



Ryan Ball

HEALTH SCIENCES CAMPUS WELCOMES STATE SENATOR—California State Senator Edward Hernandez (right), who represents the district that encompasses the Health Science Campus, visited the campus March 4, meeting with Keck School of Medicine Dean Carmen A. Puliafito and USC School of Pharmacy Dean R. Pete Vanderveen (left). During the meeting, Hernandez, an optometrist by profession and chair of the Senate Health Committee, learned about the unique teaching, research and clinical care roles of the schools. He also learned about the unique role the School of Pharmacy plays in research and development, health literacy and providing care through partnerships with community-based clinics throughout L.A. Hernandez has authored a bill that would directly assist the USC Norris Cancer Hospital and the reimbursement rates it receives for inpatient care and has stressed the importance of improving access to quality health care.

Hospital completes concierge cosmetic refresh

By Tania Chatila

A cosmetic refresh of the USC University Hospital concierge area has been completed as part of ongoing efforts to revitalize the hospital's 1991 Tower.

The refresh began in December and included several minor upgrades to the main lobby's concierge area, such as new carpet around the concierge desk and replacement of wood paneling on the desk.

Additionally, new signage welcoming patients and visitors to USC University Hospital was mounted behind the concierge desk. It includes the USC seal.

"One of our main priorities since acquiring the hospitals nearly two years ago has been continued expansion and renovation of our current facilities," said Karen Ribback, associate administrator for Planning and Development. "To that goal, we are doing what we can to refresh areas of the older USC University Hospital tower."

Ribback referred to other cosmetic renovations completed last year, such as

upgrades to several patient care units in the 1991 Tower. "This is an ongoing effort to ensure the ambience of our facilities meets the same excellent standards we hold for patient care," she said.

Director of Patient Experience Yolee Casagrande, who oversees the concierge staff, said the upgrades to the concierge area are long awaited and give the area a more welcoming feel.

"We're very happy with [the effort] to give the area a clean,

fresh, new look," Casagrande said. "Our department is the first point of contact for patients and visitors to the hospital. It is important that we put our best foot forward in making a good first impression."

Ribback said the refresh is just the beginning of major upgrades coming to the main USC University Hospital lobby. Administrators expect to commence a large-scale \$1 million lobby renovation project later this year.



Tania Chatila

Jennifer Luna, of Patient Experience, works at the recently remodeled concierge area at USC University Hospital. The refresh is part of ongoing efforts to revitalize the hospital's 1991 Tower, and is just the beginning of major upgrades coming to the main USC University Hospital lobby.

USC study widens recovery window from brain injury

By Margo Warren and Carl Marziali

In the largest stroke rehabilitation study ever conducted in the United States, stroke patients who had physical therapy at home improved their ability to walk just as well as those who were treated in a training program that requires the use of a body-weight supported treadmill device followed by walking practice.

The study, funded by the National Institutes of Health, also found that patients continued to improve up to one year after stroke, defying conventional wisdom that recovery occurs early and tops out at six months. In fact, even patients who started rehabilitation as late as six months after stroke were able to improve their walking.

"The conventional wisdom is not true. In this study we show that people are recovering up to a year," said Katherine Sullivan, one of the study leaders and an associate professor in biokinesiology and physical therapy at the Herman Ostrow School of Dentistry of USC, as well as president of the neurology section of the American Physical Therapy Association. "The potential for recovery extends well beyond the first few months after a stroke or brain injury, which is something that patients and their families are often told."

The multi-site study, which involved patients in Florida and California, involved the participation of physical therapy faculty and clinicians along with preventive medicine faculty from the Keck School of Medicine of USC.

The results of the study were announced Feb. 11 at the American Stroke Association's International Stroke Conference 2011 in Los Angeles. The National Institute of Neurological Disorders and Stroke provided primary funding for the study.

"More than four million stroke survivors experience difficulty walking. Rigorously comparing available physical therapy treatments is essential to determine which is best," said Walter Koroshetz, deputy

'The conventional wisdom is not true. In this study we show that people are recovering up to a year.'

—Katherine Sullivan, associate professor in biokinesiology and physical therapy at the Herman Ostrow School of Dentistry of USC

director of the National Institute of Neurological Disorders and Stroke. "The results of this study show that the more expensive, high-tech therapy was not superior to intensive home strength and balance training, but both were better than lower-intensity physical therapy."

The walking program involves having a patient walk on a treadmill in a harness that provides partial body weight support. This form of rehabilitation, which is known as locomotor training, has become increasingly popular. After the patients complete their training on the treadmill, they practice walking over ground.

Previous studies suggested that these devices, also called commercial lifts or robot-assisted treadmill steppers, are an effective intervention in helping stroke patients walk. But this walking program had not been tested on a large scale or examined in terms of

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New USC Cardiology Council focuses on life-saving care

By Imelda Valenzuela

“Does it take a village of doctors to save a man’s life? You bet it does,” said Nancy Spencer, the wife of a USC cardiology patient, speaking at the first meeting of the USC Cardiology Council. The story of life-saving care was a highlight of the meeting Jan. 28, when over 50 attendees gathered in Aresty Auditorium.

The USC Cardiology Council was initiated by Leslie A. Saxon, chief of the division of cardiovascular medicine and executive director and founder of the USC Center for Body Computing, to provide a forum for patients and other interested individuals.

“We have a visionary leader in cardiology—Leslie Saxon,” said Keck School of Medicine of USC Dean Carmen A. Puliafito as he addressed the audience. “She’s had lots of visionary ideas, and one of them is the Cardiology Council, which I think is tremendous. My hope is that you learn more about cardiology at USC,

share the excitement about it, and maybe get involved with helping move this program forward.”

The gathering featured discussions from a panel of USC Division of Cardiovascular Medicine faculty members including David Cesario, director of cardiac electrophysiology; Leonardo Clavijo, director of vascular medicine and peripheral interventions; Tasneem Z. Naqvi, director of echocardiography services; and Jerold Shinbane, director of the USC Ambulatory Arrhythmia Center.

Also joining the panel was Ray Matthews, program director of interventional cardiology, who earlier in the week had performed a new, minimally invasive procedure to replace a diseased aortic valve as part of a clinical trial.

“They have collaboratively worked to create what I am certain is the best multidisciplinary cardiovascular care team in the city, state and western United States,” said Saxon of the cardiovascular

team. She said that the multidisciplinary collaboration increases high quality health care and satisfactory results for patients.

George Dimogiannis, a USC cardiology patient, talked about his treatment and time spent in the intensive care unit. He expressed his appreciation to the Cardiology team for making it possible for his daughter to visit him in the ICU. “I’m 60 years old and I have a five-year-old—can you imagine what it was like for me to have her there in the ICU?” he said.

Dimogiannis’ heart surgery was successful and he attributes the positive results to the surgery and cardiovascular teams at USC. “Those guys are so good; they are my

heroes,” he said. “Every night before my daughter goes to bed, she says ‘Dear God, I want to thank you for keeping my heroes at USC safe because they saved my dad.’”

Nancy Spencer and her husband, patient Carlton Spencer, shared their satisfaction with the Cardiology Council. “I made several midnight phone calls to Dr. Clavijo while my husband was being treated—all of which he picked up every single time. There were many wonderful things he and his staff did to make me feel better,” Nancy Spencer said. To save a man’s life, she said, “it also takes synergy, communication and extreme care, which is what we received from the USC cardiology team.”

Alexandre Bonnin receives NARSAD Award for work in depression

Alexandre Bonnin, assistant professor of research at the Zilkha Neurogenetic Institute at USC, has received a Young Investigator Grant from NARSAD: The Brain and Behavior Research Fund. Bonnin was one of 214 applicants selected from a field of more than 1,000 in this round of funding, which saw NARSAD award more than \$12.6 million to researchers from leading research institutions on six continents.

Each year, promising, young researchers are identified by the 124-member NARSAD Scientific Council, a volunteer group of preeminent mental health researchers. This year’s selection process was led by Scientific Council member Herbert Meltzer of Vanderbilt University, a founding member of the council.

“Experience has demonstrated that support for the NARSAD Young Investigator program is the most effective way to further the massive effort needed to conquer the mental disorders that plague humanity,” Meltzer said.

“This is especially important now because of the reduced ability of governments, industry, and academic medical centers to fund research and treatment programs.”

“This body of research represents the cutting-edge of brain and behavior research,” added Benita Shobe, NARSAD president and CEO. “Young Investigators are selected for their innovation and potential to improve the lives of people living with mental illness through enhanced treatments and therapies, and a better understanding of the causes of mental illness.”

Bonnin’s work is focused on exploring and potentially

reducing the impact of antidepressant exposure on fetal brain development during pregnancy.

“In collaboration with Dr. Andrew McKay of the USC School of Pharmacy, we developed a proposal to investigate, in an animal model, the extent of antidepressant transport from the mom to the fetus across the placenta, and how it may be influenced by molecular delivery systems,” Bonnin explained.

Bonnin said the NARSAD award will allow his team to conduct a number of experiments to learn more about placental permeability and the physiological effects of antidepressants on mouse embryos.

“Ideally, we will be able to propose new ways to treat maternal depression using current and most efficient antidepressants while reducing their teratogenicity to the fetus,” Bonnin said. If successful, this method could be applied to many other therapeutic drugs currently used during pregnancy that have teratogenic effects on the fetus, such as cancer and diabetes treatments.”

Receiving up to \$60,000 over two years, recipients of the NARSAD grants pursue brain and behavior research related to schizophrenia, depression, bipolar disorder, autism ADHD and anxiety disorders such as OCD and PTSD. These grants also serve as catalysts for additional funding, providing researchers with “proof of concept” for their work. According to NARSAD, awardees have, on average, used their grants to leverage an additional 19 times their original grant amount.

‘Every night before my daughter goes to bed, she says, “Dear God, I want to thank you for keeping my heroes at USC safe because they saved my dad.”’

—George Dimogiannis, USC cardiology patient



Ryan Ball

USC DIGNITARIES GATHER TO VIEW LIVE SURGERY—USC Trustee Harlyne J. Norris (seated) and members of the USC Norris Advisory Board were invited to a symposium on robotic partial nephrectomy on March 4. Sponsored by the USC Institute of Urology, more than 60 participants watched live surgery and enjoyed hands-on experience with the da Vinci Si simulator.

The Weekly

Next Issue: March 18

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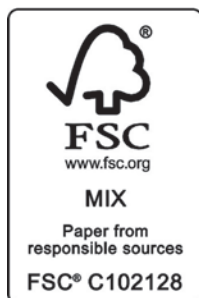
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USC study shows age of onset of puberty predicts adult osteoporosis risk

A team of researchers led by Vicente Gilsanz, professor of pediatrics at the Keck School of Medicine and director of Clinical Imaging at The Saban Research Institute of Children’s Hospital Los Angeles, has published research that determined the onset of puberty was the primary influence on adult bone mineral density, or bone strength. Length of puberty did not affect bone density.

The study was published in the *Journal of Pediatrics*.

Reduced bone mineral density leads to osteoporosis, resulting in bones becoming increasingly brittle and at risk for fracture. Osteoporosis is a significant public health issue with the cost of treatment in 2010 estimated at \$10 billion. This condition affects 55 percent of Americans aged 50 and older.

The Bone Mineral Den-

sity in Childhood Study is an ongoing multicenter study examining bone development in healthy children and teenagers of both sexes and ethnic groups in the United States. For this analysis, the investigators studied 78 girls and 84 boys who had just entered puberty, until they reached sexual maturity.

“Puberty has a significant role in bone development,” explained Gilsanz. “We found that early puberty was associated with greater bone mass while later puberty resulted in less.”

Adolescents with short stature sometimes undergo medical intervention to delay puberty in an effort to achieve greater height.

This study indicates that prolonging the growth period by delaying puberty may have unexpected consequences in later life.



Jon Nalick

CHALLENGE OF GLOBAL HEALTH—Pulitzer Prize winner Laurie Garrett says an exponential growth in global health spending over the past 20 years has occurred without careful setting of priorities and accountability. Today the U.S. provides more than half of all public giving in the world. Faced with a financial crisis, the U.S. is looking at ways to reduce that spending, but doing so during a simultaneous world food crisis “means millions of dead people,” Garrett said. “The stakes could not be higher.” A senior fellow for global health at the Council on Foreign Relations, she spoke March 4 at Mayer Auditorium as part of USC’s Visions and Voices. The event was co-sponsored by the Keck School of Medicine’s Program in Medical Humanities, Arts and Ethics; the USC Pacific Center for Health Policy and Ethics; and the Levan Institute for Humanities and Ethics.

STROKE: Intervention appears to help patients improve—even a year later

Continued from page 1
the most appropriate timing for therapy.

The investigators of the Locomotor Experience Applied Post-Stroke trial set out to compare the effectiveness of the body-weight supported treadmill training with walking practice started at two different stages—two months post-stroke (early locomotor

training) and six months post-stroke (late locomotor training). The locomotor training also was compared against a home exercise program managed by a physical therapist, aimed at enhancing patients’ flexibility, range of motion, strength and balance as a way to improve their walking. The primary measure was each group’s improvement in walking at

one year after the stroke.

The investigators had hypothesized that the body-weight supported treadmill and walking program, especially early locomotor training, would be superior to a home exercise program. However, they found that all groups did equally well, achieving similar gains in walking speed, motor recovery, balance, social

participation and quality of life.

“As long as patients received either program within the year after their stroke, walking ability was better than what was achieved with what is usually provided currently,” Sullivan explained.

At the end of one year, 52 percent of all the study participants had made significant improvements in their ability to walk.

The timing of the locomotor training program did not seem to matter. At one year, no differences were found in the proportion of patients who improved walking with the early or late treadmill training program, nor did the severity of their stroke affect their ability to make progress by the end of the year.

The trial was a collaborative effort along rehabilitation researchers at Duke University, USC and the University of Florida, and it involved a national group of interdis-

ciplinary researchers. Five community-based rehabilitation hospitals in Florida and Southern California served as clinical sites.

Julie Tilson, assistant clinical professor of physical therapy at the Ostrow School of Dentistry served as coordinator for the Southern California sites at Long Beach Memorial Medical Center, USC Physical Therapy Associates and Sharp Memorial Rehabilitation Center in San Diego.

Stanley Azen, professor of preventive medicine at the Keck School of Medicine, directed data management and analysis for the trial.

The study was funded primarily by the National Institute of Neurological Disorders and Stroke, with additional support by the National Center for Medical Rehabilitation Research. Recruitment for the study began in April 2006; the study was completed in June 2009.

Lecture series to examine broad medical issues March 28-31

The Beyond Medicine Lecture Series, a week-long noon-time lecture series exploring social, economic and political issues affecting the practice of medicine, will be held March 28-31 on the Health Sciences Campus.

The series will include these discussions:

- March 28—“Beyond the M.D.” will acquaint students with the social forces, economic constraints and political influences beyond clinical practice that shape medicine.
- March 29—“Beyond the Specialist” will introduce the different forms public health may take in the life of a specialist, whether it be through addressing barriers to treatment, international surgery or improvements in surgical health

care delivery.

- March 30—“At the Juncture: The Diabetes Epidemic” will offer a comprehensive view of the unique challenges and strategies that different health professions face to address the diabetes epidemic.

- March 31—“A Dual Perspective” will give students a better understanding of how dual degrees will allow the physician to have a larger impact and become leaders in their respective fields.

Lunch will be provided at all events.

To reserve space and for more information about speakers and event locations, visit <http://tinyurl.com/4orj5lg>.

The Weekly NEWSMAKERS

A Feb. 28 *Chicago Sun-Times* story noted that President Barack Obama appointed **Jonathan Samet**, director of the USC Institute for Global Health and chair of the Department of Preventive Medicine, as member of the National Cancer Advisory Board.

A March 1 article on IndiaWest reported that **Mark Humayun**, professor of ophthalmology, biomedical engineering and cell and neurobiology, has been elected to the National

Academy of Engineering, adding that this election is one of the highest professional distinctions accorded to engineers.

A March 3 post on Reuters featured research by **Richard Bergman**, professor and chair of the Department of Physiology and Biophysics, and colleagues, which found a new way to measure percent body fat that can account for different ethnicities. The story reported that the currently used standard, Body Mass Index,

doesn’t reflect true adiposity—the state of being obese—and can’t be generalized across genders or ethnic groups. Bergman’s formula, which uses height and hip measurements, can be used to determine adiposity even in remote areas where only basic tools like a tape measure are available, the article stated. The research was also covered by MyHealthNews-Daily, RedOrbit, and Smart Planet.

A March 4 story in *La Opinion* featured a program launched by

Anne Peters and colleagues at the USC Clinical Diabetes Program, which uses cellphone text messages to educate low-income diabetic patients awaiting an appointment at one of the city’s public clinics. The texts, sent in the patient’s native language, provide healthy eating tips, reminders about medication and measuring blood sugar, Peters said.

The USC Clinical Diabetes Program received a grant from the McKesson Foundation to fund the effort, the story noted.

Calendar of Events

This Calendar of events is also online at www.usc.edu/hscalendar for the Health Sciences Campus community

Tuesday, Mar. 15

9 a.m. Neurology Grand Rounds. “Concussion: Clearing the Confusion,” Clifford Segil, UCLA. ZNI 112. Info: (323) 442-7686

11:15 a.m. USC University Hospital Guild Speaker Series. “Postponing Death,” Cynthia Herrington, USC. DEI Third Fl. Aud. Luncheon following lecture \$25. Info: (323) 254-0600

Noon. Psychiatry Grand Rounds. “Attachment: Psychology and Evolution,” J. Mark Thompson, UCLA. ZNI 112. Info: (323) 442-4065

Wednesday, Mar. 16

8:30 a.m. Women in Management HSC Workshop. “You Are What You Do: An Occupational Therapy Approach to Time Management,” Camille Dieterle, USC. CHP 102. Info: (323) 442-1865

8:30 a.m. Research Seminar. “mRNAs and microRNAs in Lung Fibrosis: New Mechanisms and Biomarkers,” Naftali Kaminski, Univ. of Pittsburgh. IRD 732-734. Info: (323) 442-1217

11 a.m. Keck School of Medicine Postdoctoral Assoc., Caltech Postdoctoral Assoc., and the Assoc. of Women in Science: Career Development Workshop. “Putting Your Science to Work,” Peter Fiske, PAX Water Tech. Buffet lunch included. NRT Aresty Aud. Info: (323) 442-7732

4 p.m. Keck School of Medicine Postdoctoral Assoc., Caltech Postdoctoral Assoc., and the Assoc. of Women in Science: Career Development Workshop. “Entrepreneurship for Scientists,” Peter Fiske, PAX Water Tech. Beckman Instit. Aud., Caltech. Info: (323) 442-2232

Thursday, Mar. 17

Noon. ZNI Seminar. “Coupled Binding and Folding of Intrinsically Disordered Proteins,” Allan Chris Ferreon, Scripps Research Institute. ZNI 112. Info: (323) 442-2144

Friday, Mar. 18

6:45 a.m. – 8:30 a.m. Anesthesiology Grand Rounds. “Changing Practice in ICU,” Berend Mets, Penn State. MCH 256. Info: (323) 409-6856

8 a.m. – 4:30 p.m. USC Memory and Aging Center and Keck School of Medicine Seminar. “Many Faces of Dementia: Serving Diverse Populations,” Various speakers. \$75 registration, \$45 registration for full-time students. UPC: Davidson Conference Ctr. Info: (626) 470-6619

8:30 a.m. Research Seminar. “Idiopathic Interstitial Pneumonias,” Talmadge King, UC San Francisco. IRD 732-734. Info: (323) 442-1217

Noon. Medicine Grand Rounds. “TPN and Nutrition,” Sarah Lee, USC. IPT Conference Rm. B. Info: (323) 226-7556

Tuesday, Mar. 22

Noon. Psychiatry Grand Rounds. “Treating Sleep Disorders,” Michael Wincor, USC. ZNI 112. Info: (323) 442-4065

Wednesday, Mar. 23

Noon. ZNI Seminar. “Light Detection in the Retina,” King-Wai Yau, Johns Hopkins. ZNI 112. Info: (323) 442-2144

4 – 6 p.m. USC Ctr. for Excellence in Teaching. “Developing the Big Picture: How to Build Excellence & Reach New Audiences for Research in the Humanities & Social Sciences,” Thomas Habinek, USC. UPC: CUB 329. Info: (213) 740-3959

Thursday, Mar. 24

Noon. Cellular Homeostasis Lecture. “Coverage of Genetic and Stem Cell Biology in Human Disease,” Deepak Srivastava, UC San Francisco. MCH 156. Info: (323) 442-3121

Noon. ZNI Seminar. “Solid-state NMR Investigations on Prion Proteins and Protein-solvent Interactions,” Ansgar Siemer, Columbia Univ. ZNI 112. Info: (323) 442-2144

4 p.m. “Oncogenomics to Target Myeloma in the Bone Marrow Microenvironment,” Kenneth Anderson, Harvard. NRT LG 503/504. Info: (323) 865-3913

Friday, Mar. 25

8 a.m. “Update in Management of Multiple Myeloma,” Kenneth Anderson, Harvard. IPT C2J104 Conference Rm. B. Info: (323) 865-3913

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 e-mail to ebalauw@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.

School of Dentistry fetes power of research

By Beth Dunham

Students of the Herman Ostrow School of Dentistry of USC presented research projects and received awards as part of this year’s annual Research Day on Feb. 16.

The largest student-centered research event at USC included more than 100 posters for projects helmed by undergraduates, graduate and professional students, as well as residents from the Ostrow School of Dentistry and the divisions of biokinesiology and physical therapy and occupational science and occupational therapy.

“This event provides an intimate setting for researchers, both students and faculty, to interact with one another,” said Yang Chai, associate dean of research at the school, in his opening remarks. He encouraged everyone to use the event to spark new ideas and collaboration.

“The Ostrow School of Dentistry is one of our most potent weapons with regard to the life sciences,” said Provost Elizabeth Garrett, who gave a welcoming address during the event. “This school plays an important role in propelling this university to further greatness.”

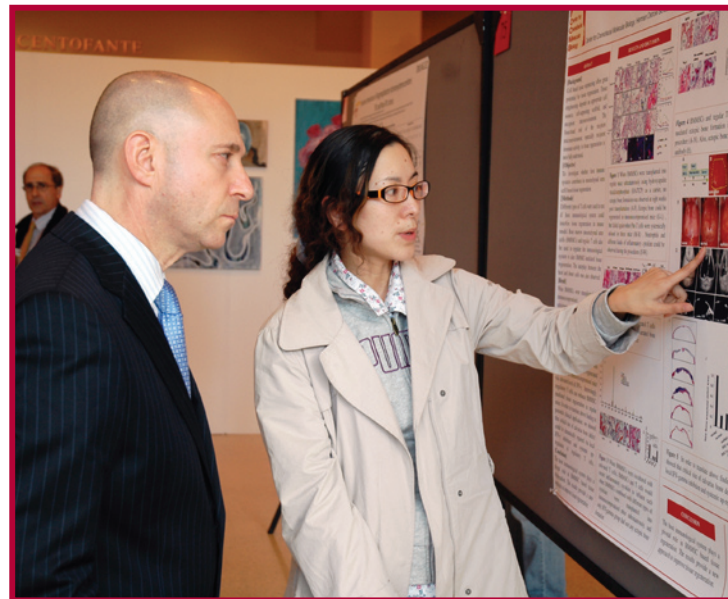
Students from all programs spoke about the importance of conducting research while in school.

“Getting involved in research broadens our knowledge beyond what we’re taught in the classroom,” said USC undergraduate McKalee Conrad. She and fellow dental hygiene classmates Joan Beleno, Amanda Olvera and Samantha Naumann presented a project that investigated the effects of fertility treatment in women.

USC undergraduate Chandler Ho said getting involved in research has been a great experience that he plans to keep with him long after he completes school and starts practicing on his own.

“Even if I’m not conducting research myself in the future, this experience will help me to keep up with research and take the initiative to find new information for patients,” Ho said. “Dentistry is all about lifelong learning.”

Several students also spoke about research from another perspective—that of the practicing clinician



Beth Dunham

Postdoctoral student Yi Liu presents her research to Avishai Sadan, dean of the Herman Ostrow School of Dentistry, on Research Day.

who returns to academic investigation.

Ph.D. candidate Szu Ping Lee said he had practiced clinical physical therapy for more than three years before coming back to get his doctorate.

“Both experiences are very important,” Lee said. “Good research starts with a good question, and for that it helps to know what real patients’ problems are. It helps you know that your research will help patients down the road.”

Leah Stein, a Ph.D. candidate in occupational science and occupational therapy, also spent time in clinical practice before returning to school. Her experiences with children with autism and other related disorders provided a practical perspective on her research, which looked at the difficulties faced by children

with sensory sensitivity when receiving dental care.

“I feel I have a different knowledge base,” Stein said. “When practicing, I noticed where the gaps in the research were.”

Avishai Sadan, dean of the Ostrow School of Dentistry, said that the school’s student research achievement was a testament to the talent and creativity of the school’s students and the valuable guidance of faculty members.

“We are incredibly proud of the Ostrow School of Dentistry students who take their education beyond the classroom, as well as our faculty members who provide priceless mentorship every step of the way,” Sadan said. “Participating in research is one of the most eye-opening experiences that students can have during their academic careers.”

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