

## New primate fossil fills ecological gap

By Zen Vuong

Fossil hunters have found part of an ancient primate jawbone related to lemurs — the primitive primate group distantly connected to monkeys, apes and humans, a Keck School of Medicine of USC researcher said.

Biren Patel, PhD, associate professor of clinical cell and neurobiology, has been digging for fossils in a paleontologically rich area of Kashmir in northern India for six years.



Modern lemur

Although paleontologists have scoured this region for a century, relics of small extinct primates were rarely found or studied.

Scientists named the new species *Ramadapis sahnii* and said that it existed 11 million to 14 million years ago. It is a member of the ancient *Sivaladapidae* primate family, consumed leaves and was about the size of a house cat, said Patel, co-author of the new study in the *Journal of Human Evolution*.

“Among the primates, the most common ones in the Kashmir region are from a genus called *Sivapithecus*, which were ancestral forms of orangutans,” Patel said. “The fossil we found is from a different group on the primate family tree — one that is poorly known in Asia. We are filling an ecological and biogeographical gap that wasn’t really well documented. Every little step adds to the understanding of our human family tree because we’re also primates.”

The last primate found in the area was 38 years ago. So, in addition to being a new species, this is the first



Sheena Lad

The new species *Ramadapis sahnii* existed 11 million to 14 million years ago and is a member of the ancient *Sivaladapidae* primate family. It consumed leaves and was about the size of a house cat.

primate fossil found in the area in decades.

“In the past, people were interested in searching for big things — things they could show off to other people,” Patel said. “A lot of the small fossils were not on their radar.”

The inch-and-a-quarter partial

mandible belongs to a primate weighing less than 11 pounds that had outlived its other adapidae cousins found in North America, Europe and Africa by millions of years.

“New primates are always a hot topic, and this one is the first of its kind

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## Meet the Faculty: Glen L. Stimmel, PharmD, sculptor

Glen L. Stimmel, PharmD, professor of clinical pharmacy at the USC School of Pharmacy and of psychiatry and the behavioral sciences at the Keck School of Medicine of USC, is a pioneer in the field of psychiatric pharmacy.

When he isn’t lecturing or overseeing academic affairs at the School of Pharmacy, you can find him in his South Pasadena backyard, painstakingly carving stone sculptures by hand, inspired by the work of sculptor Constantin Brâncuși of Romania and Shona sculptor Peter Mandala of Zimbabwe.

The greatest joy of the work is giving finished sculptures to family and friends, and the challenge is finding enough time to carve, says Stimmel, who recently was appointed associate dean for academic affairs.

“I have 200 pounds of soapstone and alabaster in my garage awaiting liberation from their rough forms,” he said.



Courtesy Glen L. Stimmel

No power tools for Glen L. Stimmel, who uses a rasp, file, hammer and chisel to sculpt soapstone and alabaster, then polishes the form with sandpaper, steel wool and carnauba wax. A finished sculpture may take several weeks to a few months to create.

## New associate dean to address medical student development

Karen Restifo, MD, JD, has been appointed associate dean for student affairs at the Keck School of Medicine of USC, according to Rohit Varma, MD, MPH, dean of the Keck School and director of the USC Gayle and Edward Roski Eye Institute, and Henri Ford, MD, MHA, vice dean for medical education at the Keck School.

“Dr. Restifo comes to the Keck School of Medicine with a wealth of experience in student affairs and national recognition as a student affairs professional,” Varma and Ford wrote in the Feb. 22 memo announcing her appointment. “Her overarching



Courtesy Karen Restifo

Karen Restifo

goal is to optimize the learning environment at the Keck School of Medicine to reduce medical student stress. She hopes to contribute to the development of

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### Send us your Los Angeles Marathon photos

Are you participating in the 2017 Skechers Performance Los Angeles Marathon, as a runner, volunteer, or spectator? Send us a photo from race day to [hscnews@usc.edu](mailto:hscnews@usc.edu) with a short description of your participation and you might see it on the *HSC News* website.

## Renowned chemical engineer, nanomedicine pioneer joining USC

By Marc Ballon

Mark E. Davis, PhD, a renowned chemical engineering professor and nanomedicine pioneer at the California Institute of Technology whose work on biomaterials for cancer treatment holds great promise to make medicines more targeted and effective, will join the USC faculty in October.

Davis, one of the few academics elected to the National Academy of Engineering (1997), the National Academy of Science (2006) and the National Academy of Medicine (2011), will hold a Provost Professor appointment at USC, with a primary

academic home in the Mork Family Department of Chemical Engineering in the USC Viterbi School of Engineering. He will be based at both the University Park Campus, at the soon-to-open new Michelson Center for Convergent Bioscience, and on the Health Sciences Campus.

In addition to his USC Viterbi appointment, Davis also will hold joint appointments in the Department of Medicine at the Keck School of Medicine of USC, as well as the Department of Chemistry in the USC Dornsife College of Letters, Arts and Sciences.

Davis’ research efforts involve materials synthesis in two general areas: zeolites and other solids that can be used for molecular recognition and catalysis, and polymers for the delivery of a broad range of therapeutics. He also conducts pioneering work on engineering nanoparticles for cancer therapeutics.

During his time at Virginia Polytechnic Institute & State University (Virginia Tech) from 1981 to 1991, Davis and his research team invented a number of new zeolites and molecular sieves. They were the first to report the synthesis of a molecular

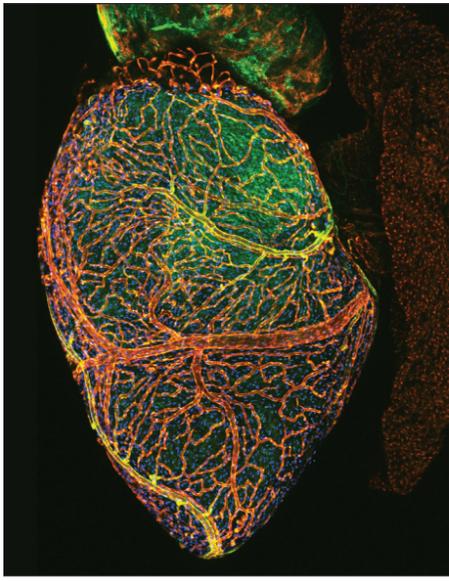
sieve with uniform pore sizes larger than 1 nanometer. In recognition of his work, Davis became the first engineer to receive the National Science Foundation Alan T. Waterman award in 1990.

In 1995, while at Caltech, Davis expanded the focus of his research to biomaterials for cancer research. He did so in response to his wife’s long, painful but ultimately successful, fight against breast cancer.

Davis and his team became the first researchers to successfully engineer nanoparticles that are made from

See **PIONEER**, page 3

# Researcher awarded \$1.7 million to study heart regeneration



Ching-Ling (Ellen) Lien

Zebrafish heart with prominent coronary vessels, marked by transgenic fluorescent reporters.

By Jennifer Marcus

Ching-Ling (Ellen) Lien, PhD, assistant professor of surgery at the Keck School of Medicine of USC and an investigator at The Saban Research Institute of Children's Hospital Los Angeles, has been awarded nearly \$1.7 million, over a four year period, from the National Heart, Lung, and Blood Institute of the National Institutes of Health to study the molecular and cellular mechanisms of the heart's circulatory system. The research will lead to a better understanding of heart development and regeneration after injury.

Heart disease is among the leading causes of death for both adults and children. A heart attack (or myocardial infarction) occurs when the heart is deprived of oxygen due to blockage of a coronary artery, which supplies the heart muscle with oxygenated blood. Yet, the mechanisms that regulate coronary vascularization of the myocardium (the middle and thickest muscle layer of the heart wall) remain unknown.

Using zebrafish as a model system to study developmental and regenerative processes of the heart, Lien's goal is to determine the molecular and cellular

mechanisms of myocardial vascularization during heart development.

Zebrafish have become an important vertebrate model for cardiovascular research not only because of their natural ability to regenerate, but also because their transparency allows researchers to observe the internal processes like blood vessel development.

"Our long-term goal is to use the mechanisms of zebrafish heart regeneration as a blueprint to design potential therapeutic approaches to enhance heart repair in humans," said Lien, principal investigator of the study.

The investigators expect their research to lead to findings that will shed light on potential developmental causes of coronary heart disease and may enhance neovascularization, or new blood vessel formation in abnormal tissue, in diseased human hearts in the future.

Co-investigators on the team include: Scott Fraser, PhD, Provost Professor of Biological Sciences and Biomedical Engineering; Megan McCain, PhD, assistant professor of biomedical engineering; Mark Frey, PhD, assistant professor of pediatrics; and Henry Sucof, PhD, professor of stem cell and regenerative medicine.

# Students pitch global surgery solutions

By Larissa Puro

Students from across the university spent a week strategizing ways to improve Nicaragua's surgical infrastructure as part of the sixth annual USC Global Health Case Competition.

The competition, open to all USC students and hosted by the Institute for Global Health, partnered with medical charity Operation Smile and Children's Hospital Los Angeles to develop a case challenge based on the organization's experience providing surgical care in more than 60 countries worldwide.

With two-thirds of the world's population lacking access to safe surgery, the competitors were tasked with developing operating room systems that would be both sustainable and appropriate to Nicaragua. The teams pitched ideas to faculty judges in 15-minute presentations.

Approximately 50 students participated in the Feb. 14 competition, forming multidisciplinary teams from seven USC schools. Members of the winning team include biology and Master of Public Health progressive degree undergraduate Cristina Gago; Master of Public Administration candidates Julian Cernuda and Brantynn Washington; and Master of Public Health candidates Ashley Millhouse and Hrant Gevorgian.



Members of the winning team are students at the Keck School of Medicine of USC, USC Dornsife College of Letters, Arts and Sciences, and USC Sol Price School of Public Policy. From left are Julian Cernuda, Brantynn Washington, Cristina Gago, Hrant Gevorgian and Ashley Millhouse.

They'll travel to Atlanta to represent USC at the International Emory University Global Health Case Competition on March 25.

Operation Smile has been providing cleft lip and palate surgeries worldwide since William and Kathy Magee founded the organization in 1982. Their son, William Magee III, MD, DDS, is an assistant professor of clinical surgery at the Keck School of Medicine of USC as well as the director of the International Research Program in the Department of Plastic

and Maxillofacial Surgery at Children's Hospital Los Angeles.

Magee III presented a lecture during the competition about innovations and challenges of the emerging global surgery field and focused on the Global Surgery Partnership, a novel collaboration between the Keck School, CHLA and Operation Smile.

Magee III praised the competition as an important educational exercise.

"Leadership and problem-solving," he said, "you only get good at it by doing it."

## PRIMATE

Continued from page 1

from its area in Asia, which has significant implications for understanding primate evolution in the Old World," said Michael Habib, PhD, assistant professor of clinical cell and neurobiology at the Keck School who was not involved in the study.

The question that remains is how the ecosystem in northern India supported this species when its relatives elsewhere were disappearing or had already gone extinct. Future fieldwork and recovering more fossil primates will help answer this question.

"People want to know about human origins, but to fully understand human origins, you need to understand all of primate origins, including the lemurs and these *Sivaladapids*," Patel said. "Lemurs and *sivaladapids* are sister groups to what we are — the anthropoids — and we are all primates."

This study was supported by the Wenner-Gren Foundation, the American Association of Physical Anthropologists, the Institute of Human Origins and several universities.

# Calendar of Events

## Friday, March 10

**8:30 a.m.** Hastings Center for Pulmonary Research Seminar. "Mechanisms of Lung Allograft Fibrosis," Vibha N. Lama, MD, University of Michigan. IRD 734. Info: Elva Rubio, (323) 409-7184, elvarubi@usc.edu

## Tuesday, March 14

**4 p.m.** USC Caruso Department of Otolaryngology – Head and Neck Surgery Seminar. "Keeping the Balance: Maintenance & Regeneration of Sensory Receptor Cells in Vestibular Organs of Adult Mice," Jennifer S. Stone, PhD, University of Washington. Herklotz Seminar Room, ZNI 112. Info: Jacqueline Jimenez, (323) 442-5579, jimenez1@med.usc.edu

## Wednesday, March 15

**Noon.** Division of Nephrology and Hypertension Lecture. "Meira and Shaul G. Massry Visiting Professor," Susan E. Quaggin, MD, Northwestern University Feinberg School of Medicine. LAC/USC Medical Center IPT Conference Room B. Info: Taneisha Jackson, (323) 442-1042, taneisha.jackson@med.usc.edu

## Friday, March 17

**8:30 a.m.** Hastings Center for Pulmonary Research Seminar. "ARDS: The Glucocorticoid Receptor Plays a Prominent Role in Disease Pathogenesis & Can be Modulated with Prolonged Methylprednisolone Treatment," Gianfranco Umberto Meduri, MD, University of Tennessee. IRD 734. Info: Elva Rubio, (323) 409-7184, elvarubi@usc.edu

## Saturday, March 18

**7 a.m.-4:30 p.m.** The USC Headache and Neuralgia Center Continuing Medical Education. "24th Annual Van Der Meulen Symposium: The Spectrum of Headache Disorder, Neuralgias and Post-Concussive Syndromes." Aresty Auditorium. Info: Chelsea Michel, (323) 442-2555, uscme@usc.edu, <https://cmetracker.net/KECKUSC/Catalog>  
**8 a.m.-Noon.** Department of Ophthalmology. "Ophthalmology Specialty Conferences: Neuro-Ophthalmology & Oculoplastics." Healthcare Center 4 Conference Room, Third Floor.

## Tuesday, March 21

**5:30 p.m.** Department of Ophthalmology

Grand Rounds. Luv Patel, MD. HCC4 Conference Room, 6th Floor. Info: John Daniel, (323) 865-7071, john.daniel@med.usc.edu, <http://eye.keckmedicine.org>

**6 p.m.-8 p.m.** USC Institute of Urology. "Men's Health Seminar," René Sotelo, MD. USC Verdugo Hills Hospital. Info and RSVP: Cecilia Pyzow, (818) 952-4729, cecilia.pyzow@med.usc.edu. Free event and parking; refreshments courtesy of Porto's Bakery and Amara Chocolate & Coffee.

## Wednesday, March 22

**Noon.** The Saban Research Institute. "Research Seminar: Risk Factors for CSF Shunt Infection and Reinfection," Tamara D. Simon, MD, MSPH, Seattle Children's Hospital. Saban Research Building Auditorium, 4661 Sunset Blvd. Info: Sandy Wang, (323) 361-7489, [tecpad@chla.usc.edu](mailto:tecpad@chla.usc.edu), <http://chla.org/tecpad>  
**Noon.** Zilkha Neurogenetic Institute Seminar. "Probing Neural Circuits with Shaped Light," Na Ji, PhD, Howard Hughes Medical Institute. Herklotz Seminar Room, ZNI 112. Info: Emily Chu, (323) 442-3219, [Emily.Chu@med.usc.edu](mailto:Emily.Chu@med.usc.edu), <http://www.usc.edu/zni>

## Thursday, March 23

**Noon.** The Southern California Research Center for ALPD & Cirrhosis Seminar. "Cellular Homeostasis Lecture Series: Calcium Signaling During Neutrophil Activation," Clifford A. Lowell, MD, PhD, University of California, San Francisco. McKibben Lecture Hall 156. Info: Asma Deras, (323) 442-3121, [asmadera@usc.edu](mailto:asmadera@usc.edu). Please contact host/moderator, Keane Lai, [keanelai@usc.edu](mailto:keanelai@usc.edu), for meeting requests.

**4 p.m.** Jane Anne Nohl Division of Hematology and Center for the Study of Blood Diseases Lecture. "Neutrophil Defensins: Friend or Foe?" Douglas B. Cines, MD, University of Pennsylvania. USC Norris Harlyne Tower LG 503/4. Info: Carolyn Castellanos, (323) 865-3913, [castellanos\\_c@med.usc.edu](mailto:castellanos_c@med.usc.edu)

## Friday, March 24

**10 a.m.-3 p.m.** Department of Preventive Medicine. "USC Public Health Career Fair." Soto Street Building (SSB) Patio. Info: Larissa Puro, (323) 442-7233, [puro@usc.edu](mailto:puro@usc.edu), <http://bit.ly/2l8O6q9>

**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.

# Nominations open for Choi Family Awards

By Douglas Morino

Nominations are open for the USC Choi Family Awards for Excellence in Patient-Centered Care. The prestigious awards honor exceptional physicians, nurses and staff who hold an unwavering commitment to compassionate patient care.

The awards are part of the USC Choi Family Excellence in Patient-Centered Care Endowment, which was established last year by Keck Medicine of USC through a generous gift from the Choi family.

"This philanthropic partnership helps ensure the culture of service and patient

advocacy that exists will be supported and enhanced now and into perpetuity," said Rod Hanners, COO of Keck Medicine of USC and CEO of Keck Medical Center of USC.

Winners will be honored at a special dinner and ceremony in May. Each individual recipient will receive \$2,000, along with an additional \$2,000 for their department to be used for programs, training and activities that support and foster our culture of excellence in patient-centered care. Additionally, each recipient's name will appear on a "perpetual plaque" installed in a place of prominence at Keck Medical Center of USC.

The Choi Family Awards

are open to all health care professionals at Keck Medicine of USC. The Choi Family Excellence in Patient-Centered Care Endowment provides funding for education and training focused on compassion, empathy, advocacy and patient-centered care. The Choi family chose to support the Keck Medicine of USC Patient Experience department after a family member received exceptional care from Keck Hospital of USC physicians, nurses and staff.

Nomination forms and instructions can be found on the Keck Medicine of USC intranet site. Submission deadline is March 15.



Don Mitici

Members of the Choi family stand with Tom Jackiewicz, Rod Hanners and the winners of the inaugural Choi Family Awards during a celebration of the awards in 2016. Nomination forms for the 2017 Choi Family Awards can be found on the Keck Medicine of USC intranet site. Completed nomination forms are due by March 15.

# Scientists: The EPA should not be weakened

By Zen Vuong

As scientists begin to find their political voices, three former U.S. Environmental Protection Agency insiders on Wednesday said the Trump administration should not sacrifice environmental quality and the health of the American people "for a coterie of special-interest stakeholders."

Their opinion piece was published March 1 in the *New England Journal of Medicine*.

"Unfortunately, sowing doubt about scientific evidence has become a widely used strategy for delaying or blocking actions that are purported to potentially affect the bottom lines for particular industries," the article stated. "We need to maintain the capacity to conduct cutting-edge research and to grapple with the application of the results in formulating evidence-based policies."

The more than 2,300-word article is authored by Jonathan Samet, MD, MS, previous chair of the EPA

Clean Air Scientific Advisory Committee and Distinguished Professor and chair of preventive medicine at the Keck School of Medicine of USC; Thomas Burke, PhD, MPH, former EPA science advisor and former head of EPA's Office of Research and Development under the Obama administration; and Bernard Goldstein, MD, EPA assistant administrator for research and development during the Reagan administration.

The article points to the key role of scientific evidence in driving public policy and its place in the laws and regulations that are critical in environmental policy. In the U.S., there is a long tradition of relying on scientific research; for example, Abraham Lincoln created the National Academy of Sciences to provide advice to the government. Key environmental statutes, like the Clean Air Act, explicitly base action in research findings.

Samet, who also is the Flora L. Thornton Chair in Preventive Medicine and director of the Institute for

Global Health, joins Burke and Goldstein in setting up a five-point call to action for the administration:

1. Evidence-based decision making on the environment should not be abandoned.
2. The Trump administration should continue to engage and seek advice from the broad community of scientists, reflecting the role of science and reason in democracy.
3. Research funding and environmental scientific capacity should be enhanced, not diminished, to reduce key uncertainties.
4. We need to continue to carefully track environmental surveillance and to be prepared to deal with emerging problems and disasters like the Deepwater Horizon oil spill.
5. There should be no pause in our efforts to reduce greenhouse gas emissions so that we can lessen the unprecedented challenges of global climate change.

## PIONEER: Davis to co-direct MD/PhD program at Keck School

Continued from page 1

polymeric materials specifically designed and created for human cancer therapeutics. To date, three different nanoparticles invented by his lab have gone to numerous human cancer clinical trials conducted both in the U.S. and abroad.

At Caltech, he and his team discovered how to successfully design nanoparticles that safely cross the blood-brain barrier in rodent models. At USC, Davis will continue his groundbreaking work on engineering nanoparticles that can deliver drugs to the brain, research that could improve the treatment of brain cancer, Parkinson's and Alzheimer's diseases, among other conditions. Their work continues on the pathway to clinical translation of these nanoparticles that if successful, would be a major medical breakthrough.

Davis also will serve as a strategic adviser to the deans of Viterbi and Dornsife, and will mentor faculty and students on convergent bioscience and engineering. As part of his duties at the Keck School, Davis will serve as co-director of the MD/PhD program.

"The connection between engineering and medicine is really a focal point for me," Davis said. "At USC, I will work on trying to be a conduit to help people do translational medicine, especially in the area of therapeutics."

"Mark Davis is a stellar addition to our faculty," Provost Michael Quick, PhD, said. "His multidisciplinary scholarship and research is an asset to the USC Michelson Center for Convergent Bioscience, where we are building bridges across



Mark E. Davis

Courtesy Mark Davis

our campus to transform medicine and science. I know he will help move us forward in these efforts. We are looking forward to his expertise and guidance."

"We are delighted to welcome Mark to the Keck School family," said Rohit Varma, MD, MPH, dean of the Keck School and director of the USC Gayle and Edward Roski Eye Institute. "He will be a tremendous resource for our MD/PhD program. His visionary work that converges the disciplines of technology and health/medicine will inspire our students to innovate and create at the forefront of translational science."

Over the decades, Davis has won a raft of awards, including the Colburn and Professional Progress Awards from the American Institute of Chemical Engineers (AIChE) and the Somorjai, Ipatieff, Langmuir, Murphree and Gaden prizes from the ACS. In 2014, he received the Prince of Asturias Award for Technical and Scientific

Research from the King of Spain, and in 2015, he was elected to the National Academy of Inventors.

Davis has written two textbooks, more than 425 scientific publications and holds 75 U.S. patents. He is a founding editor of *CaTTech* and a former associate editor of *Chemistry of Materials* and the *AIChE Journal*.

A scientist with an entrepreneurial bent, Davis founded Insert Therapeutics Inc., Calando Pharmaceuticals Inc., a company that created the first RNAi therapeutic to reach the clinic for treating cancer, and Avidity Bioscience.

Apart from his scientific achievements, Davis attained All American status for Masters Track and Field in the 400-, 200- and 100-meter dashes. In 2011, he won the 400-meter dash for men of age 55-59 at the Masters World Championship.

He holds three degrees from the University of Kentucky, all in chemical engineering.

## DEAN

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superb, professional physicians and scientists who will maximize their potential while thoroughly enjoying the medical school experience at the Keck School of Medicine."

Restifo joins student affairs deans Stephanie Zia, MD, assistant dean for career advising, and Sajjad Yacoub, MD, assistant dean for student affairs, in the day-to-day delivery of programs and services. Donna Elliott, MD, EdD, senior associate dean for student and educational affairs, will continue to oversee student affairs but will spend time working on the reaccreditation process for the medical school, the plans for the new clinical skills center and other special projects.

Restifo comes to the Keck School from Texas Christian University and the University of North Texas Health Science School of Medicine after serving as the associate dean for student affairs at the University of Arizona College of Medicine-Phoenix. She graduated from Georgetown University School of Medicine followed by an emergency medicine residency at Johns Hopkins. Restifo received her law degree from the University of Connecticut School of Law and completed a medical ethics fellowship at Harvard Medical School.

Restifo was the western regional representative to the Association of American Medical Colleges Council on Student Affairs from 2013 to 2016 and has held numerous leadership positions in the Society of Academic Emergency Physicians. She is a fellow of the American College of Emergency Physicians. At the University of Arizona College of Medicine-Phoenix, Restifo chaired the Student Affairs Committee and the LCME Student Affairs Self-Study Committee. She also was a member of numerous committees including the Admissions Committee, Honor Code Committee, Education Policy Committee, Student Progress Committee and the Curriculum Committee.

## 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:



Eric Weintraub

Zea Borok, left, and John Reith, chair of the board of the Hastings Foundation, are seen at the entrance to the Huntington Botanical Gardens.

## Investigators gather for first Hastings Center retreat

NEARLY 50 RESEARCHERS AFFILIATED with the Keck School of Medicine of USC's Hastings Center for Pulmonary Research gathered Feb. 24 at the Huntington Library and Botanical Gardens in San Marino to attend the inaugural Hastings Center for Pulmonary Research Retreat. The event included investigators from across the university and from Children's Hospital Los Angeles. They were welcomed by Zea Borok, MD, director of the Hastings Center, Ralph Edgington Chair in Medicine and chief of the division of pulmonary, critical care and sleep medicine at the Keck School. Borok recognized John Reith, chair of the board of the Hastings Foundation who attended the event, for the foundation's generous support of lung research at the university. The daylong retreat featured 16 presentations by current USC investigators that were thematically grouped to focus on lung development; lung cancer and imaging; stem cells, epithelial biology and fibrosis; and environment and inflammation. — **Eric Weintraub**



Courtesy Hossein Jadvar

Hossein Jadvar delivers the inaugural Ajit Padhy Memorial Oration at the 11th International Conference of Radiopharmaceutical and Molecular Therapy, held in November in India.

## Radiology professor honored at international conference

HOSSEIN JADVAR, MD, PhD, MPH, MBA, associate professor of radiology at the Keck School of Medicine of USC with a joint appointment as associate professor of biomedical engineering in the USC Viterbi School of Engineering, received the inaugural Ajit Padhy Memorial Award and delivered an oration lecture during the 11th International Conference of Radiopharmaceutical and Molecular Therapy (ICRT), held in November in Kochi, India. The theme of the conference, which is organized under the umbrella of the World Association of Radiopharmaceutical and Molecular Therapy (WARMTH), was, "From Controversies to Consensus in Radiopharmaceutical Therapy." Jadvar was recognized for "his contribution to education, research and clinical work in nuclear medicine," according to a summary of the conference in *The Journal of Nuclear Medicine*, the official journal of the Society of Nuclear Medicine and Molecular Imaging (SNNMI), for which Jadvar served as president during 2015-16. — **Melissa Masatani**

## Thomas Lee receives Microsoft Health Innovation Award

THE WINNERS OF THE 2017 Microsoft Health Innovation Awards were announced recently and included Thomas Lee, MD, associate professor of clinical ophthalmology at the Keck School of Medicine of USC. The award recognizes Lee's work with SADA Systems, a technology company, on a telemedicine project to train eye surgeons in Armenia to reduce rates of infant blindness. — **Amanda Busick**



David Sprague

**TAKE A WALK IN THE PARK:** Join the Hazard Park Recreation Center and Keck Medicine of USC for a walk in the park, from 5 p.m. to 6:30 p.m. every Thursday, beginning March 16. The USC Department of Public Safety will be on hand to provide a safe environment to walk. Keck Medicine of USC nurses will be available to provide blood pressure checks. Exercise equipment demonstrations will be provided. Giveaways will be given to all participants. For more information, contact Lusi Davtyan at [lusine.davtyan@med.usc.edu](mailto:lusine.davtyan@med.usc.edu).

## Broad Innovation Award winners aim to ease bathroom breaks with stem cells

By **Cristy Lytal**

Having a baby can change a woman's life in one way that she is often too embarrassed to mention. Childbirth can cause urinary incontinence, which affects up to 13 million people and incurs \$16.3 billion in annual treatment costs in the United States alone.

To address this common problem, this year's winners of the Eli and Edythe Broad Innovation Award are engineering a stem cell-based, biomaterials approach to promote the regeneration of the urethra. The one-year award provides \$100,000 of direct research funding and an additional \$20,000 to cover services in relevant core facilities at the Eli and Edythe Broad Center for Regenerative Medicine and Stem Cell Research at USC.

The project brings together Larissa V. Rodríguez, MD, and Rong Zhang, PhD, DDS, from the Catherine and Joseph Aresty Department of Urology at the Keck School of Medicine of USC, with Eun Ji Chung, PhD, from the Department of Biomedical Engineering at the USC Viterbi School of Engineering.

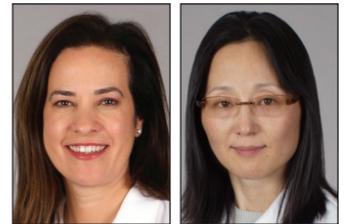
Together, they hope to advance treatments beyond the current industry standard, which involves injecting synthetic bulking agents or slings into the urethra to help control urine leakage. These therapies can assist with urethral closure, but do not improve urethral function and may trigger complications including chronic inflammation, abscesses, immune reactions, urinary tract obstruction, urethra or bladder erosion, or even blood clots in the lungs.

As a new approach, Rodríguez, Zhang and Chung are developing a bioactive hydrogel — a type of water-logged gel made of peptides, which are the building blocks of proteins. They plan to inject this hydrogel around the urethra as a temporary bulking agent to assist with closure. At the same time, the hydrogel will actively deliver

fat-derived stem cells and molecular signals to encourage tissue regeneration and the restoration of muscle tone. Eventually, the hydrogel will completely biodegrade, replaced by a regenerated and fully functional urethra.

The research team currently is testing this approach in rats with urinary incontinence, in hopes of eventually garnering supplementary grant funding to advance this work into clinical trials.

"Urinary incontinence keeps people from enjoying their children, enjoying their grandchildren, going to a movie, doing activities that all of us expect in terms of having a happy life," said Rodríguez, who also is associate provost for faculty and student initiatives in health and STEM, director



Larissa V. Rodríguez, left, and Rong Zhang

of Female Pelvic Medicine and Reconstructive Surgery (FPMRS) at the Keck Medicine of USC – Beverly Hills location, vice chair of academics at the Catherine and Joseph Aresty Department of Urology, and director of the FPMRS fellowship at the Keck School. "It disproportionately affects women. And I feel a moral sense of really giving back to these women, and giving to a population that I treat by advancing the science."

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