monitors their blood pressure, weight or other parameters. Not only does this device monitor their health, it also gives the patient a way to communicate back to his or her healthcare provider if he or she has a concern. And it delivers health education to the patient about his or her diagnosis, allowing educators and nurses and social workers to provide coaching and oversight. Using this device, the VA has cut emergency visits and readmissions to the hospital by one-third to one-half for more than 30 chronic conditions. UCLA is piloting this approach. It’s very exciting, and UCLA is leading a multi-campus trial to see how this could be deployed for our patients with CHF. We are hoping that we’ll be able to use it quite broadly to support seniors in living independently in the community as well. So here is an example of a service, combined with a technology, that doesn’t interfere with the medical management of a patient, but meets the patient’s needs and drives down the cost and the morbidity associated with the condition.

Healthcare is an enormous ship, and big ships don’t change course quickly. What is required to help nudge this huge ship in the right direction?

MJC: We need to act as a system, which is true locally – at UCLA – and nationally. As long as every individual clinician makes unilateral decisions about his or her approach to care delivery, some of those decisions will be excellent, and some will present problems for patient access and effective care. And when a new idea comes along that’s very effective, it might be adopted by one or two departments and not by the rest. Nationally, the Institute of Medicine estimates that the time lag between proof and adoption of effective new modes of care is approximately 17 years. We’re seeing this timeframe start to change around the country at different speeds. Some places have very rapidly moved to function as an integrated system, and they have been very effective in making their clinical care consistent and their patients more satisfied and healthier. Other places are much slower. Organizational change is very, very tough. And it is only with the collaborative leadership of all the parts of a complex institution like UCLA Health System that we will be able to move steadily forward, make the changes that our patients and our clinicians need and put UCLA at the forefront of healthcare transformation.

What is a key area that is ripe for the kind of changes you envision?

MJC: At UCLA, the most exciting event over the next few years will be implementing the electronic medical record – UCLA’s CareConnect. It will be, of course, frustrating in the first couple of weeks when we actually roll it out, and there are always glitches, but it is a real transformation. It doesn’t sound exciting, but the changes that this system will bring are absolutely profound. It will allow care coordination among the physicians, nurses, and everyone involved in the care of a patient – from primary care all the way through the most advanced procedures he or she undergo here, and then back into the community – all of it will be tracked and coordinated.

Another thing we can do with this system is to integrate clinical decision support into the medical record. For example, what laboratory science and pathology and radiology together know about appropriate diagnostic approaches can be integrated into the electronic record, so that a primary-care provider will receive a suggestion for a test or an imaging study at just the right moment. Research shows that that this capability can create a substantial improvement.

And we will also be able to track the results of what we’re doing. Right now, that process is done infrequently and principally through individual outcome studies, which may take years and can cost hundreds of thousands of dollars. With a clinical-data repository, which is essentially the sum of all the information on all the patients whom we see, we will be able to vastly expand our research at far less expense and with much larger numbers. We will truly be a “learning system of care.”
PROFILE: DR. ALAN FOGELMAN

The Visionary

MEDICAL EDUCATION IN CALIFORNIA WAS AT A CROSSROADS WHEN DR. ALAN FOGELMAN BECAME CHAIR OF THE DEPARTMENT OF MEDICINE NEARLY 20 YEARS AGO. HIS LEADERSHIP HAS HELPED TO TRANSFORM THE DEPARTMENT AND INSTITUTE AN ERA OF RENEWED FOCUS ON PRIMARY CARE.

WITH HIS RECEDING HAIRLINE, warm, round face and thoughtful blue eyes, Alan Fogelman, M.D. ’66, bears some resemblance to his hero Winston Churchill, whose image peers from a pair of portraits that face Dr. Fogelman’s desk in an ornately decorated office replete with World War II memorabilia, sculpted frogs, antique clocks and custom, foot-tall chess pieces.

And indeed, Dr. Fogelman is a kindly man, as his features suggest. But he also is a determined man, with a measure of Churchill’s grit, who, when he became chair of the Department of Medicine in 1992, ushered through a remarkable transformation that had a profound effect on the way UCLA would approach the teaching and practice of primary-care medicine in the future.

The early ’90s was a tumultuous time to be taking over the department. California legislators, incited by the state’s shortage of primary-care doctors, were threatening to require University of California medical schools to train at least half of their graduates as general practitioners. This at a time when only two of the Department of Medicine’s 200 faculty members were themselves practicing primary-care medicine.

Rather than wait for a mandate from the state that would affect its curriculum, UCLA decided to meet the demand on its own. Dr. Fogelman spent the next several years working toward that goal – an enormous task with political and cultural hurdles for an academic institution that emphasized tertiary and quaternary care.

That he succeeded so well was a remarkable achievement, his admirers say, and in so doing, he not only reinvigorated primary care at UCLA, but also strengthened his department’s basic medical-research programs as well as its subspecialty training and practice.

“He is a medical visionary,” says Gerald S. Levey, M.D., dean emeritus of the David Geffen School of Medicine at UCLA and The Lincy Foundation Distinguished Service Chair. “He seems to have a special knack for knowing what to do and when to do it. When the history of this era is written, he will emerge as one of the most important chairpersons of a medical department, not only at UCLA, but across the nation.”

IT WASN’T A DIFFICULT STRETCH FOR DR. FOGELMAN to focus his efforts on rebranding UCLA as an essential training center for primary-care physicians. He completed his internship and residency in internal medicine at UCLA before undertaking a fellowship in cardiology.

“That really believe that the best care for an individual is care that is coordinated, and that if you have a good general internist or family physician who is well-trained and provides most of your care, you are better off,” Dr. Fogelman says.
To reach the goal of bolstering UCLA’s training of primary-care physicians, Dr. Fogelman needed to achieve two things: entice a new generation of medical students to become internists and create a community of general internists to train them.

“We found that one of the reasons our trainees didn’t go into general internal medicine was that they were trained in an environment of big clinics where many patients were underinsured,” Dr. Fogelman says. “That doesn’t make the patients any less important, but it makes it much more difficult to take care of them, because when they need something from a surgeon, for example, trying to get one to do something for them is much more difficult.”

One way to overcome the frustrations of “big clinic” medicine was to start training young physicians in smaller offices that included a healthy mix of managed-care patients with fee-for-service PPOs, Medicare and Medicaid patients. For the managed-care patients, if a doctor requests a test and it meets UCLA’s guidelines, “it’s approved, because we’re paying ourselves,” Dr. Fogelman notes.

“We began to recruit faculty who worked in Westwood, and we also began to open practices in the community,” Dr. Fogelman says. “We would take over their leases and would pay them salaries and compensation that was probably better than they could do on their own. They had no risk, and they got to be members of the faculty.”

The plan presented some obstacles. These newly recruited physicians would be entering a university culture that requires its faculty not only to teach medical students, residents and fellows, but also to publish papers, compete for grants and serve on national committees.

It was a daunting set of expectations for busy primary-care physicians, says Tom Rosenthal, M.D., chief medical officer for UCLA Health System. “Dr. Fogelman first had to change the university’s promotion system itself. The success of getting the UCLA academic system to recognize the creative work of clinical physicians has been critical to the health system’s ability to carry out UCLA’s clinical mission over the past 15 years.”

Then, an online journal for the Department of Medicine, Proceedings of UCLA Health Care, gave primary-care physicians an outlet for their creativity, with short articles focused on case studies of common conditions that demonstrate a teaching point.

Such strategies worked. Over the next several years, the department recruited dozens of primary-care physicians in what spun off to become the Primary Care Network, with offices in Westwood and Santa Monica to support UCLA Health System’s newly acquired Santa Monica-UCLA Medical Center and Orthopaedic Hospital.

When that initial effort suffered a financial setback in 2003 and some of the community offices were closed, Dr. Fogelman responded by quietly rebuilding the department’s primary-care capacity – a project that coincided with construction of the new Ronald Reagan UCLA Medical Center. Because the new medical center would be smaller than the UCLA Medical Center it would replace, “The question was, who could move to Santa Monica?” Dr. Fogelman recalls. Tertiary and quaternary specialties were rooted in Westwood. “So it was decided a lot of internal medicine would move.”

Dr. Fogelman was able to build a new network of primary-care physicians by recruiting internists and secondary physicians such as cardiologists, gastroenterologists, infectious-disease specialists and pulmonary physicians to work together in small offices operating under the UCLA Department of Medicine shingle.

**TODAY, THE DEPARTMENT OF MEDICINE** employs about 100 primary-care interns on its faculty, many of who practice in one of the two-dozen offices that make up its Community Practice Network. Inspired by these physician-faculty members, about half of the department’s resident-graduates went into general internal medicine this past June.

It is not Dr. Fogelman’s Churchillian grit so much as the quality he shares with another notable strategist that has helped to move UCLA forward, suggests David T. Feinberg, M.D., M.B.A., president of UCLA Health System. “Alan Fogelman to me is more like Wayne Gretzky then Winston Churchill,” Dr. Feinberg says. “Gretzky was known for skating to where the puck is going to be, not where it has been. Dr. Fogelman has that same sense about medicine. He knows before everyone else what changes are going to occur.”

Indeed, the network that he helped to establish also has proved to be good business for the Department of Medicine. Earnings from the community practices pay about half of the $400 million that the department will spend this year on expenses such as the salaries of its 550 faculty members and 1,500 staff employees, as well as supporting infrastructure for research and education. (Grants and contracts make up most of the rest; state sources only cover about 2.5 percent of the budget, Dr. Fogelman adds.)

And by helping to fund the department’s research and subspecialty training programs, Dr. Fogelman says, the network helped mitigate resistance to the changes it represented.

“Our faculty saw we were developing both primary care and the next generation of researchers,” Dr. Fogelman says. “So we weren’t abandoning the principles that the university is committed to in research and teaching. We were expanding that and also adding primary care at the same time.”

**Kim Kowsky** is a freelance writer in Los Angeles.
CARDIOLOGIST ALAN FOGELMAN IS THE MASTER DETECTIVE OF “GOOD” CHOLESTEROL. HIS LATEST CASE: TRYING TO DETERMINE HOW AND WHY GOOD CHOLESTEROL GOES BAD.

By Greg Critser

In 2007, researchers released a state-of-the-art clinical study of a new Pfizer drug designed to treat high cholesterol: torcetrapib. The results were puzzling. The compound lowered low-density lipoprotein, a.k.a. LDL or “bad” cholesterol. It also substantially pushed up high-density lipoprotein, or HDL, the “good cholesterol.” By all accrued medical wisdom, torcetrapib should have lowered the rate of cardiovascular events – heart attacks, strokes and, ultimately, deaths.

But it did not. Instead, to the chagrin of the entire cardio-establishment, it increased the risk of cardiovascular events like heart attacks by 25 percent. Worse, 58 percent more heart patients died than those in a control group.

What had happened? Why hadn’t the “good” cholesterol improved their odds of living longer? It was a challenge tailor-made for Alan Fogelman, M.D. ’66, a cardiologist and chair of the UCLA Department of Medicine.

Cogitating quietly in his third-floor office in the Center for Health Sciences building, Dr. Fogelman has pursued the elusive molecule for nearly 40 years. His quest is not unlike that of a zoologist tracking down some strange and wondrous creature. “The reason HDL is constantly throwing a wrench into the whole business of cholesterol management is that it is not one thing all the time. It changes,” he says, “like a chameleon.”

Dr. Fogelman’s trek began in the late 1960s, when he was stationed at China Lake Naval Weapons Center. There, the young Navy physician was struck by a peculiar aspect of the patient population: A disproportionate number of them were dying of heart disease.

“It didn’t make any sense,” he recalls. “I mean, here was a pretty young population, guys in their 30s and early 40s, and they had all kinds of heart problems. I kept coming back to that picture in my mind and asking myself: What is happening here? The great minds of the day were mainly focused on heart failure, which was important, but I kept asking, ‘Can’t we find some way to prevent it?’”

Dr. Fogelman next landed in a perfect place to find out: the UCLA School of Medicine. Early work by UCLA pioneers and others had already elucidated the chemical structure of LDL cholesterol and showed how it might inflame arteries. What followed was a mammoth effort to characterize exactly what the molecule consisted of and how it worked.

What Dr. Fogelman et al. found was mind-boggling. LDL, at its core, is part of our innate immune system. It likely once had an important beneficial function. By oxidizing in a sudden burst, it allowed humans to fight off the enormous number of patho-
gens – viruses, bacteria, etc. – that were present in the premodern world, before better sanitation and antibiotics made such a robust system unnecessary. But LDL-driven inflammation led to plaque build-up, rupture and artery-clogging.

“LDL problems will be with human beings for a long, long time,” Dr. Fogelman says. Evolutionary processes have yet to eliminate it, he explains, “because its ill effects come so late in life – long after the typical evolutionary sorting before reproduction takes place.”

Eventually, things like lifestyle modification and drugs, mainly statins, were found to lower LDL levels and cardio risk. Similarly, LDL’s sister molecule, HDL, or good cholesterol, was found to have beneficial qualities: It seemed to transport bad cholesterol back to the liver. There were more drugs and more lifestyle recommendations. HDL levels went up in sizeable populations of Americans.

BUT BY THE LATE 1990S, Dr. Fogelman was asking a new and very uncomfortable question: If statins and such were so good at driving up HDL and driving down LDL, why did we still have so much heart disease?

He theorized that HDL might be much more complicated than previously imagined and then launched a new effort to characterize the molecule, from outer membrane to nucleus. What emerged was a complex molecule – the enzymes and antioxidants carried by normal HDL did turn out to prevent or reverse some of the consequences of the “bad” cholesterol, LDL.

In the process, however, Dr. Fogelman discovered something else: In a number of scenarios, HDL morphed into something entirely different. After the trauma of a surgery, for example, good cholesterol behaved even worse than the bad cholesterol. Why?

Thanks in part to the use of lab-bench techniques developed in his laboratory, Dr. Fogelman began teasing out the phenomenon. He found that for several weeks after someone comes down with the flu, the “fighter” enzymes inside HDL become dysfunctional. That wasn’t all. Bad HDL started popping up in the blood of patients with common chronic diseases – uncontrolled diabetes, kidney disease and rheumatoid arthritis. Hence, the higher levels of HDL caused inflammation and atherosclerosis.

Perhaps this was why torcetrapib had failed as a cardiovascular drug: The compound pushed up HDL levels in such a way as to be inflammatory. Although Dr. Fogelman cautions that these observations are not ready for use in public-health policy, they may have an impact on postsurgical care, wherein standard practice now encourages physicians to prescribe statins.

Might there be a way to restore HDL’s good characteristics? That is exactly what Dr. Fogelman and his colleagues are now trying to do.

DR. FOGELMAN’S EXPERTISE IN HDL DYNAMICS has also enabled UCLA to advance a huge and promising new medical discipline: environmental cardiology, the study of how one’s surroundings interact with genes and behavior to instigate heart disease.

A remarkable example was a study that came out in 2008 by Jesus Araujo, M.D., Ph.D., whose research at UCLA focuses on environmental cardiology. Like Dr. Fogelman, Dr. Araujo was taken with the question: Why had heart disease remained so prevalent? Perhaps, he thought, it might have to do with smog. Epidemiologists had long posted a link between the two but never found a causal explanation for it.

To find out, Dr. Araujo placed cages of genetically altered mice in two distinct locations – one alongside the Harbor Freeway and one in Santa Monica. He then used a machine to collect and analyze the exhaust fumes the animals were breathing. When Dr. Araujo later examined the mouse arteries, he found advanced artery disease in the ones parked next to the freeway.

One other thing: Their HDL had become inflammatory. Might there be a way to restore HDL’s good characteristics? That is exactly what Dr. Fogelman and his colleagues are now trying to do. Currently, there is at least one commercial study of a molecule from Dr. Fogelman’s research that mimics some of the good properties of HDL. Another, an HDL mimetic peptide, was able to turn “bad” HDL into “good” HDL in lab animals.

What are the HDL peptide’s chances? “It is so early to try to tell something like that,” Dr. Fogelman says. “We have no idea where that effort will take us, or whether it will hit the target we hope for. We have to wait for the trials.

“After all, HDL – it’s a chameleon.”

GREG CRITSER is the author of Fat Land: How Americans Became the Fattest People in the World (Mariner, 256 pages) and Generation Rx: How Prescription Drugs Are Altering American Minds (Mariner, 308 pages). This article was originally published in the January 2011 issue of UCLA Magazine.
It was the late 1980s, just a few years after he established UCLA’s heart-transplant program, and cardiothoracic surgeon Hillel Laks, M.D., was confronted with a dilemma.

His patient, a 14-year-old boy, had only a single ventricle in his heart instead of two, and he was deteriorating fast. UCLA had initially turned the boy down for a transplant because he was so sick that he did not meet the criteria for transplantation, but the boy’s mother was determined.

“Can’t you find him a heart, any heart?” she pleaded. “Give him a chance.”

Dr. Laks pushed to have the young man admitted to the program, to receive a heart that no one else could use. Because the boy was malnourished and small, the team found a donor heart from a smaller female. The transplant went ahead and, to everyone’s surprise, the boy survived another nine years – enough time to learn to ride a motorcycle and have a girlfriend.

“He had a life,” Dr. Laks recalls. “Sometimes it comes down to the question: Are you a champion of the rules or a champion of the patient? I tend to be a champion of the patient.”

That experience led Dr. Laks to think about how it might be possible to deepen the pool for donor hearts, which, with organs in short supply, always has been quite shallow. In 1992, he launched the nation’s first Alternative Heart Transplant Program to utilize “marginal” organs from older or higher-risk donors for patients who otherwise would not be accepted for transplantation. He successfully performed a five-vessel bypass to repair a donor heart that would have been rejected, to transplant into a patient who himself would not have been accepted.

Other UCLA transplant surgeons and researchers have joined Dr. Laks in efforts to expand the pool of acceptable organs and recipients, taking steps that are appropriate for each type of organ. With the national waiting lists for solid-organ transplants soaring from 30,000 15 years ago to 121,000 today, the surgical teams for liver, lung and kidney transplantation all have adopted their own creative protocols to save lives by making use of less-than-perfect organs that might at other times have been tossed away.

“There’s no way to get enough donors,” says Ronald W. Busuttil, M.D., Ph.D., executive chairman of surgery at the David Geffen School of Medicine at UCLA and founder of the UCLA Liver Transplant Program. “You’ve got to make everyone a potential donor.”
The phrase to describe the use of marginal organs for transplantation is Extended Criteria Donation (ECD), a term that reflects a trend by clinicians to utilize these organs and to do so with measurably positive results. They might include organs from an older donor or one with risk factors such as hypertension or stroke.

“The concept of ECD became a reality at UCLA,” says cardiothoracic surgeon Abbas Ardehali, M.D., director of the Heart, Lung and Heart-Lung Transplant Programs at UCLA. “This strategy saves lives.”

Organs typically are procured from donors following brain death, when brain function has ceased but the heart is still beating and circulating blood, which helps to preserve the tissues. But due to the nationwide shortage of potential donors, organs also are sometimes procured following cardiac death, making preservation and renewal before transplantation all the more important.

Ischemic reperfusion injury (IRI) – damage that can occur when blood is reintroduced to a lifeless organ – is a critical issue in all solid-organ transplantation, but particularly so when it comes to marginal organs, notes Dr. Busuttil. Holding a Blackberry in one hand to represent a liver, Dr. Busuttil explains: “When you put blood back into the organ, a tremendous chaos goes on in the organ. If the organ is marginal, that chaos results in non-function. We attempt to modify it in some way, so that when you transplant that organ, it doesn’t fall apart.”

Chemokines, or adhesion molecules, can gum up the workings of the donor tissues. “Rather than having free-flowing blood, it’s like the 405 Freeway at rush hour,” Dr. Busuttil says. “We are trying to declog the hepatic sinusoids (low-pressure vascular channels), so that blood can get through and the organ can work.”

Part of the challenge when working with less-than AAA-rated organs is to find new ways to keep them viable. To that end, Dr. Busuttil’s work in the lab for nearly three decades has resulted in a translational clinical trial, using a molecule known as a P-selectin blocker (recombinant P-selectin glycoprotein ligand, or rPSGL-1g) to block adhesion molecules and improve the blood flow. Positive results from that trial were recently published in the American Journal of Transplantation.

The surgeons do not, of course, work in isolation. They often partner with teams of research scientists to refine techniques and to create new innovations in transplant surgery. Before new modalities to improve therapeutic outcomes can be used at the bedside, “things need to be done at the benchside,” says Jerzy Kupiec-Weglinski, M.D., Ph.D., director of the Dumont-UCLA Transplant Research Laboratories.

Dr. Kupiec-Weglinski’s work has, for example, been essential to Dr. Busuttil’s P-selectin studies. While at Harvard’s Brigham and Women’s Hospital, Dr. Kupiec-Weglinski researched the molecule, and he brought that work with him to UCLA, where he has continued testing the compound for use in preventing IRI. “The results were very promising,” Dr. Kupiec-Weglinski says. “We published those results in the leading transplant journals in this country, and a couple of years later, Dr. Busuttil and his team incorporated this compound in their clinical transplantations. There were more than 50 patients treated with the rPSGL-1g, with very good results. This is a perfect example of a successful transition of the idea and the compound from bench to bedside.”

Since IRI is common to all organ transplants, rPSGL-1g, or a cocktail of drugs, might further enhance the use of ECD organs. That would most certainly be a benefit for liver transplantation, where the demand has climbed from 4,000 in 1988 to more than 20,000 in 2010. Between 5,000 and 6,000 livers are procured each...
year; roughly 750 were discarded last year. Approximately 15,000 people die each year waiting for a suitable donor liver.

UCLA has been using several techniques to expand the use of donor livers. One approach that has helped to mitigate the shortage is split-liver transplantation, wherein a single liver is divided for transplantation into two recipients; however, less than 7 percent of donor livers are found to be suitable for this procedure. “It’s got to be a perfect liver, and you’ve got to have two perfect recipients,” Dr. Busuttil says.

Another approach is accepting organs procured after cardiac death. While this might cause some damage to the organs, they still work well if they are paired with the proper recipients, Dr. Busuttil says. Donation-after-cardiac-death transplantation requires an extraordinary amount of skill and judgment – experience that the surgeons at UCLA have developed through decades of research and clinical practice.

Dr. Busuttil and others at UCLA also have pioneered the use of anti-viral agents against cytomegalovirus and hepatitis B to keep organs from failing. “If we could take the hundreds of livers that are discarded each year and manipulate them in some way, either with the selectin blocker or other techniques, then we’re making a significant impact because we’re increasing the number of donors,” Dr. Busuttil says. “It’s not enough, but it’s certainly better than it was.”

The need is amply illustrated with a visit to the liver-transplant Intensive Care Unit at Ronald Reagan UCLA Medical Center. On this day in August, all 24 beds are filled, either with patients who are waiting for or who have recently received a new liver. Those awaiting transplantation have ghastly dark complexions, and they are among the sickest patients in the nation, with Model for End-Stage Liver Disease scores approaching 40, while the average for the nation is about 20.

As Robert Galindo, a transplant recipient who now counsels other patients, says, “If I were on my death bed, I’d go with an ECD liver,” and indeed for many of these very ill patients, that might be the approach that saves their lives. “ECD livers, under the appropriate circumstances and in expert hands, work as well as standard organs,” says liver-transplant surgeon Fady Kaldas, M.D.

“All organs are stressed during the donor’s death process,” Dr. Kaldas says, noting that the body will secrete metabolites following death, whether from a stroke or a gunshot wound. “It doesn’t mean it’s a bad organ. Generally, there is no difference between an extended-criteria and a standard-criteria liver in outcome. When we deem a liver usable, it’s usable.”

DR. HILLEL LAKS

Dr. Laks has performed hundreds of the 1,500 heart transplants that have been done at UCLA since he started the program in 1984. Early on, he was troubled that he could not help some people simply because they were too old or did not have a bright prognosis. The son of teachers, Dr. Laks grew up in South Africa with the notion that “if something isn’t working, there is almost always a solution. It’s a complex process, not a cookbook approach.”

Today, Dr. Laks is the Chancellor’s Professor of Cardiothoracic Surgery, an award that is reserved for “scholars of international distinction who are recognized and respected as teachers of exceptional ability.” His lifelong inclination toward innovation helped to earn him that coveted title. It was in 1992 that he began performing quadruple bypass operations to repair “marginal” hearts. Using veins taken from the recipient patient, he would perform the bypass on a table just moments before transplanting the heart. In this way, he...
The concept of a donor chain for kidney transplantation is “such a simple idea, so elegant and so creative, yet extremely powerful in its effect.”

— Dr. Albin Gritsch, surgical director of the UCLA Kidney Transplant Program

began to help older patients who would not have qualified before for transplantation. One man who received such a transplant in his mid-70s lived into his 80s.

Dr. Laks and his team developed other creative ways to help their patients. One who had hepatitis C received a heart from a hepatitis C-infected donor. In some cases, a smaller recipient who needed less pumping capacity was matched with an older donor who had high blood pressure.

These patients often are among the cohort rejected by other transplant centers. “They are so sick, they come to us as their last resort,” says Dr. Ardehali, who performs up to 50 heart and lung transplants a year.

Nationwide, there are some 3,195 people on the waiting list for hearts and 1,790 on the waiting list for lungs, according to the non-profit United Network for Organ Sharing (UNOS). Each year, between 500 and 2,000 people die while waiting for hearts, and between 500 to 1,000 die waiting for lungs.

To optimize recipients’ chances, it has become vital to find ways to preserve potential donor hearts and lungs. In a so-called “beating-heart transplant,” for example, UCLA uses a device with multiple features and oxygenators to keep the donor heart pumping from the time it is procured to the time it’s implanted. “It is our belief that if we can maintain the donor heart in a near-normal physiological state, it will be a better organ to be transplanted,” says Dr. Ardehali, who is the principal investigator for a multi-center study on “beating-heart transplantation.”

Another innovation introduced by Dr. Laks was the use of modified reperfusion of the heart with blood from which the white cells had been removed. This proved to be highly effective, and Dr. Ardehali has now applied a similar technique to the lungs, also with excellent results. “We believe the white blood cells injure the graft, so we remove them,” Dr. Ardehali says. “We provide sugar and substrate. We modify the content of the blood that the organ needs initially. We add some measures to dilate the blood vessels.”

UCLA also has been fine-tuning the use of immunosuppression medications.

Such measures to procure and preserve donor organs are especially important if, for example, the lungs came from a donor who had pneumonia or contusions or if a heart has some blockage. “The goal is to try to expand the donor pools by utilizing hearts and lungs that were otherwise not being used,” Dr. Ardehali says. “Our experience has shown that the results are still good.”

In a UCLA study that followed 42 lung-transplant recipients who had received ECD organs, the three-month survival rate was 97.6 percent. Another study of ECD heart recipients found a five-year survival rate of nearly 60 percent, compared with the national average of about 72 percent for recipients of non-ECD hearts.

KIDNEY/PANCREAS TRANSPLANT PATIENTS are among the happiest people on earth, says surgeon Gerald Lipshutz, M.D. ’93. “They come to us, and they’re on dialysis and they’re diabetic. And when they walk out of the hospital after surgery, they no longer need dialysis, they no longer need insulin,” he explains.

But here, too, the shortage of organs has a profound impact. More people are waiting for kidneys than for any other organ — more than 95,000. Of those, fewer than 15,000 each year will get a transplant. The wait in Southern California can be as long as eight to 10 years.

As with hearts and livers and lungs, UCLA has taken some innovative steps to address the kidney shortage. They include transplanting pediatric kidneys into adults or using two “marginal” kidneys. A more controversial approach is using kidneys from donors whom the Centers for Disease Control and Prevention consider high-risk due
to behaviors that place them at greater risk of viral infectious disease. The organs in these cases are tested by sophisticated methods to detect viruses and, if cleared, can be used if the recipient, who is fully informed, gives consent. “The testing is 21st century, leaving little doubt that an infection exists,” Dr. Lipshutz says.

UCLA has also created a donor chain for kidney transplantation, in which an altruistic person, often a complete stranger, donates a kidney. That organ is given to a recipient who already has a kidney available that is not a perfect match. The recipient then passes on the incompatible kidney to another recipient, and so on. Such donor chains have resulted in successful transplants for up to six kidney patients. “It’s such a simple idea, so elegant and so creative, yet extremely powerful in its effect,” says Albin Gritsch, M.D., surgical director of the UCLA Kidney Transplant Program. “It is a huge move in a positive direction for patients with kidney failure.”

And to deal with the issue of blood-group incompatibility, UCLA has developed a program to allow a loved one to donate a kidney, even if his or her blood group doesn’t match that of the recipient. It starts with desensitizing the immune system of the recipient by filtering and removing antibodies. Doctors then use intravenous immunoglobulin to keep the cells from making more antibodies. “We can change their immune system just enough, so that they can get this alternative-blood-type organ,” Dr. Lipshutz says. The procedure also has been used in limited cases for liver transplants.

A modified approach has been used for people who have developed so many antibodies that “it’s almost as if they’re allergic to other people,” Dr. Lipshutz says. “On the operating table, they would reject any organ.”

Guillermo Montoya was one of those patients. He had received a transplant in 1991, but it failed after 10 years, putting him back on the list. But because he had developed a high level of resistance, none of the organs that came available were deemed suitable for him.

Earlier this year, UCLA contacted Montoya, now 64 years old, to tell him that a kidney was available, but it was not a perfect match. “Do you want to risk it?” they asked.

“Why not,” Montoya responded.

Dr. Lipshutz and his team began the process, called plasmapheresis, to reconfigure Montoya’s immune system to accept the organ.

“We did some filtering of his blood to remove antibodies and gave him other medication,” Dr. Lipshutz says. “It’s very time intensive for both the patients and for the doctors. Here we were able to take someone who never would have received a transplant because of immunologic reasons, and he was transplanted.”

On March 30, 2011, Montoya received his new kidney. While the recovery was difficult, doctors cleared him two months later to resume physical activities like going to the gym.

“Now I’m great, thank God,” Montoya says.

Treatments like plasmapheresis are a high-tech approach done at only a few centers. Newer hopes lie in the emerging realm of stem-cell technology. When that day comes, surgeons like Dr. Lipshutz might find themselves out of a job.

“I joke that in 100 years, people will nudge each other and say: ‘Can you believe what they did 100 years ago?’” Dr. Lipshutz says. “’They did organ transplants. Why didn’t they just grow new ones, like we do now?’”

LYNDON STAMBLER is a freelance writer and teaches journalism at Santa Monica College.
Each year in the United States, the government invests billions of dollars in basic-science research – laboratory-based studies that are designed to advance the frontiers of knowledge. But as exciting as these discoveries may be, they do little to enhance human health until they are seized upon and moved beyond the laboratory to develop a new treatment or inform an improved approach to promoting health or preventing disease. Even then, if the new therapy or health strategy isn’t widely known or appropriately applied, it does little good.

It is an unfortunate truth that, for a host of reasons, the process by which studies conducted at the laboratory bench are transformed into therapies that are effectively integrated into clinical and public-health practice – also known as translational science – has been far from optimal. A report by the National Institutes of Health (NIH) estimated that it takes an average of 17 years for only 14 percent of scientific discoveries to become standard treatment in the community.

“Seventeen years is too long to wait before the public begins to benefit from an important discovery,” says Carol Mangione, M.D., M.S.P.H., the Barbara A. Levey, M.D., and Gerald S. Levey, M.D., Endowed Chair and Professor of Medicine and Health Services in the David Geffen School of Medicine at UCLA. “The whole point of the translational-science movement is to shorten that time line.”

In an effort to speed up the pace, the NIH in June awarded UCLA, in partnership with Cedars-Sinai Medical Center, Charles R. Drew University of Medicine and Science, and the Los Angeles Biomedical Research Institute at Harbor-UCLA Medical Center, a five-year, $81.3-million grant to establish the UCLA Clinical and Translational Science Institute (CTSI). UCLA is one of 60 institutions across the country to receive such funding. The aim of the nationwide effort is not just to accelerate the creation of more effective treatments but also to more actively engage communities in clinical
research and train future generations of researchers to think and work in this “bench-to-bedside” continuum.

Through the CTSI, UCLA and its partners have embarked on an ambitious path for using translational science to tackle the conditions that account for the greatest proportion of disability and early death in Los Angeles County, where rates of heart disease, diabetes, stroke, HIV/AIDS, depression, violence and other preventable conditions far exceed the national average.

In many ways, getting there involves fundamental changes in how scientists and clinicians are trained, work and think.

The concept of translational research isn’t new. The NIH has promoted it for more than two decades. But bottlenecks have developed that have kept the translational pipeline from flowing the way it should. One reason has to do with funding — whether it’s the expense associated with the infrastructure needed for clinical and community-based research or lack of financial support for the practical steps necessary to take laboratory findings to the clinic or from the clinic to the community.

“These NIH awards are recognition that we need a better-organized, better-funded approach to this area of investigation, and that increasingly the work in clinical translational science requires team efforts within individual academic medical centers and across academic medical centers,” says Steven M. Dubinett, M.D., director of the CTSI and UCLA associate vice chancellor for translational science. Renowned for his own translational lung-cancer research, Dr. Dubinett has served on the National Cancer Institute’s Translational Research Working Group, where he participated in designing pathways that characterize the transformation of scientific discoveries into new clinical ap-

proaches for oncology.

Others point out that historically there has been little incentive for basic-science researchers to take the next step in moving their discoveries to the clinic — or to forge the types of collaborations outside their discipline that would enable that transition to happen. “Translational research requires expertise in the disease, in how to translate, and in the underlying science, and it’s hard to capture that in a single person,” says S. Claiborne Johnston, M.D., Ph.D., professor of neurology and epidemiology and director of the UC San Francisco CTSI. “We’ve tended to have basic scientists who are driven by discovery and clinical researchers and clinicians who are driven by health problems, without either having much knowledge of each other’s work.”

Traditional training approaches, while producing top scientists, haven’t necessarily encouraged big-picture thinking. “If you think about it, the work of the basic scientist selects for people who can hone in on a narrow problem and make progress on it,” says Christopher Denny, M.D., professor of pediatric hematology/oncology and a member of the CTSI leadership team. “However, that means that your sphere of expertise and the way you see things are relatively limited. To take findings from the bench to the bedside usually requires a broader perspective, and that’s why our focus with the CTSI is on multidisciplinary research.”

In his studies on vitamin-D deficiency and its impact on the immune system, John S. Adams, M.D., professor of molecular, cell and developmental biology medicine and of orthopaedic surgery, is taking discoveries from the lab to his patients — and taking insights gleaned from his clinical practice back to the lab. The synergy from working across the traditional bench/bedside divide has paid off in a big way: Dr. Adams, along with UCLA Chief of Dermatology Robert Modlin, M.D., and colleagues discovered that bringing tuberculosis-infected white blood cells to normal vitamin-D levels could improve their ability to kill the TB-causing bacteria. Their 2006 paper on the discovery, published in *Science*, led to a major push for improving vitamin-D health as a strategy for boosting the immune system and combating infectious disease, particularly in the developing world, where vitamin-D insufficiency is epidemic.

Dr. Adams follows in the footsteps of widely heralded UCLA scientists who parlayed their laboratory discoveries into advances that today benefit millions
of patients. For example, oncologist Dennis Slamon, M.D., Ph.D., director of clinical/translational research at UCLA’s Jonsson Comprehensive Cancer Center, and his colleagues conducted both the laboratory and clinical research in the development of the widely used drug Herceptin, which targets a specific genetic alteration found in more than 25 percent of patients with breast cancer. Michael Phelps, Ph.D., director of UCLA’s Crump Institute for Molecular Imaging, invented positron emission tomography, which is now used routinely for important clinical assessments in cancer, neurological disorders and cardiovascular disease.

With such examples in mind, “We want to look at these exceptional contributions and set up an infrastructure for research that would allow them to be far more common,” says Dr. Dubinett.

But he points out that researchers who are expert in both the lab and the clinic are rare; more often, translation requires teamwork, not only between basic scientists and clinicians, but also among individuals with disparate perspectives. “The major health issues cut across disciplinary lines, and there is now recognition that being able to bring laboratory studies to clinical fruition and engage communities in research require a team effort, a flexible research infrastructure and a broad spectrum of expertise,” says Dr. Dubinett.

“In the past, we have worked in silos – everyone in his or her own little world – and the communication among different groups has not been good,” says Isidro Salusky, M.D., associate dean for clinical research at the David Geffen School of Medicine at UCLA and director of UCLA’s new Clinical Translational Research Center. “The idea of the CTSI is to encourage team science as a way of accelerating advances.”

Like Drs. Dubinett and Adams, Dr. Salusky works in both the lab and the clinic in his studies of chronic kidney disease in children. In the last several years, his group has found associations between bone abnormalities, kidney disease and the cardiovascular system that have contributed to the recognition of a systemic disorder. By working together to learn more about the interrelationships among these different systems, Dr. Salusky and colleagues from other subspecialties hope to make an impact on the prevention and treatment of chronic kidney disease and its complications.

“Cardiovascular disease has been the major cause of death in adult and pediatric patients with advanced chronic kidney disease, and we have made very little progress in combating this problem over the last two decades,” Dr. Salusky says. “This is an example of an area in which we are broadening the approach to help us understand the process, in the hope that this will lead to better therapies.”

Part of the CTSI’s emphasis is to train a new generation of scientists skilled at seeing the clinical implications of laboratory findings, but also capable of working across the spectrum of disciplines. But nurturing this type of work also requires new types of reward systems. In the past, grant funding hasn’t encouraged multidisciplinary teams seeking new approaches to big problems, but that has begun to change. “It doesn’t work to just bring people together. You have to bring them together for a reason, and funding ends up being something that motivates people,” says Dr. Johnston.

While adopting such incentives, UCLA’s CTSI is also working to expand the opportunities for meaningful interactions. “There needs to be an active mixing process. You have to keep stirring the tank all the time or it’s going to settle, and people are going to go right back into their comfort zones,” says Dr. Denny. “You have to uproot people and use incentives to get them to go to seminars where they don’t know anyone, where they can learn something totally different. Often nothing will come out of it, but that one time when it does can make all the difference.”

A key part of the effort at UC San Francisco, Dr. Johnston explains, is to make the process of bringing discoveries to clinical fruition more efficient. “It doesn’t make sense for a scientist to learn all of the steps of a translational pathway,” he says. “What’s needed, which is what we have done, is to provide them with access to expertise and resources through core servic-

“TRANSLATIONAL RESEARCH REQUIRES EXPERTISE IN THE DISEASE, IN HOW TO TRANSLATE, AND IN THE UNDERLYING SCIENCE, AND IT’S HARD TO CAPTURE THAT IN A SINGLE PERSON.”
When New Therapies Are Proven In

Clinical Trials To Be Effective, Many Assume That The Public Will Immediately Reap The Benefits. But That Is Rarely If Ever The Case.

es that allow them to take these steps. That eliminates a lot of failure and a lot of waste.”

UCLA’s CTSI is taking a similar tact. The newly established Center for Translational Technologies aims to provide the structure necessary for investigators across the four collaborating campuses to easily access the more than 100 biomedical cores that already exist, as well as to accelerate the transition of emerging technologies into translational resources.

Dr. Denny, the center’s director, notes that although UCLA and its partners have numerous core facilities in areas ranging from biomedical imaging and small-molecule screening to electron microscopy, transgenic mice and microarrays, many researchers aren’t aware of the resources that exist and how they can be used. Dr. Denny includes himself among that group, despite the fact that he has been at UCLA for more than 20 years. Thus, one of his initial priorities is to develop a searchable online database to help researchers access the facilities that can assist them. In addition to providing basic information and answers to frequently asked questions about the cores through the online resource, the center plans to employ technology officers, who can provide additional information and guide junior investigators through the process. The center will also provide funding to build existing cores through new technologies, equipment upgrades and other types of expansions.

Successfully and efficiently moving discoveries from the laboratory to the clinic requires significant infrastructure the likes of which have been lacking in the past. Dr. Adams’ work on the epidemic of vitamin-D deficiency and its impact on the immune system’s ability to ward off infectious diseases such as tuberculosis illustrates the point. In his clinic, he invites patients to participate in studies in which their blood samples are taken before and after their vitamin-D treatment and studied in culture to learn how vitamin-D levels affect the response to tuberculosis.

The support required for such work – including the staff needed to help identify, screen and enroll patients and then collect biological specimens and transport those specimens to the appropriate research laboratory – is made even more complex by the fact that Dr. Adams’ outpatient clinic is at Santa Monica-UCLA Medical Center and Orthopaedic Hospital, while his lab is in Westwood. “If I had to do this on my own, it wouldn’t be possible,” says Dr. Adams. “The idea behind the CTSI is to speed the transition from laboratory discoveries to clinical benefit by making it more efficient to do these types of studies.”

A major infrastructure boost is coming through the UCLA Clinical and Translational Research Center, which is designed to support outpatient research studies in a newly renovated area of UCLA’s Center for the Health Sciences. The 23,000-square-foot center will include individual patient rooms for clinical research, interviews and procedure rooms. The clinical-research activities will be supported by the new clinical- and translational-research laboratory directed by Anthony Butch, Ph.D., professor of pathology and laboratory medicine, with the aim of promoting the latest advances in biomarkers and assay development to the CTSI community.

It’s been nearly 30 years since beta-blockers were first found to be protective for people with cardiovascular disease, yet only about half of patients who have had an acute myocardial infarction are being treated with the drugs six months later. Barely more than half of eligible Americans have received appropriate colorectal cancer screening despite overwhelming evidence of its value in preventing cancer morbidity and mortality. Tamoxifen and raloxifien have been shown to reduce the chance of getting breast cancer by 50 percent for high-risk women, yet the chemoprevention drugs are used by only one-third of these patients. From the time mammography screening was introduced until guidelines were first developed, decades passed, and untold women died of breast cancers that could have been detected at a more treatable stage.

When new therapies are proven in clinical trials to be effective, many assume that the public will immediately reap the benefits. But that is rarely if ever the...
case, and so the focus of CTSI partner institutions is as much on bringing proven therapies to the population through community engagement as it is on the bench-to-bedside work. “Translational science doesn’t end with a successful clinical trial,” says Dr. Dubinett. “We need to do a better job of disseminating what we know to be good practices.”

One CTSI member whose community translational work will be particularly important is Denise Aberle, M.D., professor of radiology. Dr. Aberle was the national principal investigator for the National Cancer Institute-sponsored National Lung Screening Trial, a large multicenter randomized study evaluating the benefits of low-dose helical CT scans vs. chest radiography for individuals at high risk for lung cancer. The results, recently published in the New England Journal of Medicine, were eye-opening: a 20-percent reduction in mortality for the high-risk patients screened with CT.

Dr. Aberle notes that there has never been an effective screening approach for lung cancer, which in the United States kills more people than colon, breast and prostate cancers combined. “This is potentially the most important advance for reducing lung-cancer mortality since the surgeon general related smoking to cancer in 1964,” Dr. Aberle says.

But she notes that her work is far from complete. “Now we need to take this evidence base and use implementation and dissemination research to try to incorporate it into the practice of medicine in a way that brings maximum benefit to all at-risk populations,” she says.

The emphasis on “bedside-to-community” translation is relatively new. “There has been a recognition that we have a leaky conduit between what we learn from clinical trials about best practices and what we actually do when we see patients,” says Dr. Mangione, who heads CTSI’s Research, Education, Training and Career Development Program. “It’s a challenging problem, and we haven’t really focused on training scientists who are good at that part of the translation. But what’s exciting is that we are beginning to do that.”

A key theme of the CTSI’s work involves bridging the divide that has existed between the academic medical center and the community through the development of bidirectional community partnerships. “The best science occurs when we are communicating across the spectrum of translation,” says Dr. Mangione. “That means the scientist is getting input from the community on important health problems and research needs, and communities are partners in everything from interventions to how we train scientists.”

New and established training programs at UCLA and its CTSI partners are focusing on training the next generation of translational researchers, skilled at thinking more broadly about health problems, participating in multidisciplinary teams and effectively working with communities and communicating findings to the public. CTSI is reaching across the educational spectrum, seeking to attract bright students to translational science through outreach to high schools and undergraduate programs, as well as in medical schools and Ph.D. programs.

The goal CTSI has set for itself – tackling the major health and disease burdens in Los Angeles County – is daunting. The county’s population of more than 10 million is larger than that of 42 states and far more diverse than most. Three-fourths of the residents are non-white, and one-third of the population was born outside the United States. Ninety languages are spoken across the county’s households. One-in-five household incomes is below the federal poverty line, and one-fourth of the county’s residents lack health insurance. A 15-year life expectancy gap separates the healthiest and sickest populations, so eliminating disparities, as well as addressing the major causes of premature death and disability, is a major focus.

“We are taking on a great challenge, but we also have a considerable opportunity to make a significant impact on the population,” says Dr. Dubinett. “We need to think creatively about how our discovery science, along with the unique resources of UCLA and our partner institutions, can be used to reach all communities to address these concerns.”

**Dan Gordon** is a regular contributor to UCLA Medicine.
60 Years of Memories

WHEN IRVING ZABIN, PH.D., WAS A YOUNG RESEARCH ASSOCIATE IN BIOCHEMISTRY AT UCLA IN 1951, he was asked to be a lecturer for the university’s nascent medical school, which had just enrolled its first class of students – 26 men and two women.

Dr. Zabin took the job, and he has worked for the school ever since. Over the next 60 years, he has seen the infant medical school, which initially employed 15 faculty members and held its first classes in the reception lounge of the old Religious Conference Building on Le Conte Avenue, evolve into an enormous complex that employs 2,500 faculty members and 1,400 residents and trains 750 medical students and 400 Ph.D. candidates at a time. It long ago moved out of borrowed space and today includes not only a state-of-the-art hospital, but also a large assortment of affiliated facilities that include community, county and VA hospitals, as well as community clinics and outpatient settings.

“The most impressive change is the great increase in size as well as the stature of UCLA,” says Dr. Zabin, who, at 91 years of age, is now a professor emeritus and the assistant dean for academic affairs for the David Geffen School of Medicine at UCLA. “We did not have a very high reputation in the beginning because we were new and just starting. But the stature of the school built up slowly as our faculty became better known.”

“I’ve been married to the medical school. It’s been a tremendously important part of my life, and I’m personally pleased and proud to still be a part of it.”

A thoughtful man with piercing blue eyes, a subtle sense of humor and uncommon energy, Dr. Zabin now reviews promotions and appointments for the medical school’s basic-science faculty. He usually sports an open-collared shirt, though there was a time when he wouldn’t think of entering the dean’s office without a tie. Before he retired from teaching, at age 70, he built a significant career working in the laboratories of two different scientists who went on to receive the Nobel Prize.

A native of Chicago who worked on meteorology and weather prediction for the Air Transport Command during World War II, Dr. Zabin studied biochemistry at the University of Chicago. There, he earned his doctorate under the tutelage of Konrad Bloch, Ph.D., a young professor who, in 1964, received the Nobel Prize in Physiology or Medicine for his work on how cholesterol is formed in the body.

In 1950, Dr. Zabin secured his first postdoctoral position at UCLA as a research associate in what was then called the Department of Physiological Chemistry (now known as the Department of Biological Chemistry). Because the medical school and hospital buildings were still under con-

Awards/Honors

Dr. Lawrence W. Bassett, the Iris Cantor Professor of Breast Imaging in the Department of Radiological Sciences, received the American College of Radiology’s Gold Medal, the organization’s highest honor given for distinguished and extraordinary service in the field of radiology.

Dr. David Hayes-Bautista, professor of medicine and director of the Center for the Study of Latino Health and Culture, is the only American member of the Mexican commission created to organize the 150th anniversary celebration of the first Cinco de Mayo celebration.

Dr. Yonca Bulut, associate clinical professor of pediatric critical care, earned an award from Today’s and Tomorrow’s Children Fund for her research to investigate if iron supplementation worsens infections in children.

Dr. Dean Buonomano, professor of neurobiology in the David Geffen School of Medicine at UCLA and a member of the UCLA Brain Research Institute, has published a new book, Brain Bugs: How the Brain’s Flaws Shape Our Lives (W.W. Norton & Co., 2011). It examines the human brain’s strengths and weaknesses, attributing some of the brain’s “bugs” – or flaws – to evolution.

A pair of plays inspired by the stories of two heart-transplant patients and their relationship with their physician, Dr. Mario C. Deng, medical director of the UCLA Advanced Heart Failure, Mechanical Circulatory Support and Heart Transplant Program, premiered in New York City. The plays were produced by The Relational Medicine Foundation and its Emotion Theater Project.

Dr. Sydney Finegold, emeritus professor of medicine, was honored with an international medical symposium co-sponsored by the Infectious Disease Association of California and the Anaerobe Society of the Americas to mark his 90th birthday and contributions to the field of microbiology and infectious diseases.

Dr. David Hovda, professor of neurosurgery and of molecular and medical pharmacology and director of the UCLA Brain Injury Research Center, has been selected by the U.S. Army as the recipient of the 2011 Strength of the Nation Award. It recognizes his breakthrough research that led to a system for diagnosis of and recovery from traumatic brain injury on the battlefield.

Dr. Lester Jones, clinical professor of surgery in the David Geffen School of Medicine at UCLA, has received an Award of Excellence from the American Podiatric Medical Association. The award recognizes outstanding national accomplishments in the field.

Dr. Kuk-Wha Lee, assistant professor of pediatric endocrinology, was awarded the Today’s and Tomorrow’s Children Fund Grand
struction, Dr. Zabin conducted his studies on the biosynthesis of lipids in a laboratory set up inside a Quonset hut. “In those days, every member of the faculty was assigned a student or two to mentor,” says Dr. Zabin. “I remember several of those medical students who eventually became members of our faculty.”

By the time the school’s inaugural class graduated, in 1955, and the medical complex opened its doors in July of that year, the number of faculty had nearly tripled, to 43, and Dr. Zabin was an assistant professor on his way to climbing the ranks to full professor.

**DR. ZABIN’S CAREER FLOURISHED** when he took a sabbatical leave at the Pasteur Institute in Paris to work on clarifying gene-protein relationships in bacteria — work that contributed to the discoveries of French biochemists Jacques Minod and François Jacob, who received the Nobel Prize in Physiology or Medicine in 1965. When he returned to UCLA, he worked on molecular biology in bacterial genetics and protein chemistry. His group determined the primary structure of beta-galactosidase, the largest protein to be characterized at the time.

As medical science advanced, so did the medical school’s curriculum, Dr. Zabin says. “There now is much more clinical relevance right in the beginning,” Dr. Zabin says. “Before, students were exposed to biochemistry concepts, which are important in medicine, but it was done in the abstract. Now biochemistry is much more directly related to medical problems and the practice of medicine.”

When he is not on campus fulfilling his administrative responsibilities, Dr. Zabin, a great-grandfather of four, plays violin for a chamber-music ensemble and enjoys movies, concerts and theater with his wife, to whom he has been married for 69 years.

But in spite of his full days, he still resists the idea of leaving UCLA, where he has spent two-thirds of his long life. “I’ve been married to the medical school,” Dr. Zabin says. “It’s been a tremendously important part of my life, and I’m personally pleased and proud to still be a part of it.” – Kim Kowsky

For 60 years, Dr. Irving Zabin has observed the transformation of UCLA’s medical school into one of the world’s premier centers for healthcare training.

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**Dr. Shlomo Raz**, chief of the Division of Female Urology, Reconstructive Surgery and Urodynamics, received the American Urologic Association’s AUA Presidential Citation.

**Dr. Eric Vilain**, professor of human genetics, pediatrics and urology and director of the Center for Society and Genetics, received the 2011 Society for Pediatric Research’s E. Mead Johnson Award for clinical and research achievements in pediatrics.

**Grants**

**Funding agency: National Center for Research Resources**

- **Grant amount:** $81.3 million
- **Grant duration:** 5 years
- **Principal investigator:** Dr. Steven M. Dubinett, director of the UCLA Clinical and Translational Science Institute (CTSI)
- **Summary:** CTSI is an academic-clinical-community partnership designed to accelerate scientific discoveries and clinical breakthroughs to improve health in Los Angeles County.

**Funding agency: National heart, Lung, and Blood Institute**

- **Grant amount:** $10.7 million
- **Grant duration:** 5 years
- **Principal investigator:** Dr. James N. Weiss, chief of the Division of Cardiology
- **Summary:** To study the mechanisms of lethal cardiac arrhythmias using a systems approach integrating mathematical modeling with experimental biology at the molecular, cellular and organ levels.

**Funding agency: California Department of Public Health**

- **Grant amount:** $9.3 million
- **Grant duration:** 3 years
- **Principal investigator:** Dr. Mark S. Litwin, chair, Department of Urology
- **Summary:** To provide free, high-quality treatment for prostate cancer to uninsured or underinsured men throughout California.

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**Prize for her research in finding a new treatment for type 1 diabetes.**

**Dr. Paul Krosgstad**, professor of pediatric infectious diseases, earned an award from Today’s and Tomorrow’s Children Fund for his work in the discovery and development of drugs to treat enterovirus infections in children.

**Dr. Wesley Moore**, professor and emeritus chief of vascular surgery, received a Lifetime Achievement Award from the Society for Vascular Surgery for his outstanding contributions to the field and exemplary professional practice and leadership.

**Dr. Richard A. Rawson, M.D. ’63** associate director of the UCLA Integrated Substance Abuse Programs and professor-in-residence in the Department of Psychiatry and Biobehavioral Sciences, received a 2011 National Institute on Drug Abuse International Program Award of Excellence.
One-on-One: Kirsten Tillisch, M.D. ’97

Kirsten Tillisch, M.D. ’97, is assistant professor at UCLA’s Gail and Gerald Oppenheimer Family Center for Neurobiology of Stress in the Department of Medicine, Division of Digestive Diseases.

MY INTEREST IN FUNCTIONAL GASTROINTESTINAL (GI) DISORDERS has grown from my interactions with patients. They have shown me how closely the brain and the GI tract interact. It’s a two-way street. For example, many people may feel an upset stomach or “butterflies” when they are nervous or stressed, and conversely, when people have abdominal pain or discomfort, their mood can be adversely affected. In 2006, I received a National Institutes of Health Career Development Award to gain new skills in neuroimaging that I can apply to brain-gut interactions. I have been studying the effect of visceral stimulation and emotional imagery on the brain in healthy people and in those with irritable bowel syndrome (IBS), using functional magnetic resonance imaging. Currently, I am focusing on the effects of mind-body treatments for IBS, such as hypnosis and meditation, to see if they can improve symptoms via their impact on these brain networks.

The biggest research challenge
THE MOST FRUSTRATING DIFFICULTY HAS BEEN OBTAINING FUNDING to conduct research using complementary or alternative treatments such as hypnosis or meditation. They are of great interest to patients and may have important health benefits, but we do not understand them well enough. Unfortunately, despite the potential broad application of these modalities, there is very limited funding to study them rigorously. We have been fortunate to have the availability of the Oppenheimer Seed Grant Program in Complementary, Alternative, and Integrative Medicine, in a competitive format, and also to have funding from the National Center for Complementary and Alternative Medicine.

The highlight of the project so far and its effect
OUR MOST EXCITING FINDING IN RECENT WEEKS has been a reproducible difference in the resting brain activity between IBS and healthy control patients. The difference is seen in the anterior insula, a region that is associated with the integration of physical sensations with emotional and cognitive input.

The immediate and future steps for the project
WE ARE CONTINUING TO EVALUATE BRAIN CHANGES IN IBS, with plans toward developing models to determine optimal treatment strategies for individual patients. In addition, we are investigating the role of brain changes in a variety of GI syndromes.

For more information, email KTillisch@mednet.ucla.edu or visit www.uclacns.org.
Postcard from Afghanistan

U.S. Air Force Lt. Col. Carlos Ayala, M.D. ’99, serves with the 455th Expeditionary Medical Group as chief of ear, nose and throat and facial plastic surgery for Craig Joint Theater Hospital at Bagram Airfield, Afghanistan. It is Dr. Ayala’s first deployment to a war zone, and his wife, Teresa, and two children, Juan Carlos and Yasmine, eagerly await his return.

MY ROLE IS TO PROVIDE CARE TO LOCAL NATIONALS, Afghan National Police and our U.S. service members who have been injured in battle. I deal with their facial injuries, fractures and all types of head-and-neck trauma, using my training in aesthetics and reconstruction to allow people to go home as normal as possible.

I arrived at Bagram Airfield in early May 2011 and in that time have already seen more than 100 patients and conducted more than 200 surgeries. This by far is the busiest I’ve ever been in the military. The type of trauma we see here doesn’t exist stateside; the injuries are not in textbooks yet.

Often, patients who have been in devastating improvised explosive device (IED) blasts arrive with multiple fragments in and soft-tissue injuries to the face. My team and I work to remove the fragments that would cause long-term scarring if they remained embedded, and we repair soft-tissue injuries to restore the facial appearance.

The injuries are so unique and devastating that there are no textbooks to show us how to fix the neck and facial trauma we see. We have to fall back on our training. After I arrived, I helped a little Afghan girl with diabetes who was intubated for a lengthy period of time. Her voice box closed up, and she would have been dependent on a breathing tube the rest of her life had I not had the necessary training and been able to save her.

Understanding the importance of training, I am also involved in the Afghan Trauma Mentorship Program. It is supported by Operation Medical Libraries, which allows me to serve as a liaison between the UCLA Medical Alumni Association and physicians here in Afghanistan.

Supporting the COIN (counter insurgency) program, we’ve worked out a relationship between UCLA and physicians here in order to provide medical textbooks. This is just one of several programs that allow me to work with other physicians, so when we leave this country, they will be able to continue providing needed care.

Carlos Ayala, M.D. ’99

The 60th Anniversary Challenge

REAFFIRMING THE NEED TO INVEST IN TOMORROW’S DOCTORS, the MAA has partnered with the David Geffen School of Medicine at UCLA to support the 60th Anniversary Challenge for Medical Student Scholarships.

The goal is to generate $2 million in alumni gifts by December 31, 2011. To stress the urgency of this initiative, $1 million has been allocated to provide a 50-percent match to gifts of $1,000 or more.

The need for scholarships is greater than ever, as the costs and debts of medical education soar. Now is the time to support our students so they can base their career decisions on their passions and not their pocketbooks.

To make a gift, go to: https://giving.ucla.edu/maa, or www.medalumni.ucla.edu/UCLA_60th_factsheet.pdf to learn more

60th Anniversary All-Class Reunion

ON AUGUST 20, 2011, the MAA welcomed graduates from the classes of 1955 through 2010 to a special reunion celebrating the 60th Anniversary of the David Geffen School of Medicine at UCLA. It was a wonderful opportunity to renew friendships and connect with former classmates. The event was co-chaired by Kathryn Gardner, M.D. ’79, and Gelareh Gabayyan, M.D. ’03. Mark Morocco, M.D., MAA Board of Directors, was the program’s ceremonial host. Highlights of the evening included a video address from A. Eugene Washington, M.D., M.Sc., vice chancellor for UCLA Health Sciences and dean of the David Geffen School of Medicine at UCLA, and the presentation of the inaugural MAA Alumnus of the Year Award to Timothy A. Miller, M.D. ’63. Alumni and guests were invited to a private tour of Ronald Reagan UCLA Medical Center prior to the reception.
Chairs of Distinction

The UCLA Department of Neurosurgery received a $2-million commitment to establish the Dr. Alfonsoina Q. Davies Endowed Chair in honor of Paul Crandall, M.D., for Epilepsy Research. The chair will be awarded to a preeminent physician-scientist with a history of creativity, innovation and willingness to view old problems in new ways with new technology. This gift is made possible through the generosity of Nadia and Thomas Davies ’57, whose daughter Alfonsoina “Nina” Davies was treated as a teenager through a pioneering surgery performed by Dr. Crandall. Sadly, the Davies lost Nina, suddenly and unexpectedly, earlier this year. They envision that the advances fostered by the creation of this chair will ultimately translate into optimum care for patients with uncontrolled epilepsy.

In Memoriam

Elliot Handler, who, along with his late wife Ruth and friend Harold “Matt” Matson, grew Mattel, Inc. from a home-based picture-frame business into the world’s largest toy maker, passed away on July 21, 2011, at his Century City home. He was 95. He is credited with inventing the Hot Wheels brand, which was introduced in 1968 following the success of the Barbie doll, created by Mrs. Handler in 1959.

In 1998, Mattel pledged $25 million to name Mattel Children’s Hospital UCLA, marking the largest single gift made to any children’s hospital by a corporation or corporate foundation. It has been the title sponsor of the hospital’s annual fundraiser, Mattel Party on the Pier, since 2000 and regularly donates toys to child-life enrichment programs. The company established the Mattel Executive Endowed Chair in Pediatrics, held by Dr. Sherin U. DeVaskar, and continues to support pediatric healthcare and research initiatives at UCLA, including pledging $100,000 to create the Elliot Handler Play Fund. On a personal level, Mr. Handler generously donated to Mattel Children’s Hospital UCLA and the Jonsson Comprehensive Cancer Center. He is survived by his daughter Barbara Segal, for whom the iconic Barbie doll was named.

Edith (Edie) Wasserman, widow of Lew Wasserman, passed away on August 18, 2011, at age 95 in Beverly Hills. Her grandson Casey Wasserman noted in a statement to the Los Angeles Times, “She had very strong convictions and was dogged in her pursuit of those. And they usually involved helping others.” The Wassermans were “the undisputed king and queen of Hollywood,” and Mrs. Wasserman was not only at the center of Hollywood society, but she also was recognized for her exceptional fundraising skills, resulting in the family’s tradition of charity.

With her husband, Mrs. Wasserman raised millions of dollars for the Motion Picture and Television Fund, the Music Center, CalArts and Cedars-Sinai Medical Center, among other major entities in Southern California. At UCLA, they established the Edith and Lew Wasserman Fund for Undergraduate Support in the College of Letters and Science, and the Jules Stein Eye Institute was the beneficiary of their philanthropy for a half century. In that regard, the couple established the Edith and Lew Wasserman Professor of Ophthalmology, and the Edie and Lew Wasserman Building is being constructed at the Stein Plaza on campus in honor of their long-standing commitment. Mrs. Wasserman is survived by her daughter Lynne Wasserman, two grandchildren and three great-grandchildren.

Gifts

For the second consecutive year, the Annenberg Foundation has supported the work of Dr. Reza Jarrahy, assistant professor, Division of Plastic and Reconstructive Surgery, with $150,000 designated for UCLA’s Craniofacial Clinic. Dr. Jarrahy treats pediatric and adult patients from all over the world with rare and complicated craniofacial disorders. His research focuses on tissue engineering to develop a bone-graft substitute for bone loss due to congenital, traumatic or surgical causes. In addition, Dr. Jarrahy travels abroad to provide reconstructive surgery to craniofacial patients in developing countries who lack access to medical care.

The Division of Liver and Pancreas Transplantation received a total of $700,000 to date from David Caspino, president of RDC Collective. These current-use funds support the clinical operations of the UCLA Liver Transplant Program, which provides a full spectrum of services for end-stage liver disease and cancer, transplantation of the pancreas for diabetes mellitus, and surgical and medical treatment options for all forms of liver diseases, from primary and metastatic tumors and chronic and congenital diseases to viral hepatitis, biliary-tract abnormalities and portal hypertension.

The Jonsson Cancer Center Foundation received gifts totaling more than $3.1 million from the Entertainment Industry Foundation (EIF) during the 2010-2011 fiscal year. These contributions continue EIF’s long-standing commitment to advancing breast- and ovarian-cancer research under the direction of Dr. Dennis Slamon.

The Robert Wood Johnson Foundation has awarded $747,355 over two years to support UCLA Family Common’s coaching-in-life skills, directed by Dr. Mary Jane Rotheram-Borus, for students at the Robert F. Kennedy Community Schools in Los Angeles. The goal is to demonstrate the integration of social- and emotional-wellness strategies with the daily curriculum through teachers, administrators, parents and the children themselves. The primary deliverables will be 1) a new integrative-teaching curriculum for promoting wellness in schools, 2) a new model of parental engagement for
social and emotional behaviors, and 3) a training manual for disseminating these practices to other schools.

Dian H. Kim and John B. Frank made a $1.5-million pledge to the Division of Liver and Pancreas Transplantation. The Kim-Frank Family Fund for Surgery will support UCLA’s Liver Transplant Program – the most active in the world, directed by Dr. Ronald W. Busuttil. Research priorities to be undertaken include developing increasingly effective immunosuppressive regimens and drugs, refining surgical techniques and discovering new protocols for the treatment of rejection and other critical medical complications.

An innovative pilot project has been launched by Sherry Lansing, chair of the University of California Board of Regents, and her husband, Academy Award–winning film director William Friedkin. They wish to help counter the staggering rate of surgical-site infections that are contracted in the U.S. each year – between 800,000 and 2 million. An award from The Sherry Lansing Foundation is benefiting the Surgical Infections Quality Improvement Project, under the direction of Dr. Richard J. Shemin in the Division of Cardiothoracic Surgery and Dr. Daniel Z. Uslan in the Division of Infectious Diseases. In an era of greater accountability and health reform, the initiative offers an opportunity to pioneer best practices and to create a model program that can be established at hospitals nationwide.

The Robert R. McCormick Foundation awarded a $1-million grant to support Dr. Patricia Lester and Dr. Shirley Glynn’s three-year initiative in providing behavioral healthcare research and services to returning service members and families through the Welcome Back Veterans UCLA Family Resiliency Center.

Mr. and Mrs. Murray H. Neidof pledged $250,000 to the Gloria Neidof Fund for Bipolar Research in support of the UCLA Mood Disorders Research Program under the leadership of Dr. Lori Altshuler. Furthermore, they added to their significant contributions to Dr. Linda Liau’s brain-tumor investigations in the Department of Neurosurgery by contributing $200,000 to the Neidorf Family Fund for Translational Pediatric Brain Cancer Research, bringing the family’s (including son and daughter-in-law Michael and Rebecca) total support of pediatric neurosurgery to $850,000 since 2004.

POM Wonderful LLC made a $475,869 pledge over three years to support research and education related to the effects of pomegranates on memory and cognitive function. This work is under the direction of Dr. Gary Small in the Memory and Aging Research Center at the Jane and Terry Semel Institute for Neuroscience and Human Behavior at UCLA.

A loyal Bruin and long-time donor, Mrs. Raymond (Shirley) Rothman and daughters Rita and Marcie have been involved with CASIT (Center for Advanced Surgical and Interventional Technology), UCLA’s interdisciplinary research institute designed to revolutionize surgical education and training. In 2006, the Rothman Family Seed Fund for CASIT Research was established to underwrite promising investigations under the direction of Dr. E. Carmack Holmes, executive director. Mrs. Rothman passed away in July 2010; her estate generously provided for CASIT to carry on her family’s charitable legacy.

The UniHealth Foundation awarded $549,656 over two years to the UCLA Global Center for Children and Families in the Jane and Terry Semel Institute for Neuroscience and Human Behavior at UCLA. It will underwrite a comprehensive obesity-prevention program, under the direction of Dr. Mary Jane Rotheram-Borus, at the Robert F. Kennedy Community Schools. Additionally, UniHealth awards $50,000 per year to the Department of Family Medicine in support of the International Medical Graduate (IMG) Program. It is a unique pre-residency program that prepares bilingual (English-Spanish), bi-cultural IMGs to become Board-certified family physicians in California. Upon completion of the residency, participants are required to spend 18 to 36 months in an underserved community. Since 2000, UniHealth also has provided a $50,000 scholarship annually for one third- or fourth-year medical student who has expressed a desire to practice medicine in medically underserved communities.

The Vons Foundation made a gift of $350,000 to support UCLA’s participation in the Athena Breast Health Network, a collaborative effort across five University of California medical centers to improve breast cancer patient care. To date, The Vons Foundation has contributed $1.1 million to the Athena site at UCLA.

Mr. Seth Wohlberg, founder of the RE Children’s Project, has given $111,000 to researchers in UCLA Neurosurgery to better understand the cause of Rasmussen’s encephalitis (RE). It is a rare neurological disease that causes intractable epileptic seizures, cognitive deficits, and paralysis of half the body. RE typically affects previously normal children between two and 10 years old, as was the case for Mr. Wohlberg’s daughter Grace, who was 10 when she started exhibiting symptoms. She underwent a hemispherectomy, the only known cure for the associated seizures in which half of the brain is removed. Mr. Wohlberg has become the leading national advocate for this disease, funding research at top medical institutions, including UCLA.

Center of “Affection”
Operation Mend patient Army Specialist Joey Paulik is the center of “affection” from Ruta Lee (right), Thalians Board Chairman, and Kira Lorsch (left), Thalians Event Co-Chair. The Thalians, an organization that focuses on mental health issues, presented Operation Mend with a $300,000 donation, representing proceeds from its recent annual fundraiser held at the Playboy Mansion. The group chose UCLA’s Operation Mend because of its mission to heal America’s returning military heroes (from Iraq and Afghanistan) in body, mind, and spirit.
Events

On June 6, 2011, 18 preschoolers from the Mann Family Early Childhood Center presented a donation to Mattel Children’s Hospital UCLA. It was made in honor of classmate Chloe Stevelman’s baby brother Matthew, who underwent a successful “arterial switch” heart surgery at 10 days old. Dr. Brian Reemtsen, UCLA’s chief of pediatric cardiothoracic surgery, reattached two main arteries and coronary arteries into their correct positions in the baby’s strawberry-sized heart, and Matthew is growing and developing normally. The 4-year-old students had been learning about mitzvot (good deeds) and decided they would help sick children by collecting money from their piggy banks and family members. The funds were used to buy toys and games for hospitalized girls and boys.

Thanks to the generosity and goodwill of Christina and Willie Geist, Operation Mend was the focus of an event held June 8, 2011, at NBC Studios in New York. Operation Mend is UCLA’s first-of-its-kind collaboration with the military to treat U.S. troops severely wounded during service in Iraq and Afghanistan. It raised significant funds and resulted in media exposure, including appearances on MSNBC’s Morning Joe and Jansing & Co. by Dr. Timothy Miller, chief surgeon for Operation Mend. After reading about Operation Mend in People magazine, Christina Geist called UCLA to offer assistance. When she mentioned that her husband was host of MSNBC’s Way Too Early with Willie Geist and co-host of Morning Joe, the event was born.

http://operationmend.ucla.edu

In June 2011, a Veterans on Wall Street (VOWS) event was held on the Intrepid Sea Air & Space Museum in New York City, and Operation Mend was one of several programs recognized. VOWS is dedicated to honoring former military personnel by facilitating career and business opportunities through founding member banks and financial firms. Emcee Brian Williams of NBC Nightly News introduced the patients in the audience and a film about the program.

On November 9, 2011, in New York City, Operation Mend patient Marine Cpl. Aaron Mankin was awarded the Iraq and Afghanistan Veterans of America 2011 IAVA Veterans Leadership Award, which is granted each year to an extraordinary veteran who has demonstrated immense courage and leadership. Philanthropist and co-founder of Operation Mend Ronald A. Katz received several awards and honors including the 2011 Spirit of Hope Award. It is presented for outstanding service to the U.S. and is awarded to distinguished Americans whose patriotism and service reflect that of Bob Hope. Mr. Katz served as grand marshal of the New York Veterans Day Parade on November 11, 2011.

UCLA Health System hosted a series of special events in September 2011 to unveil the new Santa Monica campus, which will officially open in early 2012. A formal dedication ceremony was followed by such activities as a physician breakfast, a staff open house, and a community celebration in front of the scenic Harman Garden Plaza facing Wilshire Boulevard.

The UCLA Division of Digestive Diseases held a fundraising event at Mrs. Paula Kent Meehan’s home on September 18, 2011. Mrs. Candy Spelling and Mrs. Barbara Davis served as co-hosts. Virtuoso violinist Elizabeth Pitcairn performed, playing the legendary 1720 “Red Mendelssohn” Stradivarius.

The Visionary Ball 2011 was held on Thursday, October 6, 2011, at the Beverly Wilshire Hotel. The event, benefiting UCLA Neurosurgery, honored philanthropist Sydney Kimmel, founder of the Jones Group, with the Visionary Award; director/choreographer Doriana Sanchez with the Courage Award; and Louis J. Ignarro, Ph.D., professor of molecular and medical pharmacology at UCLA, with the Medical Visionary Award. Look for more details on the gala in the next issue.

www.visionaryball.org

Mattel Children’s Hospital UCLA celebrated its 12th Annual Mattel Party on the Pier on October 16, 2011, at Pacific Park on the Santa Monica Pier. The 1,400 guests enjoyed a full day of amusement-park rides, a silent auction featuring one-of-a-kind experiences and collectors’ memorabilia, arts and crafts, great food and carnival games stocked with prizes donated by Mattel and run by celebrities from children’s TV shows. Mattel’s Hot Wheels Cycling Team, an event sponsor, held the Elliot Handler Memorial Ride to benefit pediatric healthcare initiatives at UCLA.
The Lesson of Las Maritas

By Jorge A. Lazareff, M.D.

NEAR THE END OF JULY 2001, Alba Leticia Alvarez de Quiej went into labor. She and her husband, Wenceslao, were anticipating the birth of their first child. But in spite of the help from midwives of Suchitepéquez, the southwestern region of Guatemala where they live, Alba’s efforts to deliver were fruitless.

After two days of excruciating pain, she was exhausted. Wenceslao asked the landlord of the banana farm where he worked for a pickup truck, so he could drive his wife to a hospital in Mazatenango, the regional capital. In Mazatenango, doctors obtained an abdominal ultrasound, the first Alba Leticia ever had, and diagnosed that the Quiej babies were twin girls and that they were conjoined at the head.

When the girls emerged, none of the physicians and nurses in Mazatenango had ever seen similar newborns. There was no Neonatal Intensive Care Unit at the hospital, but through sound clinical and nursing skill, the medical team helped the girls to overcome their precarious physiological condition. It was clear to anyone who looked at them that the girls would face significant difficulties, and the immediate impulse was to separate them as if what held the babies together was merely layers of malformed tissue that would dissolve under gentle pressure.

A few weeks later, Maria Teresa Quiej Alvarez and her sister Maria de Jesus Quiej Alvarez were transferred from Mazatenango to a Social Security hospital in downtown Guatemala City. Radiological studies revealed that their cerebral circulation was interchanged through a venous network that bridged their contiguous brains. This anatomical anomaly prevented the local surgeons from attempting their separation. So a Guatemalan non-profit organization contacted an American counterpart, and they began to search for a hospital where the girls could be separated.

One of the hospitals they approached was UCLA. Some centers concluded that the surgery was not feasible, and others were ready and willing. We were chosen over some other prestigious universities for reasons that were more poetic than scientific; of all the surgeons in the U.S. and Canada who examined photographs of the twins, I apparently was the only one who asked the simple question: “Who is Maria Teresa and who is Maria de Jesus?”

While sitting with Alba and Wenceslao on a wooden bench outside of the pediatric ward at the Social Security Hospital, I shared my uncertainties about being able to perform a successful procedure, and they shared their fear that their daughters would live stigmatized lives and be ostracized because of their malformation.

During that visit, I met Maria Teresa and Maria de Jesus, Las Maritas. They were robust and happy babies, though their movements were limited to rolling within their small crib. In the hospital, there was no stigma. Nurses, doctors and everybody else adored the girls. When they left the hospital to come to Los Angeles – flying here on a plane that was donated by a generous benefactor – their farewell party was memorable.

On their first night at Mattel Children’s Hospital UCLA, the nurses handcrafted a unique setting for them by joining two cribs together and padding the boundaries with pillows tied to the bars. Someone brought a mirror and showed each girl the reflection of her sister’s face – a face neither had ever seen before.

The surgery to separate Las Maritas was covered by media from throughout the United States and Guatemala. Today, the limelight has faded, and the twins, who now live in the United States, live their different biological realities. Maria de Jesus is becoming an independent 10-year-old, while Maria Teresa still is reeling from the devastating meningitis that struck her four months after she arrived back home in Guatemala following the separation surgery.

In the U.S., their foster families love them. Jenny Hull and the Cajes family are the extension of those first healthcare workers in Mazatenango. It is a chain of kindness that began well before Maria de Jesus and Maria Teresa became known as Las Maritas, a chain of kindness that will continue throughout their lives.

The story of Maria Teresa and Maria de Jesus Quiej Alvarez brings me back to the first stanza of Questions From a Worker Who Reads by Bertolt Brecht: “Who built Thebes of the seven gates?/In the books you will find the names of kings/Did the kings haul up the lumps of rock?” And this is the beauty of medicine. It assembles people with different understandings of the realities of life and knits them together in a united effort to do the difficult work of helping to heal a stranger in need.

Dr. Jorge A. Lazareff is the Geri and Richard Brawerman Chair in Pediatric Neurosurgery in the David Geffen School of Medicine at UCLA.
Dear reader:
Share your thoughts with us. Submit letters to: EditorMedicine@mednet.ucla.edu.
New Beginning

The newly dedicated Santa Monica campus of UCLA Health System is scheduled to officially open for patient care in early 2012. Look for full coverage in the next issue of UCLA Medicine.