

# Rebels with a Cause raises \$3.6 million for USC cancer research

**‘When I say David [Agus] is ahead of his time, quite seriously it’s because he knows and understands the future of medicine.’**

**—Carmen A. Puliafito, dean of the Keck School of Medicine of USC**

**By Imelda Valenzuela Fowler**

A media titan and a Nobel Laureate were honored, two music icons performed, an Emmy and Golden Globe award-winning comedian emceed and over \$3.6 million was raised at the recent *Rebels with a Cause, Visionaries and Revolutionaries Transforming Cancer Research* gala.

The event was held on Sept. 19 in support of the lifesaving research and clinical care of David B. Agus, director of the USC Westside Cancer Center and the USC Center for Applied Molecular Medicine.

*Rebels with a Cause* was named in honor of actor Dennis Hopper, a former Agus patient who appeared in the motion picture of a similar name. Hopper died in May 2010 of prostate cancer.

“Dennis Hopper was one of my inspirational heroes,” said Agus. “Obviously *Rebels with a Cause* is something we truly believe in. Dennis was like the people we are honoring tonight, on the frontier fighting against cancer, and in my mind, they are all rebels.”

Sumner M. Redstone, executive chairman of Viacom and CBS Corporation, and



At the gala are (from left): Sumner M. Redstone, executive chairman of Viacom and CBS Corporation; singer Tony Bennett; David B. Agus, director of the USC Westside Cancer Center and the USC Center for Applied Molecular Medicine; and Nobel Laureate Murray Gell-Mann, presidential professor of physics and medicine at USC.

Nobel Laureate Murray Gell-Mann, presidential professor of physics and medicine at USC, were both honored as the first “rebels” at the inaugural fundraiser held at the Four Seasons Los Angeles at Beverly Hills. Redstone has donated over \$27 million toward Agus’ research and clinic at USC.

“When I say David is ahead of his time, quite seriously it’s because he knows and

understands the future of medicine,” said Carmen A. Puliafito, dean of the Keck School of Medicine of USC.

He added, “The contributions he has made, is making and will make in cancer research and treatment are inspirational in their own right. But they are also inspiring the next generation of young scientists and clinicians to ensure the future success of both fundamental

and applied research.”

The gala featured special guest performances by Tony Bennett and Neil Young.

Actress and comedian Tracey Ullman, whose husband is a patient of Agus, served as emcee.

“David gave us a psychological boost,” said Ullman. “He always treats my husband with respect, and he’s mindful of his pride and dignity,” she said amid tears.

## USC scientists receive NIH support for important, little-explored cancer research

**By Robin Heffler**

Three USC researchers—representing medicine, chemistry and chemical engineering—are recipients of highly competitive grants from the National Institutes of Health’s National Cancer

Institute (NCI). They seek to answer what the NCI considers to be “important but not obvious questions” about cancer, challenging investigators to study the disease in especially effective and imaginative ways.

Some \$22 million is being distributed among the first 56 recipients nationwide to be awarded grants through the NCI’s Provocative Questions Project. USC received more awards than any other Southern California

institution. Two of the university’s three awards went to researchers in the Keck School of Medicine of USC, while the third went to researchers from the USC Viterbi School of Engineering and the USC Dornsife College

of Letters, Arts and Sciences.

For a study to be titled “Epigenetic Drivers of Cancer,” Peter Laird, director of the USC Epigenome Center and professor of surgery, biochemistry and molecular biology at the Keck School, submitted a query that led to an award of more than \$2.38 million over four years.

“In contrast to the traditional focus on mutations in the DNA, this grant will enable us to pursue an understanding of the less-often studied epigenetic changes in gene activity—changes in how the cell interprets the DNA,” Laird said. “My question is: Can we distinguish between ‘driver’ and ‘passenger’ epigenetic events that lead to cancer? If we’re able to do that, then we can identify which genes actually help to cause the cancer and develop drugs that attack that defect in the cell.”

Joining him as principal investigators of the study are Peter Jones, the Sawyer Chair in Cancer Research and a distinguished professor of

## USC marks Breast Cancer Awareness Month with game-day celebration

USC Norris Cancer Hospital recognized breast cancer awareness month on Oct. 20 at the Los Angeles Memorial Coliseum before the USC and Colorado football game, by celebrating the researchers, physicians and patients who fight against breast cancer every day.

Before the game, physicians and patients volunteered at the Keck Medical Center of USC booth and distributed giveaways and information on breast cancer services. The highlight of the day was when Trojan fans saluted the nine USC breast cancer physicians, patients and survivors, as they stood on the 50-yard line during a special halftime appearance.

“Being part of the Norris breast cancer awareness booth was an amazing experience and opportunity to remind women to get their yearly exams, since early detection is key. The doctors and nurses at Norris are the best, and I am so grateful for their expertise, compassion and dedication to finding a cure toward breast cancer,” said patient Rose Low.



From left: Darcy Spicer, associate professor of clinical medicine; Rose Low, patient; Lilia Frausto, nurse practitioner, breast center; Stephen Sener, professor of clinical surgery; Laura Alcala, patient; Christie Russell, associate professor of medicine; Regina Baker, assistant professor of surgery; Mary Jo Enyeart, patient; and Rutha Jones, patient.



# Salerni Collegium, Dolly Harris recognized at Volunteer Recognition Awards

**By Amy E. Hamaker**  
 Guests gathered at the annual USC Alumni Association Volunteer Recognition Awards Dinner on Sept. 21 to recognize the volunteers who keep USC running.  
 The event honored volunteers from alumni clubs and organizations with affiliations throughout the university for their dedication and service to USC.  
 There were two honorees this year from the Health Sciences campus:

Salerni Collegium Alumni Association (SCAA), home to Keck School of Medicine of USC alumni, resident alumni, faculty, parents and friends, was the recipient of a Volunteer Organization of the Year Award.  
 Dolly Harris, a volunteer with the USC Alumni Board of Governors and the USC School of Pharmacy Alumni Association, was honored with a President's Award.  
 Leadership from the Keck School and Salerni Collegium were present at the dinner, including Keck School Dean Carmen A. Puliafito, John



Stephen Blaha

Dolly Harris of the USC School of Pharmacy Alumni Association receives her President's Award from Scott M. Mory (right), CEO, and Mitchell Lew, president, of the USC Alumni Association.

House, clinical associate professor, Department of Otolaryngology; Donna Elliott, associate professor of pediatrics and associate dean for student affairs; George Stoneman, president of the Keck Parents Association Board of Directors; Robert Beltran, member of the Salerni Collegium Board of Directors; Michele Cannis, president of the Salerni Collegium Board of Directors; and Kenneth Geller, vice president of the Salerni Collegium Board of Directors.  
 Established in 1958, Salerni



Stephen Blaha

Health Sciences campus leaders celebrated Salerni Collegium's award as Volunteer Organization of the Year at the Sept. 21 Volunteer Recognition Awards Dinner. From left: Donna Elliott, Molly Gervais, Catherine Herrera; John Gonzalez, Irma Gonzalez, Michele Cannis, Tim Cannis, Lidia Beltran, Robert Beltran, Sandra Campione and George Stoneman.

Collegium has evolved into one of the largest medical support and networking groups in the nation. The organization provides scholarships for medical students, funds student programming and offers

access to the alumni online community KeckNet.  
 Volunteer Organization of the Year Awards are given to USC alumni organizations or clubs in recognition of extraordinary efforts to engage USC alumni lifelong

and worldwide and build a culture of philanthropy among the Trojan Family. The President's Award is given to individuals in recognition of their extraordinary leadership, service, achievement and overall contributions to USC.

## NIH: Grants allow USC researchers to explore unanswered, but important, cancer questions

**Continued from Page 1**  
 urology and biochemistry and molecular biology at the Keck School, and Stephen Baylin, deputy director of The Sidney Kimmel Comprehensive Cancer Center at Johns Hopkins.  
 Laird noted that his co-investigators are two of the pioneers in the field of the epigenetics of cancer. In addition, for 17 years, Jones was director of the USC Norris Comprehensive Cancer Center, one of the world's premier institutions for the study of epigenetics.  
 Darryl Shibata, professor

of pathology in the Keck School received more than \$220,000 to study "How do NSAIDS [nonsteroidal anti-inflammatory drugs] Prevent Colorectal Cancer?"  
 Shibata said that several epidemiological studies have shown that in people who take low-dose aspirin for heart health for at least five years, their risk of colon cancer goes down by 10 to 20 percent.  
 "But no one knows why," Shibata said. "I'm going to test aspirin and another NSAID, sulindac, which is sometimes used as a pain reliever, to

try to find out how NSAIDS reduce cancer risks."  
 Shibata is interested in the stem cells from which cancer develops. "The theory, which I will explore, is that aspirin might reduce the number of stem cells we have in our bodies," he said. "It's only recently that we've been able to count the number of stem cells in mice. It turns out that the colon has many stem cells in it. So, if we could reduce the number with some low-dose aspirin, then we might be able to reduce the risk of colon cancer."

The third USC project funded by the NCI seeks to answer the question: "Are there new technologies to inhibit traditionally 'undrug-gable' target molecules, such as transcription factors, that are required for the oncogenic phenotype?"  
 In this study, three principal investigators were awarded more than \$472,000 to explore whether tumor cells that express certain proteins, and do not respond to standard drugs currently used to fight cancer, can be stopped or prevented with new types of drugs that would block the actions of those proteins.  
 The study's researchers include Richard Roberts,

professor of chemistry and chemical engineering in the Viterbi School and Dornsife College; Terry Takahashi, research assistant professor of chemistry in the Dornsife College; and Pin Wang, associate professor of chemical engineering and materials science in the Viterbi School.  
 A departure from the NCI's traditional grant-making process, the Provocative Questions Project asks for research proposals to address 24 critical questions that, if answered, could "substantially change the way that scientists approach cancer research."  
 In response, the NCI received more than 700 grant applications.

The Weekly

Next Issue: Nov. 5

The Weekly is published for the faculty, staff, students, volunteers and visitors in the University of Southern California's Health Sciences campus community. It is written and produced by the Health Sciences Public Relations and Marketing staff. Comments, suggestions and story ideas are welcome. Permission to reprint articles with attribution is freely given.

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## Good Neighbors Campaign drawing to a close

The Good Neighbors Campaign, which kicked off on Oct. 1, is coming to a close at the end of the month.  
 The campaign collects donations from USC staff, faculty and friends to promote better health and educational opportunities in the areas surrounding both the Health Sciences and University Park campuses.  
 Organizers are hoping at least 50 percent of USC's faculty and staff will participate to help achieve this year's goal of raising \$1.6 million. Last year, nearly 6,000 people affiliated with USC contributed, raising over \$1.5 million.  
 Of the programs that received funds last year, a dozen were health care-related initiatives including the USC Neighborhood Mobile Dental Clinic, the Engineering for Health Academy, Science for Life, HSC Health and Science Expo, USC Physical Therapy Fit Families Program, the USC Med-COR program, and the HSC Community Health and Wellness Fair.  
 Though the official campaign ends at the end of October, it is still possible to contribute to the Good Neighbors through the end of the year by visiting <https://giving.usc.edu/goodneighbors/Donation/Give>.

# USC study uncovers molecular components of healthy immune system

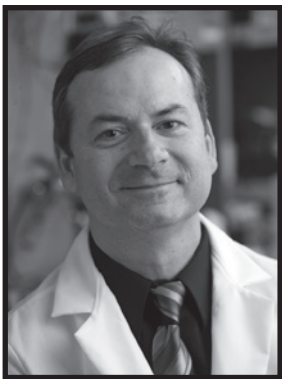
**By Marie Rippen and Ellin Kavanagh**  
Fatih M. Uckun, professor of pediatrics at the Keck School of Medicine of USC, is first author on a paper describing the findings of a multi-institutional study that revealed fundamental new insights about the development of a healthy immune system.

The report was published in the October issue of the *Proceedings of the National Academy of Sciences*. The study involved analysis of gene expression profiles of lymphocyte precursors from 1,104 patients with childhood leukemia.

Ikaros protein is the master regulator of a child’s immune system development. It controls the genes that cooperatively contribute to the architecture of a healthy immune

system that protects the child against infections and is capable of detecting and destroying cancerous cells if and when they are produced. Malfunction of Ikaros has been linked to development of acute lymphoblastic leukemia (ALL), the most common form of childhood cancer. Therefore, a strong and sustained Ikaros activity is considered of paramount importance, but until now it was not known how its function could be strengthened to further decrease the odds of developing leukemia.

Stuart Siegel, director of the Children’s Center for Cancer and Blood Diseases, said, “ALL is the



Fatih M. Uckun

most common type of cancer in children, so understanding its pathogenesis is of the utmost importance. This finding also helps to provide new information on how ALL originates and progresses, thereby making new and more effective treatments possible.”

Uckun and his colleagues at The Saban Research Institute of Children’s Hospital Los Angeles, have discovered that the enzyme SYK kinase specifically modifies Ikaros by adding two phosphates to unique regulatory sites. This so-called “phosphorylation”

markedly improves the interactions of Ikaros with sequence-specific DNA segments of its target genes and amplifies its ability to accurately and effectively orchestrate the development of the immune system. The team also developed new diagnostic tools for a rapid analysis of Ikaros function in the laboratory that—upon further validation and optimization—could help identify children at high risk for leukemia.

“The new insights provided by this comprehensive analysis of Ikaros regulation have the potential to lay the foundation for innovative strategies aimed at preventing childhood leukemia,” said Uckun, head of Translational Research in Leukemia and Lymphoma in the Children’s Center for Cancer.

## Students sought for ‘SunSmart’ skin cancer education project

**By Hope Hamashige**

Students from the public health program at the Keck School of Medicine of USC are looking for USC undergraduates to help out with a community health project.

SunSmart, which is a collaboration between USC undergraduates involved in the Joint Educational Project (JEP) and students in the Master of Public Health program at the Keck School, educates nearby elementary school children about the danger of too much exposure to the sun.

The program was conceived by Myles Cockburn, associate professor of preventive medicine at the Keck School, who said there is evidence that kids in Southern California are at heightened risk for developing skin cancer later in life.

One troubling fact that concerns public health officials is the rise of melanoma rates in recent years among Californians. Melanoma, the deadliest form of skin cancer, is associated with exposure to ultraviolet radiation from the sun and experiencing sunburns in childhood.

“In California, we’re seeing a troubling trend in an increased incidence of melanoma that can’t be explained by more accurate screening and diagnosis,” said Cockburn. “And while still rare, the disease is becoming more common in Latinos, an important population for our outreach through SunSmart.”

For more information, or to participate, contact (213) 740-1837 [uscthv@gmail.com](mailto:uscthv@gmail.com).

## USC hires renowned orthopaedic surgeon

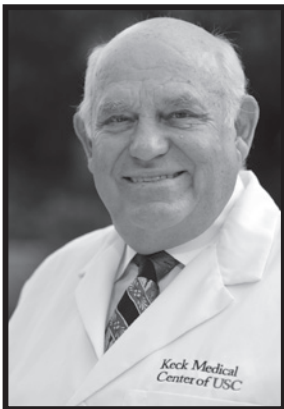
**By Jon Nalick**  
Expanding its roster of top-flight surgeons, the Keck School of Medicine has recruited Lawrence D. Dorr, an international leader in the field of joint replacement of the hip and knee, as a professor of orthopaedic surgery.

Jay R. Lieberman, professor and chair of the Department of Orthopaedic Surgery, said Dorr has contributed significantly to advances in total joint replacement and described him as a leading proponent of robotic surgery.

“He is an internationally renowned total joint replacement surgeon who has dedicated his whole career to optimizing the results of these procedures,” he said.

Dorr’s pioneering research has aided in the design of widely used orthopaedic implants, as well as small incisions and the use of robotic surgery for total hip replacement.

An international speaker and writer, Dorr has authored a book on surgical techniques and numerous journal articles. He is the founding editor of the *Journal of Arthroplasty*, former editor-in-chief of *Techniques in Orthopaedics* and a member of the editorial



Lawrence D. Dorr

boards of several other prominent journals. He is the founder and past president of the Knee Society and the American Association of Hip and Knee Surgeons and past president of the Hip Society.

Dorr received his medical degree from the University of Iowa Carver College of Medicine and completed his fellowship training in orthopaedics/arthritis surgery at the Hospital for Special Surgery in New York.

Lieberman said that Dorr’s recruitment marks the beginning of an expansion of the department’s clinical expertise and capabilities in areas including joint replacement, sports medicine and spine surgery. Additional recruitments are under way.

## The Weekly NEWSMAKERS

An Oct. 22 article in *The Tennessean* quoted **Natalie Strand**, assistant professor of clinical anesthesiology at the Keck School, about how to correctly administer a spinal steroid in reference to the recent fungal meningitis outbreak.

An Oct. 22 article in the *Los Angeles Times* quoted **Philippe Friedlich**, associate professor of clinical pediatrics at the Keck School, who said that the heart/lung bypass machines at Children’s Hospital Los Angeles have supported 1,000 babies since 1987.

An Oct. 22 story on Phys.org featured research by **Randall Wetzels**, professor of anesthesiology and pediatrics at the Keck School, and colleagues at the University of California, Riverside, that mines data from pediatric intensive care units to help doctors treat children and cut health care costs.

An Oct. 21 article in the *Los Angeles Times* highlighted a study by **Andrea Hricko**, professor of clinical preventive medicine at the Keck School, and colleagues, finding that a proposed rail yard in the L.A. harbor area would increase air pollution. “By 2035, there will be almost twice as many trucks on the 710 as there were in 2010. The air will not be cleaner,” Hricko said. Views by Hricko, South Coast Air Quality Management District officials, and environmental advocates will be collected for an environmental impact report on the proposed yard.

An Oct. 21 report in *Food Consumer* cited a study by **Frank Stanczyk**, professor of research in obstetrics and gynecology at the Keck School, and colleagues about using synthetic hormones to treat menopausal symptoms.

An Oct. 20 story in the *Pasadena Sun* stated that Children’s Hospital Los Angeles is one of America’s premier teaching hospitals through its longtime affiliation with the Keck School of Medicine.

An Oct. 19 report in *Global News* (Canada) covered research by Keck School of Medicine doctoral student **Chelsea Catsburg** and colleagues, finding that red meat consumption can increase the risk of bladder cancer.

An Oct. 19 broadcast on ABC News Los Angeles affiliate KABC-TV interviewed **Jeffrey Upperman**, associate professor of pediatric surgery at the Keck School, about children being struck by cars due to being distracted while walking.

An Oct. 22 article by the California HealthCare Foundation featured research led by **Pia Pannaraj** about school-age children spreading the flu. *Science Codex*, Yahoo! News and CBS News Greenville, N.C., affiliate WNCT-TV also covered the research.

An Oct. 22 report in *Science Codex* featured research by **Edy Soffer**, professor of clinical medicine at the Keck School, and colleagues that looks at the promise of electrical stimulation treatment for unresolved reflux symptoms.

An Oct. 18 column in *The Washington Post* featured research by Keck School research assistant **Suzanne Houston** and **Elizabeth Sowell**, professor of pediatrics at the Keck School, regarding studies on how parental education and economic status affect the development of children’s brains. Subjects with higher education had larger hippocampal regions, which process learning and memory; those with lower education or income had larger amygdalas, in which stress is processed.

On Oct. 17, *Fortune* ran an op-ed by **David Agus**, professor of medicine at the Keck School, about health-conscious laws. While New York Mayor Michael Bloomberg’s decision to limit trans fats in the city drew criticism, Agus wrote that researchers found the legislation significantly reduced trans fat consumption, affecting high- and low-income residents equally. “We know where we can reduce our risk for some disease by controlling certain agents of illness,” Agus said.

An Oct. 16 story by ABC News interviewed **Francine Kaufman**, professor emerita of pediatrics at the Keck School, about a study finding that sleep deprivation can lead to weight gain.



# Calendar of Events

This Calendar of Events is also online at [www.usc.edu/hscalendar](http://www.usc.edu/hscalendar) for the Health Sciences campus community

## Monday, Oct. 29

**9 a.m. – 1 p.m.** “The Mammalian Kidney: Development, Damage and Repair,” Frank Contantini, Columbia Univ.; Ben Humphreys, Brigham and Womens; Roger De Filippo, CHLA; Melissa Little, Queensland; Andy McMahon and Janos Peti-Peterdi, USC. BCC 1st Floor Conference Room. Info: (323) 442-7732

**2 p.m. – 4 p.m.** Massry Prize Lectures. “Are There Circadian Clocks? Might a Genetic Prayer, Heaved from Mid-Court be Answered to Help Figure Out Such Biological Timers?” Jeffrey Hall, Brandeis University. “The Circadian Feedback Loop Circa 2012,” Michael Rosbash, Brandeis University. “The Genetics of Sleep and Circadian Rhythms in Drosophila,” Michael Young, Rockefeller University. KAM Mayer Auditorium. Info: (323) 442-1283

## Tuesday, Oct. 30

**Noon.** Cancer Center Grand Rounds. “The Role of Cell Surface GRP78 on Cancer Cell Growth and Tissue Factor Activation,” Richard Austin, McMaster University. NRT Aresty Auditorium. Info: (323) 865-0801

## Wednesday, Oct. 31

**8 a.m.** Pathology and Laboratory Medicine Grand Rounds. “ACGME: The Next Accreditation System and the Pathology Milestones,” Wesley Naritoku, USC. NOR 7409. Info: (323) 442-1180

**Noon.** Center for Excellence in Research Workshop. “Responsible Conduct of Research Training,” Susan Rose, USC. NML East Conference Room. Info: (213) 740-6709

## Thursday, Nov. 1

**Noon.** Research Center for Liver Diseases Seminar. “The Behavior of Mitochondria,” Jodi Nunnari, UC Davis. HMR 100. Info: (323) 442-1283

## Friday, Nov. 2

**8:30 a.m.** Surgical Grand Rounds. “The Evolution of Lung Cancer Surgery from Thoracotomy to Robotics,” Daniel Oh, USC. DOH 100. Info: (323) 442-9064

## Saturday, Nov. 3

**8 a.m. – 3:30 p.m.** USC Center for Cerebrovascular Disorders & Office of Continuing Medical Education 2012 Cerebrovascular Disease Symposium. “Treatment of Ischemic and Hemorrhagic Stroke: Who, When and Why?” Gary Steinberg, Stanford; Arun Amar and Gene Sung, USC. KAM Mayer Auditorium. Info: (323) 442-2555

**4 – 6 p.m.** USC Institute for Genetic Medicine Art Gallery Opening Reception. CSC 240. Info: (323) 442-1144

## Sunday, Nov. 4

**8:30 a.m.** Walk to End Alzheimer’s. The USC Department of Neurology is participating at this year’s 2012 Walk to End Alzheimer’s event at Century Park in Century City. Register online at [alzla.org/walk](http://alzla.org/walk) and join team USC Memory and Aging. Team members will receive a USC Memory and Aging team T-shirt. Info: Lisa Jordan at (323) 442-7685

## Tuesday, Nov. 6

**Noon.** Cancer Center Grand Rounds. “Study Design Considerations for Next Generation Sequencing,” Duncan Thomas, USC. NRT Aresty Auditorium. Info: (323) 865-0801

## Wednesday, Nov. 7

**8 a.m. – 4 p.m.** Translational Science Day. A.M. Session: “How Did a Failed Contraceptive Become the Gold Standard in Breast Cancer Treatment and Prevention?” V. Craig Jordan, Georgetown. P.M. Session: “How Does Healthcare Reform Relate to Translational Science and its Impact on Health?” Lloyd Michener, Duke. NRT Aresty Auditorium. Info: (323) 442-4032

**Notice:** Deadline for calendar submission is 4 p.m. Monday to be considered for that week’s issue—although three weeks’ advance notice of events is recommended. Please note that timely submission does not guarantee an item will be printed. Send calendar items to *The Weekly*, KAM 400 or fax to (323) 442-2832, or email to [eblaauw@usc.edu](mailto:eblaauw@usc.edu). Entries must include day, date, time, title of talk, first and last name of speaker, affiliation of speaker, location and a phone number for information.

# Ostrow School launches new online program

By Beth Dunham

The Ostrow School of Dentistry of USC has launched a new online program aimed at busy practicing dentists who want to enhance their competency in treating geriatric patients.

The Online Master of Science in Geriatric Dentistry, a three-year program, uses weekly videoconferences, online lectures and quizzes, a research project and short yearly visits to campus to give dentists a deeper understanding of the oral health needs of older adults—all while they continue their dental practices.

“This program is for the motivated general dentist who’d like to improve his or her skills in caring for older adults,” said Roseann Mulligan, program director and chair of the Division of Dental Public Health and Pediatric Dentistry at the Ostrow School. “It will focus on the most common medical and oral health conditions seen in older adults and their treatments, as well as cognitive changes, mental disorders and social factors that will impact and thus require



Roseann Mulligan, chair of the Ostrow School of Dentistry division of dental public health and pediatric dentistry, treats a patient.

adjustments to oral health care delivery.”

Mulligan emphasized that as the baby boomer generation continues to age, the need for health professionals to understand the unique medical, pharmaceutical and dental considerations of geriatric patients increases.

“If more dentists have knowledge about the various factors influencing and impacting aging, it will be of great benefit to older adults seeking dental care who frequently demonstrate a complex array of external and internal factors that could

impact that care,” she said.

Students must be able to commit 10 to 20 hours each week to the online program’s lectures and videoconferences and must visit campus for one week at the start of the program and for two weeks after each academic year. The program is accredited by the Western Association of Schools and Colleges.

For more information about the school’s online programs, visit [dentistry.usc.edu/programs/online-programs](http://dentistry.usc.edu/programs/online-programs).

# Keck School of Medicine poised for growth, development

By Hope Hamashige

The Keck School of Medicine of USC has experienced years of dramatic change, and more change is on the horizon, Dean Carmen A. Puliafito said at the Oct. 9 Town Hall meeting.

“The medical landscape is changing as is the world of academic medicine,” Puliafito told the crowd gathered in Mayer Auditorium. “It is now big business.”

While the big changes in the past have been the result of internal developments—the naming gift from the W. M. Keck Foundation and the split with a corporate partner—outside forces are at work now, and it is up to the academic medical centers to adapt.

Specifically, the Affordable Care Act and the changing budget for the National Institutes of Health—an unprecedented force in the growth and development of academic medical research—are going to put all academic medical centers to the test in coming years.

The future of academic medicine, as Puliafito described it, involves juggling all the traditional responsibilities of teaching, research and running clinical practices, but with a new priority on economic competitiveness.

Likewise, the institution is going to have to embrace the fact that the NIH has made it clear that its priority is going to be funding basic scientific research that has the possibility of evolving into a clinical translation.

The best way to encourage such research, said Puliafito, is to help build a stable institution with top leaders. “We need security in order to foster creativity,” he said.

Part of the stability equation is going to be increasing the Keck School’s endowment, which Puliafito said needs to more than

double in order to bring it to the level of USC’s “peers.”

In general, raising money is going to have to be a major priority and not just for the endowment for the Keck School. Puliafito added that creating a campus with better facilities and more amenities is going to carry a huge price tag, which is going to require a major philanthropic effort. The Keck Medicine Initiative, part of the Campaign for the University of Southern California, is the name of the fundraising effort that is underway to raise \$1.5 billion for various projects on the Health Sciences campus.

Hurdles aside, Puliafito also emphasized that the changes that took place in the recent past have put the Keck School in a place where it is poised to grow.

“We are well positioned to step into the brave new world of health care,” Puliafito said.

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**Visit the USC Web: <http://emergency.usc.edu>** This page will be activated in case of an emergency. Backup Web servers on the East Coast will function if the USC servers are incapacitated.