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.

Provost and Senior Vice President for Academic Affairs Elizabeth Garrett said the school’s 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.

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 said 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 Arash Ashari 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 Counselors, 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 said.

By Yamin 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 more exam rooms, includ-

see DENTISTRY, page 2

by Imelda Valenzuela Fowler

James A. Knowles, professor and associate chair for research in Psychiatry and the Behavioral Sciences, 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. Pulaalto, 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 fund-
ing 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

see CHAIR, page 2
By Allison 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 for 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/b-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 affected by this debilitating disease.”

Researchers from the City of Hope Beckman Research Institute collaborated on the project. First author Beiyou 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 Minoo, 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.
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 chemotherapeutic.

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.

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 Kears, 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,” Kears 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.

USC Civic Engagement

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

Monday, Apr. 2

Tuesday, Apr. 3
12:30 p.m. USC Center for Excellence in Teaching Active Learning Workshop. Lunch will be provided. USC DML 240. To RSVP, visit http://ext.usc.edu/rsvp Info: (213) 740-9595

Saturday, Apr. 7
3 p.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, SobeSoff Sports Field. Info: worldhealthdayla.org

Tuesday, Apr. 10
4 p.m. Dean’s Special Lecture. “The Molecular Basis of Endolysosomal Transcription,” Roger D. Kornberg, Stanford. RAM 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, EXRN Health and Research. RBIB 100. Info: (323) 442-1079

Wednesday, Apr. 18

Thursday, Apr. 19
Noon. Dean’s Translational Medicine Seminar cosponsored with CRI: “Toward a Fourth-Generation of Disparities Research to Achieve Health Equity,” Sandra Greene Quinn, School of Public Health, and Stephen B. Thomas, Maryland Center for Health Equity. NRT Arvey 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 in 1973. He completed his post gradu- ating at Los Angeles County+USC Medical Center. In private practice since 1979, he is the senior partner at Eastside Orthope- dic 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 MeCoSummer 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 USC news online:

• USC team tracks down cause of birth defect
http://tinyurl.com/c06xk3y

• Keck School of Medicine of USC research indicates asthma cost to communities may exceed previous estimates
http://tinyurl.com/cy954rg

• Pedro Amador, Los Angeles Times

• Most low-income kids keep health insurance despite premium hike
http://tinyurl.com/cjc6nbn

Tuesday, Apr. 24

Friday, Apr. 27

Sunday, Apr. 29
3 p.m. RSOU Orange County Reception: Dean Paladino hosts the OC Trojan Family and introduces the newly appointed director of the USC Norris Comprehensive Cancer Center, Stephen Grobler. 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 guarantee an item will be printed. Send calendar items to The Weekly, KAM 400 or fax to (323) 442-8282, 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 alum Richard Zapanta received the Legacy Award from the USC Latino Alumni Association at the association’s sold-out 38th annual scholarship gala March 27 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 gradu- ate training at Los Angeles County+USC Medical Center. In private practice since 1979, he is the senior partner at Eastside Orthope- dic 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 MeCoSummer 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.”

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Visit the USC Web: http://emergency.usc.edu This page will be activated in case of an emergency.
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