

## Staff share ideas for innovation challenge

By L. Alexis Young

Keck Medicine of USC called for innovative ideas that would make an impact on resource utilization and efficiency of care for patients. More than 100 staff members responded.

The R3 initiative focuses on providing the right care, right resources and right cost for patients. On May 16, the top seven ideas in the first R3 Innovation Challenge were presented to a panel of judges at a “Shark Tank”-style competition in the Herklotz Seminar Room on the Health Sciences Campus. Each finalist shared a presentation highlighting the financial or productivity impacts, intended benefits, sustainability and implementation strategies for their ideas.

“The R3 Innovation Challenge reinforced my strong belief that staff working in patient care have some of the best ideas for how we can do things better,” said Rod Hanners, CEO of Keck Medical Center of USC and COO of Keck Medicine of USC. “And that certainly bore out with over 100 ideas that

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### Save the Date

Keck Medicine leaders to discuss State of the Health Sciences

Thomas E. Jaekiewicz, MPH, senior vice president and CEO of Keck Medicine of USC, and Rohit Varma, MD, MPH, interim dean of the Keck School of Medicine and director of the USC Gayle and Edward Roski Eye Institute, will present the State of the Health Sciences, at 7 a.m. June 9 in Aresty Auditorium on the Health Sciences Campus.

A live stream of the address will be available at [keckmedia.usc.edu/msa](http://keckmedia.usc.edu/msa) and the complete address will be archived and available within 15 minutes of its conclusion. RSVPs requested at [www.keckmedicine.org/esvp/state](http://www.keckmedicine.org/esvp/state).



Mark Humayun shakes hands with President Barack Obama after receiving the National Medal of Technology and Innovation during a ceremony held May 19 at the White House.

Ryan K. Morris/National Science & Technology Medals Foundation

## ‘A testament to American ingenuity’

Mark S. Humayun, MD, PhD, co-director of the USC Gayle and Edward Roski Eye Institute and director of the USC Institute for Biomedical Therapeutics, received the nation’s highest award for achievement in technology from President Barack Obama during a May 19 ceremony at the White House.

Humayun received the prestigious National Medal of Technology and Innovation, after a winter storm caused the January event to be rescheduled.

In a statement issued by the White House, Obama said, “Science and technology are fundamental to solving some of our nation’s biggest challenges. The knowledge produced by these Americans today will carry our country’s legacy of innovation forward and continue to help countless others around the world. Their work is a testament to American ingenuity.”

One of nine recipients of the medal this year, Humayun was chosen for his lifelong dedication to bridging medical science and engineering to restore sight. He holds more than 100 issued patents and patent applications, most in the area of bioimplants for ophthalmology. His innovative work is best exemplified by the development of the Argus II, the only FDA-approved retinal prosthesis system that allows those with certain blinding diseases to regain some useful vision.

During his remarks, the President shared details of Humayun’s journey to earning the National Medal, beginning with Humayun’s family immigrating to the United States when he was 9 years old and dedicating himself to the study of ophthalmology after seeing his diabetic grandmother lose her vision.

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## Researcher tapped for investigator program

By Cristy Lytal

Some people see an award as remuneration for work well done. Upon being named a New York Stem Cell Foundation – Robertson Investigator, ALS researcher Justin Ichida, PhD, sees his award as motivation for work still left to do.

“If you just look at the people who have won this award before, these are people — some of whom are being considered for a Nobel Prize — who have really revolutionized the field of stem cell research and disease research,” said Ichida, assistant professor of stem cell biology and regenerative medicine at USC. “So to win this has been a tremendous honor. And it not only speaks to the potential that our lab’s research has shown, but also motivates us to go out there and do some big science, like some of these other fellow winners.”

The New York Stem Cell Foundation (NYSCF) Stem Cell Investigator Program provides \$1.5 million, five-year awards to creative young scientists pursuing high-risk, high-reward stem

See **INVESTIGATOR**, page 3



Justin Ichida

Cristy Lytal

## Meet the Faculty: Soma Sahai-Srivastava’s holy visit

Soma Sahai-Srivastava, SMD, associate professor of neurology, is a board-certified headache specialist who advocates for an integrated approach to the management of headache disorders. But the medical director of the Neurology Clinics and director of the USC Headache Center also is from a town that is well known to Buddhists.

“I went to India in January this year, and met the Dalai Lama at his home in Dharamsala,” she said. “My home town Bodh Gaya is the seat of Buddhism and internationally known for that. I have a special interest in spirituality and healing and the role of the human mind.”



Soma Sahai-Srivastava, right, shakes hands with the Dalai Lama during a January visit to Dharamsala, India.

Courtesy Soma Sahai-Srivastava

Get to know the faculty members on the Health Sciences Campus and beyond!

Do you have a special skill or interest that nobody expects? Is there a professor whose hidden talent should be celebrated?

Let us know by emailing [hscnews@usc.edu](mailto:hscnews@usc.edu) with your nominations for our Meet the Faculty feature and you might see them in a future HSC News issue.

## Event highlights Hastings Center's focus on lung research

By Melissa Masatani

Physicians and leading scientists from across the country gathered recently to celebrate the inauguration of the Keck School of Medicine's Hastings Center for Pulmonary Research.

More than 100 people attended the symposium, titled "The Pulmonary Challenge: Innovations in Lung Development, Stem Cells and Regeneration," which was held March 11 in the Aresty Auditorium on the Health Sciences Campus. The event highlighted the center's core research focus on lung injury, repair and regeneration, said the center's director Zea Borok, MD, chief of the division of pulmonary, critical care and sleep medicine at the Keck School.

"The amount of support on this campus and beyond for lung research is encouraging," said Borok, who also is professor of medicine and biochemistry and molecular biology at the Keck School. "I must acknowledge the generosity and vision of the board of the Hastings Foundation and their support for establishment of the center, with the goal of transforming lung research at USC."

The Hastings Center brings together basic and translational researchers and clinicians to create



Keynote speaker Brigid Hogan presents at the Hastings Center for Pulmonary Research inaugural symposium March 11.

a nationally recognized center of excellence for advanced lung disease that builds on existing collaborations within and outside the Keck School. The center's goal is to develop new treatments for pulmonary diseases that affect millions of people around the world.

"The Hastings Foundation has had a long history with Keck Medicine and is proud to support the groundbreaking pulmonary research happening here," said John Reith,

Hastings Foundation president. "We look forward to seeing the advancements in research and patient care as a result of the spectacular work done by Dr. Borok and the rest of the team at the Hastings Center."

The Hastings Foundation has been a longstanding supporter of pulmonary research at the Keck School of Medicine of USC, donating more than \$32 million since 1975. Its most recent gift of \$7.5 million supported the launch of the Hastings Center,

which will allow Keck School scientists to expand pulmonary research and will facilitate the recruitment of new faculty members like Amy Firth, PhD, assistant professor in the division of pulmonary, critical care and sleep medicine, who was one of the symposium speakers.

"I'm honored to have been the first faculty member recruited to the Hastings Center," Firth said. "The support of the Hastings Foundation was instrumental in continuing my research into how induced pluripotent stem cells — adult cells that have been programmed into a stem cell-like state — can help regenerate damaged or diseased lung stem cells. This work can fundamentally change the way we treat lung disease."

Brigid Hogan, PhD, a national leader in lung development and cell biology, presented the keynote address. The George Barth Geller Professor and Chair of the Department of Cell Biology at Duke University Medical Center, Hogan presented, "The Life of Breath: Stem Cells of the Lung in Repair and Regrowth."

"We were fortunate to have cutting-edge speakers from outside the center, as well as to feature some of the exciting work being done by our own researchers," Borok said.

## Calendar of Events

### Saturday, June 4

**7:45 a.m.-3:45 p.m.** USC Thyroid Diagnostic Center Continuing Medical Education. "The 38th Symposium Thyroid 2016 Practical Solutions to Complex Clinical Problems," Peter A. Singer, MD. Aresty Auditorium. Info: Anika Bobb, (323) 442-2547, [uscme@usc.edu](mailto:uscme@usc.edu). Registration: <http://www.usc.edu/cme>

### Monday, June 6

**4 p.m.** Keck Medicine of USC Town Hall Discussion. "End of Life Option Act," presentation, discussion and refreshments to follow. Aresty Auditorium.

### Tuesday, June 7

**9:45 a.m.-6 p.m.** The Saban Research Institute of Children's Hospital Los Angeles. "21st Annual Poster Session," Anita S. Watson Courtyard, Saban Research Building, 4661 Sunset Blvd. Info: Ritu Gill, (323) 361-8715, [tecpad@chla.usc.edu](mailto:tecpad@chla.usc.edu), <http://chla.org/tecpad>

### Wednesday, June 8

**2 p.m.** USC Cancer Survivorship Advisory Council. "The Survivor Art Series," exhibit opening and reception. Speaker: Rose Freeland, cancer survivor and artist. Jennifer Diamond Cancer Resource Library, USC Norris Comprehensive Cancer Center. Info: (323) 442-7805

### Thursday, June 9

**1:30 p.m.** Keck Medicine of USC Stroke Support Group Meeting. "Returning to Work after Stroke," Nerses Sanossian, MD. Keck Hospital, 3 North, Day Room, 3261A. Info: Ozzy Obiwuru, (323) 442-0049, [obiwuru@med.usc.edu](mailto:obiwuru@med.usc.edu). Snacks are provided and parking is validated.

**6:30 p.m.** USC Verdugo Hills Hospital Seminar. "Advances in Spine Surgery at USC Verdugo Hills Hospital," John C. Liu, MD, and Raymond J. Hah, MD. USC Verdugo Hills Hospital, Council Room. Info and RSVP: Julie Anderson, (818) 952-4771, [Julie.Anderson@vhh.usc.edu](mailto:Julie.Anderson@vhh.usc.edu)

### Friday, June 10

**8 a.m.-3 p.m.** Orthopaedic Surgery. "USC Graduate Orthopaedic Society Meeting," Joshua J. Jacobs, MD, Rush Medical College. Aresty Auditorium. Info: RSVP: Sylvia Suarez, (323) 226-7204, [sylsua@usc.edu](mailto:sylsua@usc.edu). The 2016 Orthopaedic Surgery graduating physicians will be presenting their senior projects.

### Sunday, June 12

**2 p.m.-4:30 p.m.** Meditation Conference. "Heartfulness Meditation Conference 2016," Dean of Religious Life Varun Soni, PhD. Bovard Auditorium. Info: <http://conference.heartfulnessinstitute.org/>

### Tuesday, June 14

**6 p.m.** USC Institute of Urology. "Men's Health Seminar," Director: Rene Sotelo, MD. USC Verdugo Hills Hospital. Info and RSVP: Cecilia Pyzow, (818) 952-4729, [cecilia.pyzow@med.usc.edu](mailto:cecilia.pyzow@med.usc.edu)

### Thursday, June 16

**6:30 p.m.** USC Spine Center Seminar. "Advances in Spine Care," John C. Liu, MD, Jeffrey C. Wang, MD, Christopher C. Ornelas, MD. 9033 Wilshire Blvd., Suite 500, Beverly Hills. Hosted valet parking available. Info: Kelly Turner, (323) 442-6984, [Kelly.Turner@med.usc.edu](mailto:Kelly.Turner@med.usc.edu), [spine.keckmedicine.org](http://spine.keckmedicine.org)

### Friday, June 17

**10 a.m.-5 p.m.** USC Center for Health System Innovation Symposium. "Disruptive Innovation in Patient Safety." Eli and Edythe Broad CIRM Center Auditorium. Info and RSVP: Veronica Pagán, (323) 442-9259, <http://bit.ly/1U9Z47z>

### Friday, June 24

**8:30 a.m.** Hastings Center for Pulmonary Research Seminar. "Epithelial-Mesenchymal Crosstalk in Lung Fibrosis and Alveolar Homeostasis," Christina E. Barkauskas, MD, Duke University. IRD 734. Info: Elva Rubio, (323) 226-7923, [elvarubi@usc.edu](mailto:elvarubi@usc.edu)

## Symposium examines state of Alzheimer's disease study

By Melissa Masatani

Several of the world's foremost neurology and neuroscience experts gathered recently to discuss the state of Alzheimer's disease research at the third annual Zilkha Symposium on Alzheimer Disease and Related Disorders.

Titled "Bench to Bedside and Beyond: Relating Discovery Research to Translational Developments and Clinical Efforts," the symposium was held April 15 at the Zilkha Neurogenetic Institute (ZNI) on the Health Sciences Campus. Berislav Zlokovic, MD, PhD, who is ZNI director and professor and chair of the Department of Physiology and Biophysics at the Keck School of Medicine of USC, hosted the event and participated in several sessions throughout the day.

"The incredible progress in Alzheimer's disease research has not only increased our awareness of the disease, but raised a hope that we will be able in a nearby future to arrest and reverse this devastating brain disorder," said Zlokovic, the Mary Hayley and Selim Zilkha Chair in Alzheimer's Disease Research. "Events like this are important to advance our work, so we are honored to have the support of Eva and Marc Stern,

whose donation made it possible to have this year's event."

The symposium was broken up into four sessions, where physicians and researchers shared the latest unpublished results of bench discoveries and bedside progress. Topics included "Different Therapeutic Approaches to Targeting apoE," by David Holtzman, MD, from the Washington University School of Medicine in St. Louis, which discussed the effects of three different approaches to targeting apoE, the strongest genetic risk factor for Alzheimer's disease; and "Biomarkers of AD: Entering a New Era," by Philip Scheltens, MD, PhD, from Vrije Universiteit Medical Center, Amsterdam, which gave an overview of the ability for physicians to provide a biological diagnosis of Alzheimer's disease based on biomarkers, rather than the onset of symptoms such as dementia.

"At the Zilkha conference and in the Institute, we support 'science without borders,'" Zlokovic said. "It is not important who is going to make a breakthrough, but it is important to all of us that we find a cure for Alzheimer's," as Mr. Zilkha said in his address to the conference speakers."



Participants in the third annual Zilkha Symposium on Alzheimer Disease and Related Disorders stand with Berislav Zlokovic, eighth from left, and Selim Zilkha, fifth from right, during the symposium, held April 15 on the Health Sciences Campus.

**Notice:** Calendar items are due at least 10 days before publication date. Timely submission does not guarantee publication in print. See more calendar entries at [hscnews.usc.edu/calendar-of-events](http://hscnews.usc.edu/calendar-of-events). Submit items at [tinyurl.com/calendar-hsc](http://tinyurl.com/calendar-hsc). Include day, date, time, title of talk, first and last name of speaker, affiliation of speaker, location and a phone number/email address.



Larissa Puro

Jean Paul Shumbusho, center, a surgical resident at the National University of Rwanda, takes a break between training at the USC Surgical Skills Simulation and Education Center.

## Doctors hold plastic surgery training for Operation Smile

By Larissa Puro

Nearly two dozen doctors from around the world visited the Keck School of Medicine of USC recently to enhance their medical skills and learn new surgical techniques.

The group of physicians was part of a larger contingent of Operation Smile-credentialed surgical volunteers, which brought more than 100 international doctors to four U.S. universities. USC's 21 participants ranged from residents to 30-year surgical veterans from Bolivia, Egypt, Ethiopia, Ghana, India, Kenya, Morocco, Peru, Rwanda and Venezuela.

"Bringing young surgeons from around the world together to share ideas is as great for the development of a global family as it is for the advancement in medicine," said William Magee III, MD, DDS, assistant professor of clinical surgery and director of international programs at Children's Hospital Los Angeles.

USC faculty led the training at the Keck School of Medicine of USC Surgical Skills Simulation and Education Center, home to the largest fresh tissue dissection lab of its kind, and an accredited surgical skills training center.

Between May 19 and 21, the participants worked with USC specialists in pediatric plastic surgery, craniofacial surgery, congenital hand surgery, reconstructive surgery, breast reconstruction, microsurgery, burn surgery and abdominal and chest reconstruction. Leading the program with Magee was Joseph Nicholas Carey, MD, assistant professor of surgery in the division of plastic and reconstructive surgery; and Justin Gillenwater, MD, burn and critical care fellow.

The participants benefited from 12 total hours of surgical instruction and simulation using USC's innovative perfusion model. Using real human tissue — provided in partnership with USC's vendor Science Care — with artificial blood flow, the surgeons practiced their skills in a realistic operating room setting.

Since 2007, the Keck School's division of plastic surgery has conducted international programs similar to this simulation. This year, the university partnered with Operation Smile as part of both organizations' commitment to helping fill the global gap in access to safe, well-timed surgeries by providing training to local medical personnel in low- and middle-income countries.

## MEDAL: Humayun honored to receive award

Continued from page 1

"(Humayun) says the moment when he witnessed someone seeing light and shapes, someone experiencing the miracle of sight for the first time in decades — those moments have been some of the happiest and most rewarding of his professional career," Obama said. "In his words — and I think no pun is intended — 'There wasn't a dry eye in the operating room.'"

"I am very honored to receive the National Medal of Technology and Innovation," Humayun said in a statement. "Medical breakthroughs such as the Argus II come after long periods of research and development and I am grateful to have been and continue to be surrounded by teams of very talented individuals."

The National Medal of Technology and Innovation, presented by U.S. presidents since 1980, is given to individuals, small teams collaborating on innovative systems or divisions of companies, all whom have contributed to the nation's economic, environmental and social well-being.

"Mark Humayun epitomizes the culture and dedication of the experts

at the USC Roski Eye Institute to constantly seek new solutions in the mission to prevent blindness," said Rohit Varma, MD, MPH, director of the USC Roski Eye Institute and interim dean of the Keck School of Medicine of USC. "One of the reasons the USC Roski Eye Institute has been ranked in the Top 10 of ophthalmology departments over the last 21 years by *U.S. News & World Report*, is because of the innovative stars in our constellation like Mark who help guide and inspire us. As only the third USC recipient in 30 years to receive this prestigious honor, we are tremendously proud of Mark."

Humayun merges medicine and engineering to focus on developing treatments for the most debilitating and challenging eye diseases. An expert in bioelectronics and implants for the eye, Humayun is a USC professor with joint appointments in ophthalmology, cell and neurobiology at the Keck School of Medicine of USC, and in biomedical engineering at the USC Viterbi School of Engineering. He holds the inaugural Cornelius J. Pings Chair in Biomedical Sciences.

## Study: Visual impairment in U.S. to double by 2050

By Sherri Snelling

A study published May 19 by researchers at the USC Gayle and Edward Roski Eye Institute in *JAMA Ophthalmology* found that the U.S. prevalence in visual impairment (VI) and blindness is expected to double over the next 35 years. By 2050, the number of Americans with a variety of eye disease and impairment issues, including age-related macular degeneration (AMD), glaucoma, diabetic retinopathy (DR) and cataracts, will dramatically increase impacting both individuals and society.

The National Eye Institute (NEI)-funded study, led by principal investigator, Rohit Varma, MD, MPH, interim dean of the Keck School of Medicine of USC and director of the USC Roski Eye Institute, found that by 2050, 16.4 million Americans over age 40 will have VI due to uncorrected refractive error compared to 8.2 million in 2015.

In addition, more than 2 million age 40+ will be blind and 6.95 million will have VI by 2050 compared to 1.02 million and 3.22 million respectively from 2015.

The groups most at risk — non-Hispanic whites, older Americans and

women — do not change from 2015 data to 2050 projections. However, while African Americans have the highest prevalence of blindness and VI today (15.2 percent today growing to 16.3 percent by 2050), the Hispanic population will become the most at risk minority group for both VI and blindness increasing from 9.9 percent today to 20.3 percent in 2050.

The study also examined data state by state and found Mississippi and Louisiana will have the highest per capita prevalence for blindness while Florida and Hawaii will lead the nation for VI per capita.

"This study gives us a GPS for our nation's future eye health," Varma said. "Increased education and vision screenings are critical for both younger and older Americans, but especially women and minorities over age 40, to prevent vision impairment that can dramatically worsen their quality of life. The earlier we can diagnose these blinding eye diseases through an annual eye exam and obtain eye care, the more people will have the chance to live longer lives without the physical limitations and emotional challenges of vision loss and blindness."



Douglas Morino

Nerwin Lin, Jynette Querubin and Christine Santiago from the Quality and Outcomes department stand with Rod Hanners, left, after placing first in the R3 Innovation Challenge.

## INNOVATION: Winning entry aims to prevent patient readmissions after hospital discharge

Continued from page 1

create efficiencies and better outcomes in delivering value to our patients, staff, referring providers and payers."

Nerwin Lin, Jynette Querubin and Christine Santiago from the Quality and Outcomes department placed first in the competition. Their initiative focuses on developing patient-centered hospital discharge care to prevent readmissions to the hospital.

The team won six months of reserved parking, the R3 Innovation Challenge trophy and a plaque.

Craig Kim and John Alexiou from Nursing Administration placed second

with their ideas around improving nursing quality analytics. They won Apple watches and Disneyland passes.

Tvenn Kirkpatrick from PACU was the third-place winner with an idea to provide bedside caddies and pouches for patient's personal belongings to prevent the loss of those items, and won Disneyland passes.

"The quality of the ideas submitted was exceptional and an effort is underway to assess the opportunities associated with more than 90 ideas that didn't make it to the final round, but had promise to improve operations," Hanners said.

## INVESTIGATOR

Continued from page 1

cell research with the potential to accelerate cures for major diseases.

Ichida is using his \$1.5 million prize to find new ways to slow or stop the symptoms of amyotrophic lateral sclerosis (ALS), also known as Lou Gehrig's disease.

Patients with the disease suffer from the degeneration of their motor neurons, the cells that communicate messages from the brain to the muscles.

This usually results in paralysis and

fatal respiratory failure within three to five years of diagnosis.

"Onset strikes in middle age, usually at about 50 to 60 years old, usually when people are still the primary source of income for their families," Ichida said. "They probably have younger kids. So it's really a devastating disease, and there is no effective treatment at this time."

To accelerate the quest for new treatments, Ichida is using stem cell technology to reprogram skin and blood cells from ALS patients into motor neurons, which exhibit the disease's signature degeneration.

## HSC Newsmakers

A roundup of news items related to Keck Medicine of USC, which may include philanthropic donations, research grants, publication in academic journals and mentions in the news media:



Ricardo Carrasco III

From left, Tom Buchanan, Martha E. Haake, James Russell, Jane Haake Russell, Richard Haake, Donald Haake and Rohit Varma are seen May 9 on the Health Sciences Campus.

### Baxter Foundation visits HSC

**DIRECTORS OF THE DONALD E. AND DELIA B. Baxter Foundation** visited the USC Health Sciences Campus on May 9, to hear presentations from Keck School of Medicine of USC faculty and meet with participants in the Baxter Foundation Student Research Fellowship Program. The Donald E. and Delia B. Baxter Foundation recently gave \$300,000 to the Keck School to support junior faculty research, as well as its summer research fellowship program. The Baxter Foundation provides annual funding for research by junior faculty members at the Keck School, and this year's recipients are Joseph T. Rodgers, PhD, assistant professor of stem cell biology and regenerative medicine, and Hyungjin Eoh, DVM, PhD, assistant professor of molecular microbiology and immunology. — **Sara Reeve**

### Keck School professor tapped by governor to be chair of ICC

**MARIE POULSEN, PhD, PROFESSOR** of pediatrics at the Keck School of Medicine of USC, and chief psychologist, Children's Hospital of Los Angeles, has been appointed the chairperson of the Interagency Coordinating Council (ICC) for Early Intervention by governor Jerry Brown. The ICC is a council composed of governor-appointed stakeholders interested in early intervention for children with disabilities. Robert Jacobs, MD, MPH, professor of pediatrics at the Keck School and head of the division of general pediatrics at CHLA, says that Poulsen is a great fit for this appointment. "She was a member of the ICC since its earliest days, and there is no one better suited to lead the ICC at this critical juncture to advocate for, and assist in developing, this next generation of services for young children," Jacobs said. — **Amanda Busick**



Children's Hospital Los Angeles  
Marie Poulsen

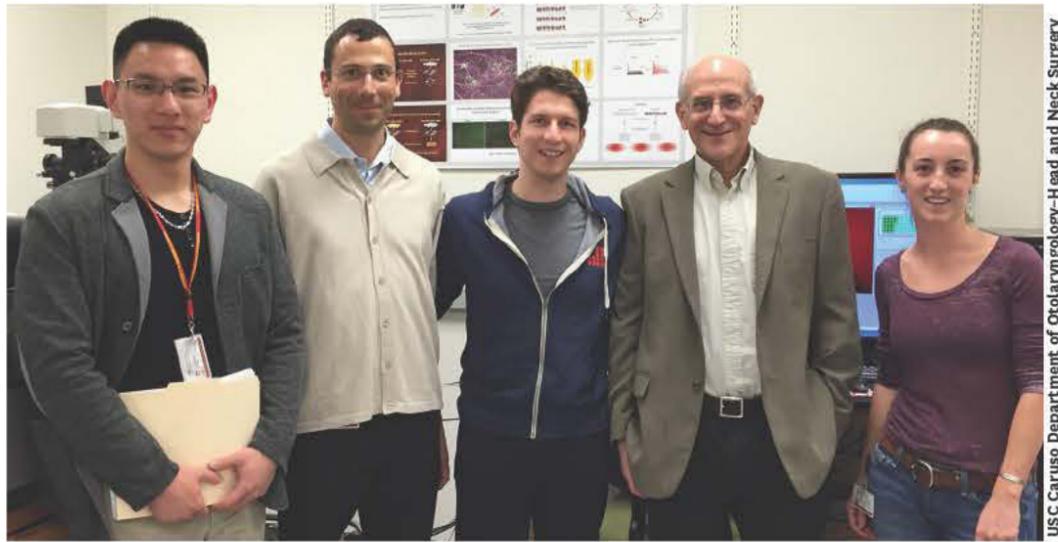


Cristy Lytal

Keynote speaker Ophir Klein speaks May 20 at the Galen Center.

### Stem cell scientists detail their research — from head to toe

**THE STEM CELL AND DEVELOPMENTAL BIOLOGY RETREAT** was a total body experience — covering organ systems ranging from the brain to the skeleton, from the kidney to the heart. Held May 20 in USC's Galen Center, the retreat showcased presentations and research posters by dozens of postdoctoral scholars and PhD students. To help this research find its way into the pages of scientific journals, Sheila Chari, PhD, editor of *Cell Stem Cell*, offered tips on how to get published. Ophir Klein, PhD, MD, professor at the University of California, San Francisco, delivered the keynote address, offering a window into the evolution and development of teeth with the remarkable ability to grow continuously. Andy McMahon, PhD, director of USC's stem cell research center, concluded the event by thanking the retreat organizers, postdoctoral fellow Kim Staats, PhD, and postdoctoral research associate Nils Lindstrom, PhD. — **Cristy Lytal**



USC Caruso Department of Otolaryngology-Head and Neck Surgery

From left, Vincent Haoze Yu, Rodrigo Martínez Monedero, Michael Sidgmore, Neil Segil and Louise Menendez are seen in the Choi Family Therapeutic Screening Facility on the Health Sciences Campus.

## Gift to help hearing loss research

By Hope Hamashige

**T**here has always been one insurmountable problem related to hearing loss: When the sensory hair cells in the inner ear die, they don't regenerate. These microscopic cells signal to the brain that it is hearing a noise and the fact that they do not regenerate is the reason that hearing loss is irreversible.

But Neil Segil, PhD, professor of research in the Department of Stem Cell Biology and Regenerative Medicine at the Keck School of Medicine of USC, hopes that the research going on in his laboratory could provide real solutions for people with hearing loss, whether it be from aging, a genetic predisposition, or as a result of treatment with antibiotics or chemotherapy.

Collaborating with the Ichida lab from USC Stem Cell, the team has been able to reprogram skin cells to develop into sensory hair cells. This scientific feat not only is creating new understanding of how they develop and why they die, but also creating new possibilities for finding treatments that will prevent hearing loss and to restore it after it is lost.

Getting to this point took a major scientific effort that was made possible because of an extraordinary gift from the Sidgmore Family Foundation. The family made a contribution to the USC Tina and Rick Caruso Department of Otolaryngology-Head and Neck Surgery, and earmarked the funds for cutting-edge research, which has supported the efforts of the Segil lab.

The Sidgmore family became aware of the research efforts of the Segil lab through a relationship with the late John Niparko that dated back more than 20 years when Michael Sidgmore became a patient. When it came to finding a research project to finance, Michael Sidgmore said that the family was happy that Niparko steered them to Segil's research.

"We wanted to fund innovative research that is pushing the dial," said Sidgmore, who added that funding scientific research is similar to venture capital funding because it is hard to know whose research will lead to breakthroughs. "You are really backing the people doing the work and we think we would be hard-pressed to find a better team."

## Study: Cancer survival rates for some not improved

By Zen Vuong

**H**istorically, 15- to 39-year-olds have been treated like an overlooked middle child whose parents are too busy lavishing cancer prevention and therapeutic attention on the youngest and oldest, but the Keck School of Medicine of USC is looking to change that dynamic with a first-of-its-kind report card.

Published this year, "Cancer in Los Angeles County: Trends Among Adolescents and Young Adults 1988-2011" is a large-scale, comprehensive evaluation of the cancer trends of 15- to 39-year-olds, said Dennis Deapen, lead author of the report and director of the Los Angeles Cancer Surveillance Program.

"There has been tremendous improvement in survival of pediatric cancer patients over the last three decades," Deapen said. "Thirty years ago, 80 percent of pediatric cancer patients died of their disease. Now over 80 percent are cured. Yet in what we define as the 'AYA population,' between the ages 15 and 39, there has been no overall improvement in their survival."

USC is a leader in tackling intractable problems such as cancer. For the past 44 years, the Los Angeles Cancer Surveillance Program has tracked every diagnosed case of cancer. Keck Medicine of USC and the USC Norris

Comprehensive Cancer Center oversee the program.

Lack of health insurance, paltry clinical trial participation and adherence to treatment, and differences in tumor biology are a few of the hypotheses for why

improvements in modern medicine has been of little or no benefit to the AYA group.

Second only to age and gender, race and ethnicity is the strongest predictor of differences in cancer risk, Deapen said.

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**Editor:** Melissa Masatani

**Director, Internal Communications:** Virginia Baca

**Contributors:** Andrea Aldana, Meg Aldrich, Amanda Busick, Ricardo Carrasco III, Louise Cobb, Mary Dacuma, Nathan Cowen, Cristy Lytal, Douglas Morino, Sara Reeve, Sherri Snelling, Carol Sussman, Zen Vuong and L. Alexis Young

Phone: (323) 442-2830  
Fax: (323) 442-2832  
Email: hscnews@usc.edu  
Web: hscnews.usc.edu | kecknet.usc.edu

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