

School of Dentistry launches \$115 million fundraising initiative

By Beth Dunham

The Ostrow School of Dentistry of USC announced its \$115 million fundraising initiative as part of the \$6 billion Campaign for the University of Southern California. The announcement was made March 23 at a celebratory event and picnic attended by faculty, students and alumni. The announcement comes as the school celebrates its 115th anniversary.

The fundraising goal is the largest on record for any U.S. dental institution and will primarily support endowed student scholarships, faculty recruitment and retention, and facilities improvements and expansion.

The Ostrow School of Dentistry Board of Councilors has committed to a \$10 million comprehensive gift to start the \$115 million campaign initiative.

USC President C. L. Max Nikias said: “Since its founding in 1897, the Ostrow School of Dentistry of USC has produced the majority of dental professionals in Southern California, contributing greatly to the health and well-being of people throughout this region. The school’s new fundraising initiative seeks to raise \$1 million for each year of its impressive history, and it will play a vital role in the success of the overall Campaign for USC.”

Provost and Senior Vice President for Academic Affairs Elizabeth Garrett spoke of the school’s impact on the reputation of USC as a whole.

“Over a century of distinction in the field of dentistry has brought widespread respect and acclaim to the members of our Ostrow School’s academic and practicing communities, and this success is reflected on the entire University of Southern California,” Garrett said. “Remember, however, that these last 115 years will be just a fragment on the time line of the Ostrow School’s history; there is more to achieve, and you are positioned to take bold steps moving forward.”

Ostrow School Dean Avishai Sadan said, “When you’re a part of the Ostrow School of

Dentistry of USC community, you are a part of something special. You are a part of the school that in the last decade has reached more than 650,000 patients, the school that annually publishes dozens of cutting-edge discoveries, and—most importantly—the school that has educated more than 10,000 of the best dental professionals in the world.”

Ralph Allman, chair of the Ostrow School’s Board of Councilors, and other board members announced their \$10 million joint commitment to support the initiative.

Future dentists and lifelong professors also reflected on the impact the Ostrow School has had on their lives.

Dental school associate professor Richard Kahn, an Ostrow School alumnus as well as a faculty member, shared memories from his nearly 52 years at the school.

“I am proud of my association with the Ostrow School of Dentistry of USC,” Kahn

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Accompanied by the Trojan Marching and the USC Song Girls, USC Football Head Coach Lane Kiffin (above) and his players visited Pappas Quad on March 23 to meet with fans and generate interest in the upcoming season. Right, quarterback Matt Barkley addresses the crowd. Top, safety Drew McAllister signs an autograph.



Photos/Jon Nalick

USC football team rallies HSC fans

Demand for Evaluation and Treatment Center surges

By Tania Chatila

The Evaluation and Treatment Clinic (ETC) at Keck Hospital of USC is about to get a whole lot bigger.

An expansion project that will more than double the clinic’s number of exam rooms is set to begin in May to help meet growing demands for service and enhance patient care. Construction to build three additional patient exam rooms—including a larger room to better accommodate bariatric patients—will take approximately eight to 10 weeks to complete. Once finished, the ETC will include a total of

five patient exam rooms, a waiting area, a consultation area, a nursing area and adjacent admitting space.

“Since opening in August 2009, the ETC has seen incredible growth,” said Fred Weaver, chief of vascular surgery at the Keck School of Medicine of USC and the clinic’s medical director. “We want to continue that momentum. By adding three more exam rooms, we will be better equipped to serve more patients and meet the needs of our growing Keck Medical Center of USC.”

As a 24-hour ambulatory care center,

the ETC provides a critical service to the organization, hospital leaders said. It gives established, private patients of USC providers a place to go for after-hours care. It is located in Keck Hospital’s Norris Inpatient Tower lobby.

Approaching its third year in existence, the ETC currently sees about 180 patients a month—an 80 percent increase from the average 100 monthly patients the clinic saw in its first year. With the additional exam rooms, patient volume is projected to grow even more—15-20 percent in the

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Jon Nalick

From left: Carlos N. Pato, James A. Knowles and Pat Levitt gather March 19 for the Della Martin Chair in Psychiatry and Neuroscience installation ceremony.

Knowles installed as Della Martin Chair in Psychiatry

By Imelda Valenzuela Fowler

James A. Knowles, professor and associate chair for research in Psychiatry and the Behavioral Sciences at the Keck School of Medicine of USC, was installed as the inaugural holder of the Della Martin Chair in Psychiatry and Neuroscience during a reception on March 19.

“Psychiatric disease in all of its manifestations takes a great toll on our society and our communities,” said Carmen A. Puliafito, dean of the Keck School of Medicine of USC, during the reception. “Understanding the origins of psychiatric disorders and their treatment is a very high priority, and looking at the genetic roots of psychiatric disorders has been, for a long time, an important topic. Jim Knowles is someone who really has

pushed this field forward.”

The Della Martin Foundation, a partner of the Keck School of Medicine of USC since 1976, established the original Della Martin Chair in Psychiatry, which is held by Michele Pato, and provided the funding to establish the second chair held by Knowles.

“This represents a model for the type of partnership that is so critical for the Department of Psychiatry and the Keck School of Medicine of USC,” said Carlos N. Pato, the Franz Alexander Professor and chair of the Department of Psychiatry and the Behavioral Sciences. “The contributions that have been made by the Della Martin Foundation have been critical on their own, and the holders of

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USC researchers find new drug target for pulmonary fibrosis

By Alison Trinidad

A team led by Keck School of Medicine of USC researchers has identified a target in lung cells that may lead to new treatments for idiopathic pulmonary fibrosis, a progressive disease that ultimately robs a patient of the ability to breathe.

Pulmonary fibrosis, characterized by scarring of the lung, affects about 128,000 people in the United States, with about 48,000 new cases diagnosed annually, according to the Coalition for Pulmonary Fibrosis. Lung damage caused by the disease can't be repaired, and treatment has

focused on improving quality of life.

The researchers discovered that inhibiting certain proteins blocks the interaction between two cellular pathways thought to contribute to pulmonary fibrosis. The discovery represents a new approach to suppress the disease. Their study appears in the March 2, 2012, edition of *The Journal of Biological Chemistry*, the flagship journal of the American Society for Biochemistry and Molecular Biology.

"There is very little research available about the mechanisms that underlie

direct interactions between these cell signaling pathways, although previous studies have suggested that there is crosstalk between the two," said Zea Borok, senior author of the study and professor of medicine and biochemistry and molecular biology at the Keck School.

"Anti-inflammatory treatments that traditionally have been used for pulmonary fibrosis are uniformly ineffective," added Borok, who is co-director of the Will Rogers Institute Pulmonary Research Center at USC. "Our research suggests a new approach to treat a disease that

is currently incurable."

A cell signaling pathway consists of a series of signals that regulate cell behavior.

Studying these pathways and how information is transmitted along them may help shed light on disease origins and therapies.

Using rat lung cells, Borok and her colleagues showed that the Wnt/ β -catenin and transforming growth factor- β signaling pathways directly interact with one another.

The interaction appears to increase expression of the α -smooth muscle actin protein, a hallmark of a biological process associated with fibrosis formation. The researchers confirmed that the interaction also occurs in human lung cells, and found that the interactions are dependent on the CREB-binding protein (CBP).

The researchers suggest using ICG-001, an experimental CBP inhibitor developed by co-author Michael Kahn, a USC Provost Professor in medicine and pharmacy, to stymie the pathway interaction.

They posit that ICG-001, which has been shown to

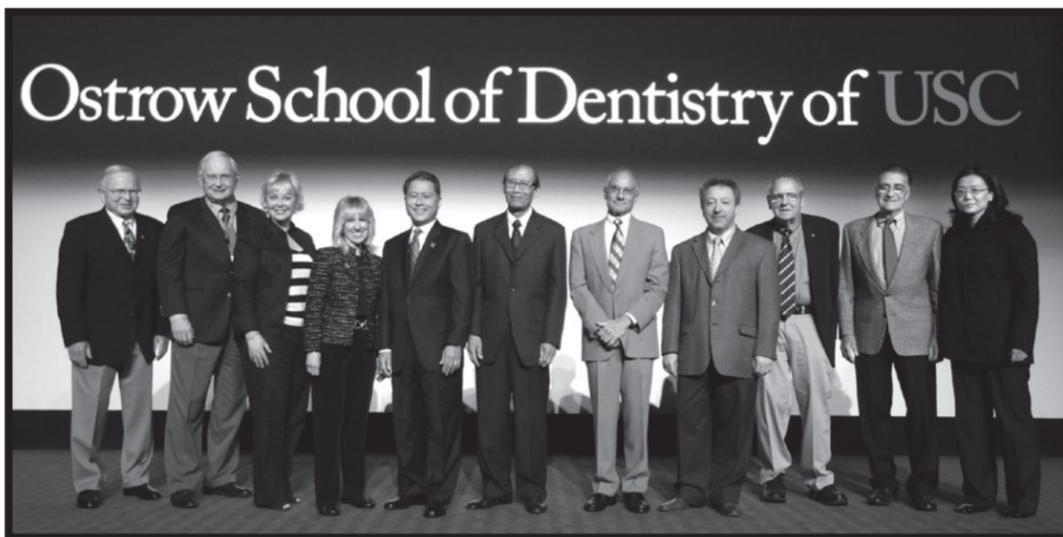
be safe for clinical use in colorectal cancer patients, could be used as treatment for pulmonary fibrosis.

The next step is to study its efficacy in fibrosis patients.

"Pulmonary fibrosis is the most common of the interstitial lung diseases, with a fatality rate in line with cancer," Borok said. "These findings have the potential to provide an alternative treatment for patients afflicted by this debilitating disease."

Researchers from the City of Hope Beckman Research Institute collaborated on the project. First author Beiyun Zhou, assistant professor of medicine at the Keck School, performed most of the work for the study during her postdoctoral training in Borok's laboratory.

Other Keck School co-authors include Edward Crandall, professor and chair of the Department of Medicine; Parviz Minoos, professor of pediatrics; and Cu Nguyen, lab manager. The study was supported with funds from the Hastings Foundation, Whittier Foundation and National Institutes of Health.



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The Ostrow School Board of Councilors committed \$10 million to the campaign. From left, Ralph Allman, John J. Lytle, Linda Tarrson, Diane Melrose, Derek Tagawa, Edward Lew, Gary Harmatz, Boris Keselbrenner, Jerry McClellan, John Aschieris and Vivian Chui.

DENTISTRY: School launches ambitious fundraising initiative

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said. "It's a wonderful place to work, and it's been a wonderful place for me to learn and teach. I am confident we will continue and improve on our tradition of educational excellence."

Vanessa Leewing, a member of the D.D.S. class of 2014, said, "I've had a lot of really great experiences since

coming to USC. I am so glad I chose the Ostrow School for my education, and I can't wait to see what the future holds for the school."

The launch was also celebrated at the school's annual Friends of Dentistry Gala on March 24 at the Four Seasons Hotel in Beverly Hills. At this event, associate professor emeritus Sakae K. Tanaka re-

ceived the inaugural Friends of Dentistry Excellence in Education Award in recognition of his more than four decades of service as a mentor to Ostrow students.

The fundraising initiative for the Ostrow School of Dentistry of USC will conclude in 2018, coinciding with the culmination of the university's campaign.

CHAIR: Della Martin Foundation endows new chair in psychiatry

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these two Della Martin chairs have brought, in the last six years, over \$40 million in awards from the National Institutes of Health. This is the exact type of investment that is so critical and continues to pay out every year. It is a relationship that we very much count on."

Della Martin, who died in 1974 at the age of 90, was the sister of aviation pioneer Glenn Martin, whose company, Martin Marietta, ultimately merged to become Lockheed Martin.

According to Laurence K. Gould Jr., chair of the Board of Trustees for the Della Martin Foundation, Martin's family committed her, at age 28, to a California state mental institution. She stayed there for 45 years, until her brother died. At that time, a lawyer for her brother's estate began proceedings that eventually allowed for her release, said Gould. The Della Martin Foundation was established upon her death for the purpose of researching the causes and cures of mental illness.

"Today we are here to honor the selection of the newest Della Martin Chair, Dr. James Knowles, who has an absolutely outstanding

record. We are so pleased that he will be holding this chair," said Gould. "Our relationship between the Della Martin Foundation and USC has been a source of great pride. I think what is being done here at USC is exactly the type of thing that Della Martin wanted to be done, to fulfill her legacy to discover the causes and cures for mental illness."

Pat Levitt, director of the Zilkha Neurogenetic Institute of USC, chair of the Department of Cell and Neurobiology, and Provost Professor of Neuroscience, Psychiatry, Psychology and Pharmacy, said, "Jim has achieved what most academics believe is the pinnacle of scholarly success: recognition by the university and by a foundation. From my perspective, there is no greater honor than holding an endowed chair."

Knowles said, "It is an honor to be named the first holder of the Della Martin Chair. It will allow me to accelerate my work in alleviating the pain and suffering of those with psychiatric illnesses."

Allen W. Mathies, dean emeritus of the Keck School of Medicine of USC, was also in attendance.

The Weekly

Next Issue: April 6

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Radiology offers 4D imaging to Keck Medical Center doctors

By Ryan Ball

Three-dimensional imaging has revolutionized the way physicians assess and treat patients. Now, even more information can be gathered by factoring in the fourth dimension, time. To tap into the far-reaching potential of time-flow analysis, the Department of Radiology at the Keck School of Medicine of USC recently set up the 4D Quantitative Imaging Center, or "4DQUICK" for short. The new service provides a powerful, advanced imaging tool to clinicians of the Keck Medical Center of USC and the greater Los Angeles community.

"This is something we have not done here at USC, and there aren't many places that actually offer this kind of service," said Edward Grant, professor and chair of the Department of Radiology at the Keck School of Medicine. "We are now able to obtain quantitative information using various imaging algorithms. For example, we're actually able to noninvasively look at tumors that have been treated and quantify the amount of tumor that has been killed versus the amount that remains alive. As such we can more precisely direct future therapy."

Grant said an excellent use of this technology is surgical planning. In the kidney, for example, he said, 4D imaging can separate out vessels that serve the tumor and enable the surgeons to better remove the tumor and spare the

kidney and vital blood vessels. "As we go through this, we are finding more and more clinical uses," he remarked.

"4D advanced imaging is the future of radiology, providing dynamic 3D visualization of body morphology," said Syed Rahmanuddin, clinical instructor in the Department of Radiology and director of the 4DQUICK. Employing several different advanced software applications, he and his team take the information provided by CT and MRI scans and create the 3D images and 4D animations. For patients, this does not entail any extra radiation or additional imaging examinations.

Joel Keats, medical director of Health Consultation Center II and associate professor of radiology at the Keck School, noted that the state-of-the-art system of imaging will enhance radiology for a broad range of disciplines, particularly orthopedics, hepatology, abdominal surgery, neurology and cardiology.

"It's so new and it's evolving so quickly that, literally, every day that I come here there is some different organ system that we're evaluating and some new way in which we are evaluating it," Keats said. "The potential is limited only by our imaginations."

The 4D Quantitative Imaging Center at Keck is based in Health Consultation Center II. For more information go to <http://keck.usc.edu/4DQUICK>.



Congressman Xavier Becerra (center) discussed health care reform during a March 15 visit to the Dean's Community Leadership Council at the Keck School of Medicine of USC. In the two years since the Affordable Care Act was signed into law, he said, 105 million Americans have had a lifetime limit on their coverage eliminated. Up to 17 million children with pre-existing conditions can no longer be denied coverage by insurers, and 2.5 million additional young adults up to age 26 now have health insurance. Representing California's 31st Congressional District, Becerra is also vice chair of the House Democratic Caucus. With Becerra above are Keck School Dean Carmen A. Puliafito (left) and USC Senior Vice President for University Relations Tom Sayles.

USC awarded \$353,000 to improve diagnosis of kidney injury

By Kukla Vera

The Foundation for the National Institutes of Health (FNIH) Biomarkers Consortium has awarded the USC School of Pharmacy a contract for \$353,000 to conduct an observational study to evaluate biomarkers of aminoglycoside-induced kidney toxicity among patients with cystic fibrosis.

Paul Beringer, associate professor of pharmacy, will lead the USC project in collaboration with co-investigator Adupa P. Rao, assistant professor of clinical medicine at the Keck School of Medicine of USC. Their study will focus on patients being treated with aminoglycoside antibiotics, typically used when patients are hospitalized due to a pulmonary exacerbation, a notable worsening of lung function. The aminoglycoside antibiotics have the potential to cause significant kidney injury.

According to the foundation, the Biomarkers Consortium, a public-private research partnership, aims to "test new biomarkers that are more sensitive and will establish better criteria for when kidney safety concerns should halt further testing of a drug."

While kidney toxicity of some drugs presents a serious problem for drug developers, the currently used biomarkers lack sensitivity and can occasionally produce false positives. This may cause a delayed identification of clinically significant kidney injury until the later stages of drug development, resulting in potential exposure to large numbers of patients enrolled in clinical trials and unnecessary expenditure of time and resources to conduct these large-scale trials.

The USC study will evaluate 20 novel proteins important to kidney damage and determine the sensitivity and specificity in predicting kidney injury in patients receiving aminoglycoside therapy. The study will recruit 75 patients with cystic fibrosis. This patient population is a target group for this study as they are typically treated with aminoglycosides when pulmonary exacerbations occur. Further, this condition warrants hospitalization, providing an opportunity to conduct the testing and determine biomarker efficiency.

"The availability of these improved biomarkers will provide a tremendous asset to clinicians, offering a more

real-time picture of the effects of drugs on the kidney and allowing precise dose titration to avoid clinically significant kidney injury," said Beringer, who works with Rao at the USC Cystic Fibrosis Program. The program manages 200 adult patients with the disease.

The national study project involves USC and the University of Minnesota focusing on cystic fibrosis patients taking aminoglycosides and Brigham and Women's Hospital/Dana Farber Cancer Institute and the MD Anderson Cancer Center studying patients with head and neck cancer using cisplatin, a common chemotherapy.

According to a statement from the foundation, the project will enable the continued development of potentially valuable compounds across a number of therapeutic areas, including cancer, cystic fibrosis and diabetes. The data generated from this project is aimed to advance regulatory acceptance of new biomarkers appropriate for monitoring kidney safety in the clinic.

Importantly, this data will improve clinical diagnoses of drug-induced kidney injury during drug development and patient therapy."

ETC: Program to aid patient care expands

Continued from page 1

short term, according to hospital administrators. Construction will take the clinic from 562 to 1,028 square feet.

"We're all excited about what this clinic expansion will mean to the operation as a whole, said Yolee Casagrande, director of the ETC. "This clinic was built from the ground up and it was always our hope to grow. This expansion increase our volume, but it will also improve access, services and overall timeliness. With more rooms, we can ensure our patients are not waiting long for care."

Casagrande said there are no plans to reduce operations during construction, and work will be phased to ensure ongoing care for patients. Measures also will be taken to minimize impact to patients, physicians and staff, she said.

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Calendar of Events

This Calendar of Events is also online at www.usc.edu/hscalcalendar for the Health Sciences campus community

Monday, Apr. 2

Noon. Medicine Grand Rounds. "Common Variable Immuno Deficiency (CVID)," Behzad Yashar, USC. IPT Conference Room B. Info: (323) 226-7556

Tuesday, Apr. 3

Noon. Psychiatry Grand Rounds. "The Genetics of Addiction," Laura Bierut, Washington University in St. Louis. ZNI 112. Info: (323) 442-4065

12:30 p.m. USC Center for Excellence in Teaching Active Learning Workshop. Lunch will be provided. UPC: DML 240. To RSVP, visit <http://cet.usc.edu/rsvp/> Info: (213) 740-3959

Saturday, Apr. 7

9 a.m. – 1 p.m. World Health Day LA 2012 Going For The Gold: A joint event between USC, UCLA and Western University of Health Sciences. Offering free health screenings, activities and entertainment to promote healthy lifestyles. Los Angeles Expo Center, Soboroff Sports Field. Info: worldhealthdayla.org

Tuesday, Apr. 10

4 p.m. Dean's Special Lecture. "The Molecular Basis of Eukaryotic Transcription," Roger D. Kornberg, Stanford. KAM Mayer Auditorium. Info: (323) 442-1900

Friday, Apr. 13

Noon. Department of Family Medicine. "Addressing Mental Health Needs within Primary Care," Marvin Southard, Los Angeles County Department of Mental Health, and Barbara Saunders, ENKI Health and Research. HMR 100. Info: (323) 442-1678

Wednesday, Apr. 18

Noon. ZNI Seminar. "Treadmilling Actin Filament Arrays and Axon Growth," Paul Forscher, Yale. ZNI 112. Info: (323) 442-2144

Thursday, Apr. 19

Noon. Dean's Translational Medicine Seminar cosponsored with CHLA. "Toward a Fourth Generation of Disparities Research to Achieve Health Equity," Sandra Crouse Quinn, School of Public Health, and Stephen B. Thomas, Maryland Center for Health Equity. NRT Aresty Auditorium. Info: (323) 442-7874

Friday, Apr. 20

8 a.m. – 6 p.m. Translational and Clinical Research in ONJ 2012, Co-Sponsored by the Center for Craniofacial Molecular Biology and Ostrow School of Dentistry of USC and the Keck School of Medicine of USC. "Anti-Resorptive Agent Induced Osteonecrosis of the Jaw: Pathogenesis and Management," Various speakers. NRT Aresty Auditorium. Info: (323) 442-7874

Tuesday, Apr. 24

Noon. USC Global Health Lecture Series. "A Struggle for Relevance: The Future of WHO," Kelley Lee, London School of Tropical Medicine. Lunch will be served. UPC: TCC 450. Info: (323) 865-0419

Friday, Apr. 27

Noon. Center for Applied Molecular Medicine. "Microfluidics for Cancer Cell Chemotaxis," Mingming Wu, Cornell University. CSC 250. Info: (323) 442-3849

Sunday, Apr. 29

3 p.m. KSOM Orange County Reception: Dean Puliafito hosts the OC Trojan Family and introduces the newly appointed director of the USC Norris Comprehensive Cancer Center, Stephen Gruber. Balboa Bay Club, 1221 West Coast Highway, Newport Beach, CA 92663. To RSVP: keck.usc.edu/balboabayclub Info: (323) 442-1767

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. 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.

USC Latino Alumni Association honors Richard Zapanta

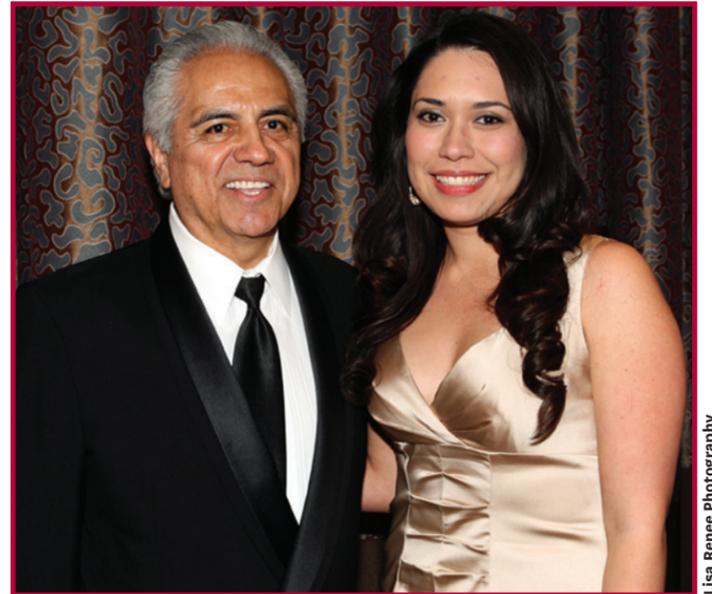
Keck School of Medicine of USC alumnus Richard Zapanta received the Legacy Award from the USC Latino Alumni Association at the association's sold-out 38th annual scholarship gala March 2 at the Beverly Wilshire Hotel.

Fourth-year Keck School student Michelle Munoz received the Dr. Edward Zapanta Outstanding Medical Student Award.

Receiving his award from USC Trustee Frank Cruz, Zapanta said, "My proudest achievement is the founding of the USC Mexican American Alumni Association that now continues as the USC Latino Alumni Association. I'm honored to have played a small role in the support and nurturing of our Latino students."

Since 1974 the organization has raised \$14 million to help Latino youth pursue their education.

A 1968 graduate of USC, Zapanta completed his M.D. at the Keck School in 1973. He completed his post graduate training at Los Angeles County+USC Medical Center. In private practice since 1979, he is the senior



Lisa Renee Photography

Legacy Award recipient Richard Zapanta shares the spotlight with Outstanding Medical Student recipient Michelle Munoz at the sold-out scholarship gala.

partner at Eastside Orthopedic Medical Associates and Plaza Surgical Center.

Zapanta and his wife, Rebecca, annually give a scholarship to a deserving Garfield High School student and sponsor a student for the USC MedCor Summer Work Program. His brother, the late Edward Zapanta, was the first Latino appointed to the USC Board of Trustees in 1984.

Munoz added, "My range

of experiences at the Keck School of Medicine of USC have been rewarding, diverse and challenging, making me proud to be a part of the Trojan Family. From day one, the faculty has invested in my education and shaped me into a well-rounded physician. Most importantly, I have the humbling privilege to provide our underserved Latino patients with the care they deserve."

ONLINE EXTRAS

Read more HSC news online:

- **USC team tracks down cause of birth defect**
<http://tinyurl.com/btumwjr>
- **Pediatric researchers link maternal diabetes to obesity in offspring**
<http://tinyurl.com/cjc6nbn>
- **Most low-income kids keep health insurance despite premium hike**
<http://tinyurl.com/cy954rg>
- **USC researchers discover epigenetic control of infection-fighting blood-cell production**
<http://tinyurl.com/cra4ofe>
- **Needs of heart failure patients addressed by new center**
<http://tinyurl.com/cuolg4v>
- **Keck School of Medicine of USC researchers use rat stem cells to study Kaposi's sarcoma virus**
<http://tinyurl.com/bnhyf8v>
- **Fall into the GAP**
<http://tinyurl.com/bnfnmvd>

• **USC scientists find complex switch regulates simple bodily function**
<http://tinyurl.com/c6gk3ny>

• **Keck School of Medicine of USC research indicates asthma cost to communities**

may exceed previous estimates
<http://tinyurl.com/crgacpb>

• **Ostrow School celebrates Give Kids a Smile Day**
<http://tinyurl.com/bowtzc>

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