



Above, Naima Nilou reacts to the good news that she matched with the University of Hawaii for prelim medicine and LAC+USC for emergency medicine. Above, right, Ryan Nelson, celebrates his match at CHLA for pediatrics, and (middle right) Bethany Lehman wipes away tears of joy at having matched at Northwestern/McGaw for psychiatry. Students celebrated their matches with glasses of champagne and strawberries (right).



Photos/Jon Nalick

HSC researchers aim to make impact through innovation

By Elisa Wiefel

More than 75 faculty members and graduate student researchers attended the first "HSC Innovator Reception and Conversation" on March 19 to hear about USC's plans, programs and policies to empower campus innovators to make maximum impact with their ideas and research.

The USC Stevens Institute for Innovation and the BioMedTech Park development team hosted the event, which attracted faculty researchers from the Keck School of Medicine and the USC Schools of Dentistry and Pharmacy.

The discussion featured remarks from Keck School Dean Carmen Puliafito, Pharmacy Dean R. Pete Vanderveen and Dentistry Dean Harold Slavkin, as well as an overview of USC Stevens' recent move to the Health Sciences Campus and an update on the development of the planned state-of-the-art BioMedTech Park.

Krisztina Holly, USC vice provost for innovation and executive director of USC Stevens, and Laurie Stone, program manager for the BioMedTech Park, each spoke at length about innovation as a strategic priority for the university.

Holly said that "people sometimes focus on the creativity side of innovation, but the most challenging part is the pragmatism necessary to identify market opportunities and turn the breakthrough ideas into real products, companies and services."

Still, she added, "By making innovation a fundamental pillar in the strategic vision of the university, and with increased emphasis specifically on supporting innovation at the Health Sciences Campus, USC is raising the bar on how to effectively transfer USC research and creative work into the market, nurture a culture of innovation on a university campus, and develop the skills necessary for lifelong innova-

See **INNOVATE**, Page 3

A Match Day that can't be matched

Veronica Jauriqui and Meghan Lewit

Fourth-year medical student Bethany Lehman's voice was still quivering, and the tear-stained letter was still clutched in her hand, when she shared her good news with friends.

Lehman will join the residency program in psychiatry at Northwestern University, while her fellow Keck student and fiancé Grant Kleiber will begin a residency in plastic surgery at nearby University of Chicago.

In an annual rite of passage carried out here and at medical schools nationwide on March 20, fourth-year students from the Keck School of Medicine prepared for the next chapter of their professional lives. The event was Match Day—when graduating medical students across the country find out where they will spend their residencies.

Promptly at 9 a.m., students received their official letters from the National Residency Matching Program (NRMP),

and celebrated the news with family and friends.

Lehman and Kleiber—who will be married two days after graduation—had hoped they could continue their residencies in the same city and were delighted with the results.

"We are very, very excited to go back to Chicago because his family is from Chicago," Lehman said. "We really wanted to be able to be there together."

Of the 164 students who participated in the match, 109 will do all or part of their residencies in California while the rest will pursue training in 23 other states, said Donna Elliott, associate dean for student affairs. Thirty-eight students will remain at LAC+USC Medical Center for their residencies, up from 28 last year. Internal medicine, pediatrics, general surgery and orthopedic surgery had the highest number of placements overall, she said.

See **DAY**, Page 2

USC students collaborate with Keck School to deliver anti-AIDS campaign

By James Tella

Working in partnership with doctors from the Keck School of Medicine, students from USC's John C. Hench Division of Animation & Digital Arts (Hench-DADA) have put their creative powers to use by generating a series of public service announcements (PSAs) to fight against the incidence of HIV/AIDS in youth.

The group, composed of 10 MFA students, premiered their works in Bovard Auditorium during "The Feminization of an Epidemic" event on March 10, on National Women and Girl, HIV/AIDS Awareness Day.

With running times under 20 seconds, the PSAs covered subjects such as HIV testing, condom use, safe sex and more. The students were free to cover the topics as they saw fit, with the caveat that each animated short had to reflect a particular prevention area.

The clips came from a collaboration between Hench Chair Kathy Smith and Andrea Kovacs, Keck professor of Pediatrics and Pathology and division head of Pediatric Infectious Diseases.

"I felt that this was an important social and community issue for our program to be involved in," said Smith, who was introduced to Kovacs last fall by USC Vice Provost for Research Peter Mancall. "Peter felt we could form a productive collaboration around the research and awareness that Dr. Kovacs is trying to bring to the feminization of HIV/AIDS through her clinics, and I was excited about the possibilities in front of us."

The Hench-DADA students crafted spots under a tight deadline. "I didn't think we had any hope that the PSAs would be created in time," said Keck Program

Manager Molly Moran who attended Adjunct Faculty Lisa Mann's seminar class to present the issues to the students just two weeks prior to the event. "We weren't really sure what would happen, but the Hench Division's involvement became such a fundamental part of the process."

Mann was thrilled at how much her students threw themselves into the assignment. "Animation is such a great way to reach the target audience of young girls," she said. "It really evolved as we were going through it. Everyone was so inspired and came up with some amazing ideas."

Second-year MFA student Dave Horowitz said, "I wanted to relate to children, and thought, 'What better way than video games?'"

He created "Don't Play Games With Your Health" based on Tetris, one of his all-time favorite pastimes.

"It was great to help with something that creates awareness of HIV for youth, especially since it's being taught less and less in school," he said.

According to the statistics provided at the evening's talk, the USC neighborhoods are the hardest hit by the disease in Los Angeles County. Globally, the HIV/AIDS epidemic disproportionately impacts women, youth and people of color. More than 50 percent of new infections occur in young women of childbearing age, and in the U.S. one in every four persons infected with HIV this year is likely to be younger than 21.

With 87 percent of American youth saying that they do not believe that they are at risk for HIV infection, prevention is the only method available to stop the spread of this disease.

"This collaboration has the impact to make an enormous difference for at-risk populations," added Smith, noting that the PSAs are currently airing on USC's Trojan Vision Television Service.

The shorts also will be utilized to broadcast and recruit for future youth-oriented events.

Health group honors former Keck School dean

The Community Health Alliance of Pasadena (CHAP) will honor former Keck School Dean Robert E. Tranquada as a "Health Action Hero" for his tireless efforts to improve the delivery of health care.

Tranquada will accept his award at the group's annual fundraising gala on May 2 at the Westin Hotel in Pasadena.

Tranquada's accomplishments include serving as medical director of LAC+USC Medical Center, as well as a founding board member of L.A. Care. He also helped establish and direct Watts Health Center, now known as the Watts Health Foundation, and chaired the Los Angeles County Task

Force on Health Care Access.

The mission of the Community Health Alliance of Pasadena is to provide high quality, accessible and culturally sensitive health care and related services in an environment of care and mutual respect to the residents of the greater Pasadena area.

Tickets to attend the event are \$150 per person. VIP tickets are available starting at \$250 and table pricing begins at \$1,500. Special sponsorship levels are also available starting at \$2,500. For more information or to purchase tickets and/or sponsorships, contact CHAP at (626) 398-6300, ext. 20 or visit the Web site at www.chapcare.org.

April 1 deadline looms for STEM scholarships

Hispanic college students pursuing degrees in science, technology, engineering and math (STEM) are invited to apply for more than \$2 million in scholarship and internship opportunities through Advancing Hispanic Excellence in Technology, Engineering, Math and Science, the educational foundation of the Society of Hispanic Professional Engineers.

Students may apply for as many scholarships as they are eligible. There is no application fee. All applications must be postmarked by April 1.

Students must be registered full time (taking at least 12 credit hours as an undergraduate or nine credit hours as a graduate student) in a STEM discipline. Additional information can be found at <http://ahetems.org/scholarships.html>.



The Keck School of Medicine's Department of Obstetrics and Gynecology recently hosted "Impacting Women's Health through Collaborative Research," an interdisciplinary retreat showcasing research into cervical, ovarian and breast cancer, immunological consequences of HPV, immune monitoring and translational research. Faculty from the Departments of Preventive Medicine, Psychology, Molecular Microbiology and Immunology, Pathology, and Obstetrics and Gynecology participated in the Feb. 22 event. Above, Laila Muderspach, assistant professor and chair of the Keck School of Medicine Department of Obstetrics and Gynecology, leads the discussion.

DAY: Medical students matched to residencies

Continued from page 1

The 2008 match was the largest ever with 15,242 medical school graduates around the country vying for positions, according to the NRMP.

"We as a school feel that you've done exceptionally well in the match," Elliott told the students shortly before the rush for the envelopes began.

Rian Hasson, joined by her parents, Joy and Robert, and twin sister Rebecca, let out a scream when she tore open her letter. Hasson will begin a residency at Boston's Brigham & Women's Hospital. "It was my first choice so I feel that I'm going to be where I'm supposed to be. I'm very excited."

Catherine Tierney learned that morning that she would be spending the next several years as a resident in USC's own obstetrics/gynecology residency program.

"There were definitely a lot of nerves, that's for sure," she said. "Sleeping last night was hard, but this came quick enough. It was very exciting."

Monica Padelford had a practical, as well as excited, reaction. "I'm going to have a job, Dad!" she yelled into her cell phone after learning she had been matched with the pathology program at Cedars-Sinai Medical Center. "No more allowance!"

As mentors, Keck School students introduce high school students to world of medicine

By Katie Neith

For many medical students, a priority in studying medicine is to help improve health in their communities. Recently, a select group of Keck School of Medicine students took that mission one step further by promoting medical careers among local children.

Five medical students in their second year partnered with 25 advanced level students from the Bravo Bio-Medical Magnet High School. Over two Saturdays in late February and early March, the medical students served as mentors and teachers during a symposium intended to teach the high school kids about understanding the anatomical basis of specific diseases.

Each day started with a lecture and discussion of a specific disease, such as

dry-eye, and the tissues and organs involved. The high school students were then broken into groups with a medical student and taken to the teaching laboratories, where they continued discussions with the aid of technology, such as a transmission electron microscope (TEM) and ultramicrotomy.

"When I got my chance to work it, I was speechless," wrote Christopher Ortega, a sophomore at Bravo High School, of his experience with the electron microscope. "It's never crossed my mind that I'd ever use one of those, something that I'd only read about. It was a great surprise, kind of like finding \$5 in your washed jeans, but more scientific."

Ortega wrote about his experience for an essay competition that asked partici-

pants to summarize how the symposium improved understanding of how modern day anatomical methods can shed light on disease processes, and how this understanding may have influenced their plans for the future in college and beyond.

Joel Schechter, professor in the Department of Cell and Neurobiology and assistant dean of student affairs at the Keck School, judged the essays. Ortega was chosen as the first-place winner and received \$500 to be used for educational purposes. Three other students received \$400 for their essays.

Schechter organized the symposium with the help of an Education Outreach Grant from the American Association of Anatomists. He has a long history of working with students from Bravo, many of whom come from underserved

communities and have a strong interest in medical or health-related careers.

"The high school kids were really excited because they had never had this level of instruction before, i.e., demonstrating to them how structural biology is linked to clinical disease," said Schechter. "They loved interacting with the medical students and the medical students, in turn, really enjoyed being role models, guiding and inspiring the kids."

Ortega said their guidance paid off. He reported in his essay that while he was once on the fence about going to medical school, he now sees himself as becoming a doctor.

"The med students, most of all, cemented my choice," he wrote. "I learned a lot, but more importantly, I learned I want to continue learning."



Kristztina Holly, USC vice provost for innovation and executive director of USC Stevens explains how the University can help campus innovators turn breakthrough ideas into real products, companies and services.

INNOVATE: USC aims to facilitate success

Continued from page 1
tor success."

Stone said that the HSC Innovator event promoted two key goals.

"First, we wanted to inform our faculty and researchers about the existing significant resources available to them to facilitate their entrepreneurial efforts," she said. "And second, we wanted to showcase the planned

BioMedTech Park and gauge our faculty's and researchers' level of interest, because frankly, they are our most likely tenants as the research park gets off the ground."

She added, "It was clear from the large turnout across each of the three schools that the BioMedTech Park will be a vital new asset to the university's innovation efforts."

USC professor coaches Congress on OCT

Alexander Walsh, assistant professor of ophthalmology at the Keck School of Medicine and director of the Doheny Eye Institute's Imaging Exploration and Software Engineering Laboratory, recently spoke to members of Congress about revolutionary advances in visual imaging technologies.

In a Feb. 26 Capitol Hill meeting, Walsh explained how collaborative research between the National Eye Institute (NEI) and the National Institute of Biomedical Imaging and Bioengineering (NIBIB) has resulted in the next generation of Optical Coherence Tomography (OCT). This powerful diagnostic imaging technology is already revolutionizing practitioners' abilities to diagnose and monitor treatment of major eye diseases faster, more accurately, at a lower cost and with less discomfort for the patient.

"OCT has changed everything we do in ophthalmology," said Walsh. "It represents an objective, standardized method for making a diagnosis and a quantitative way to monitor treatment progress and outcomes."

OCT is a non-invasive, high-speed, high-resolution imaging technology that can now display a three-dimensional, cross-sectional view of the retina, not just the superficial view of its surface provided by conventional imaging technologies. OCT systems—no bigger than many instruments already in an ophthalmologist's office—can

capture an image in just seconds.

Keck School of Medicine Dean Carmen Puliafito led a team at Harvard University Medical School—where he founded the Laser Research Laboratory in the Department of Ophthalmology—in inventing and developing OCT. Collaborators from the Massachusetts Institute of Technology included David Huang, now director of the Doheny Laser Vision Center and holder of the Manger Chair in Corneal Laser Surgery at the Keck School.

"The need for OCT grows all the time," said Walsh, who added that ongoing collaborations among the NEI, NIBIB, academic researchers, and industry are leading to further refinements in the technology. "Although currently used primarily in a retinal specialist's office, OCT has widespread potential as a cost-effective tool to screen for AMD [age-related macular degeneration], diabetic retinopathy and glaucoma," Walsh said, while also acknowledging that the technology is just beginning to expand into other medical fields.

The briefing was sponsored by the Alliance for Eye and Vision Research in conjunction with the Coalition for Imaging and Bioengineering Research, the American Institute for Medical and Biological Engineering, the Association for Research in Vision and Ophthalmology and the Ad Hoc Group for Medical Research.

In Case of An Emergency...

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.

Call the Emergency Information Phone:
213-740-9233

The emergency telephone system can handle 1,400 simultaneous calls. It also has a back up system on the East Coast.

Calendar of Events

The HSC Calendar is online at www.usc.edu/hscalendar

Sunday, Mar. 30

8:30 A.M. Childrens Hospital Los Angeles TTS Race for Hope. 1001 Rose Bowl Drive, Parcel H Parking lot, Pasadena. Info: www.ttstraceforhope.org

Monday, Mar. 31

NOON. Fellows' Didactic Teaching Conference. "Post Transplant Immunology," Yasir Qazi, USC. GNH Drs. Dining Rm. A & B. Info: (323) 226-7307

Tuesday, Apr. 1

9 A.M. Neurology Grand Rounds. "Synaptic Mechanisms of Experience-dependent Plasticity," Tansu Celikel, USC. ZNI 112. Info: (323) 442-7686

NOON. Cancer Ctr. Grand Rounds. "Chronic Cancer Pain: Gene Therapy to (Epi-) Genomics," Andreas Beutler, Mount Sinai School of Medicine. NOR 7409. Info: (323) 865-0801

Wednesday, Apr. 2

7 A.M. Medicine Grand Rounds. "Lupus Nephritis," Violeta Yakimova, USC. GNH 1645. Info: (323) 226-7556

NOON. Renal Grand Rounds. "Dyslipidemia & PTH," Mohammad Akmal, USC. GNH 6441. Info: (323) 226-7307

Monday, Apr. 7

NOON. Fellows' Core Curriculum Conference. "Edema & Diuretics," Miroslaw Smogorzewski, USC. GNH Drs. Dining Rm. A & B. Info: (323) 226-7307

NOON. "Pathogenesis of Systemic Lupus Erythematosus: Chance Favors Susceptible Hosts," Shu Man Fu, Univ. of Virginia. GNH 6441. Info: (323) 442-1946

4 P.M. "Dyslipidemia in Transplant Patients:

Research in Progress," Jacob Ahdoor, USC. GNH 10-340. Info: (323) 226-7307

Tuesday, Apr. 8

NOON. Cancer Ctr. Grand Rounds. "Roles of the Transcription Factor LRF in Hematopoieses," Takahiro Maeda, City of Hope. NOR 7409. Info: (323) 865-0801

2:30 P.M. Translational Science Symposium. "Immunological Challenges in Clinical Transplantation," Various speakers. KAM B21. Info: (323) 361-8681

Wednesday, Apr. 9

7 A.M. Medicine Grand Rounds. "Endocarditis," John Fan, USC. GNH 1645. Info: (323) 226-7556

NOON. Renal Grand Rounds. "Genetic and Inherited Renal Disorders: Diabetic Nephropathy," Sharon G. Adler, UCLA. GNH 6441. Info: (323) 226-7307

Thursday, Apr. 10

9 A.M. USC Childhood Obesity Research Ctr. Symposium. "Childhood Obesity: Genes, Brains, and Behavior," Gary Taubes, author of *Good Calories, Bad Calories*. NRT Aresty Aud. Info: (323) 442-4101

Friday, Apr. 11

8 A.M. The Saban Research Inst. of Childrens Hospital Los Angeles Distinguished Lecturer series. "Imitation in Autism: Findings and Mechanisms," Sally Rogers, UC Davis. CHLA Saban Research Bldg. Info: (323) 361-8424

NOON. "Medical & Surgical Treatment of Resistant Hypertension," Mitra Nadim and Fred Weaver, USC. GNH 7420. Info: (323) 442-6130

NOON. "Immune Repair Responses in HIV," Kathleen Rodgers, USC. GNH 6441. Info: (323) 226-7504

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 HSC 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.



Jon Nalick

Carolyn Pataki, professor of clinical psychiatry and behavioral sciences, interviews a virtual post-traumatic stress disorder patient, which responds to speech and also conveys diagnostically important visual cues such as emotion and gestures.

Virtual patient to help students learn to diagnose

By Jennifer Chan

The Keck School of Medicine has tested one of the first virtual patient technologies to help teach and sharpen medical students and clinicians' interviewing and evaluation skills.

Created by USC's Institute for Creative Technologies, "Justina," a virtual sexual assault victim suffering from post-traumatic stress disorder, uses voice recognition and natural language to interact and respond to direct questions. Justina's responding gestures, tone and emotion convey the virtual patient's respective diagnosis.

"PTSD is under-diagnosed because it is difficult to elicit information from frightened patients," said Carolyn Pataki, professor of clinical psychiatry and behavioral sciences. "The virtual patient helps medical students, residents and clinicians to practice their interviewing skills and recognize symptoms that someone might have. This is the first trial run with students on Justina."

Funded by a Provost seed grant for

Teaching with Technology, the Keck School of Medicine teamed up with USC's Institute for Creative Technologies to apply the virtual humans research and technology developed for Army training and use it to develop a program to enhance and elevate the quality of psychiatric education. The virtual patient provides continuous feedback, guiding the student toward an optimal interview approach. Standardized patients, or actors, are typically used to teach students how to interact with patients.

"One of the many benefits of using technology over actors include the availability of virtual characters. Students can interact with Justina anytime and there is no limit on the amount of time a student can practice with the program," said Patrick Kinney, research scientist with USC's ICT.

"Virtual patients also have the capability to present different conditions and the system records every evaluation. The data can be used to assess the students in a timely manner," Kinney said.

HSC NEWSMAKERS

Complete listing at: www.usc.edu/uscnews/usc_in_the_news/

A Mar. 24 *U.S. News & World Report* article quoted neurology researcher **Michael Jakowec** about the potential use of therapeutic cloning to treat Parkinson's disease.

A Mar. 24 *Los Angeles Times* article quoted family medicine residency director **Maureen Strohm** on the potential effects of the 10 percent reduction in doctor reimbursement rates in the Medi-Cal health insurance program.

A Mar. 21 *Ventura County Star* story quoted diabetes expert **Anne Peters** on the importance of losing weight to reduce risk of diabetes.

On Mar. 21, KPCC-FM's AirTalk noted that a series of USC studies have shown the health dangers of particulate matter and chemicals in the air.

A Mar. 21 *Technology Review* article quoted cardiologist **Leslie Saxon** about new technology involving pills that can monitor the body's response system.

A Mar. 20 KABC-TV Channel 7 story included pharmacologist **Roger Clemens** on the chemical compounds occurring naturally in foods.

On Mar. 19, NPR quoted Childrens Hospital Los Angeles ophthalmologist **Mark Borchert** about China's controversial stem cell treatments for children.

A Mar. 19 *Daily Breeze* article reported that Los Angeles businessman **Larry Freeman** donated \$5 million to the USC/Norris Comprehensive Cancer Center and Hospital. The story also ran on City News Service.

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