

## Researcher plucks hairs — to make them grow

By **Cristy Lytal**

If there's a cure for male pattern baldness, it might hurt a little.

A team led by USC Stem Cell Principal Investigator Cheng-Ming Chuong, MD, PhD, has demonstrated that by plucking 200 hairs in a specific pattern and density, they can induce up to 1,200 replacement hairs to grow in a mouse. These results are published in the April 9 edition of the journal *Cell*.

"It is a good example of how basic research can lead to a work with potential translational value," said Chuong, who is a professor of pathology at the Keck School of Medicine of USC. "The work leads to potential new targets for treating alopecia, a form of hair loss."

The study began a couple of years ago when first author and visiting scholar Chih-Chiang Chen, PhD, arrived at USC from National Yang-Ming University and Veterans General Hospital, Taiwan. As a dermatologist, Chen knew that hair follicle injury affects its adjacent environment, and the Chuong lab had already established that this environment in turn can influence hair regeneration. Based on this combined knowledge, they reasoned that they might be able to

See **HAIR**, page 3

## Medical student to participate in international ethics program

By **Thorin Tritter of FASPE**

Lisa Schamber of the Keck School of Medicine of USC is one of 14 medical students chosen to participate in a two-week ethics program this summer in New York, Germany and Poland.

Now in its sixth year of operation, the Fellowships at Auschwitz for the Study of Professional Ethics (FASPE) is a unique international program that explores the history of the Holocaust as a way to engage graduate students across five different fields (business, journalism, law, medicine and religion) in an intensive study of contemporary ethics in their discipline.

FASPE is predicated upon the power of place, and in particular, the firsthand experience of visiting Auschwitz and traveling in

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Participants climbed 1,391 steps to the top of the Aon Center.



Two of the team's top fund-raisers — physicians Alison Wilcox, left, and Christopher Lee — atop the Aon Center.

## Keck team climbs to the top at Lung Association fundraiser

A group from Keck Medical Center of USC was the top fund-raising team in the Fight for Air Climb, a stair-climbing event held April 11 in downtown Los Angeles. The Keck Medical team was also the largest group, with 46 registered, although not everyone actually climbed the skyscraper. Participants had to raise at least \$100 to join the climb up the 1,391 steps needed to reach the 63rd floor of the Aon Center. As of April 20, the American Lung Association fundraiser had brought in \$150,563, about 70 percent of its goal. Donations are being accepted through May 11. The team from Keck Medical Center had raised a total of \$5,819, which was about \$700 more than the second-place group.

## Soviet-era poet recites acclaimed work at Zelman lecture

By **Douglas Morino**

Celebrated Russian poet Yevgeny Yevtushenko recently recited a selection of his work at the 5th Annual Vladimir Zelman Distinguished and Endowed Lectureship presented by the Department of Anesthesiology at Keck School of Medicine of USC and sponsored by the Guilford and Diane Glazer Foundation.

Among Yevtushenko's readings was the poem *Babi Yar*, nominated for the 2007 Nobel Prize in literature. Written in 1961, the poem



Russian poet Yevgeny Yevtushenko, seated, with Philip Lumb, MD, lecture host Vladimir Zelman, MD, and co-presenter James Ragan.

examines the distortion of historical facts by officials in the Soviet Union regarding the Nazi massacre of the Jewish population in Kiev, Ukraine, during WW II.

"Yevgeny Yevtushenko is one of leading dissident poets at the time of the Soviet Union," said Philip Lumb, MD, professor and chair of anesthesiology, Keck School of Medicine. "He has a great deal of controversy associated with his name."

Screenwriter, poet and USC Professional Writing

See **ZELMAN**, page 3

## With Oct. 1 as deadline, ICD-10 transition begins

By **Douglas Morino**

Keck Medicine of USC will soon begin information and training sessions related to a new coding system for reporting of medical diagnoses and in-patient procedures set to begin Oct. 1.

The ICD-10, the latest edition and 10th revision of the International Classification of Diseases published by the World Health Organization, is the standard diagnostic tool for epidemiology, health management and clinical purposes. ICD-10 will be used to report diagnoses in all clinical settings. It includes codes for signs and symptoms of diseases.

"ICD-10 is the end result of a broad mission to leverage clinical documentation

to increase the quality of care," said Chief Information Officer Joshua Lee, MD. "It's taking documentation and making it reflect with precision exactly what we do. ICD-10 makes everyone climb to a new level in the specificity of their documentation."

The codes provide a uniform approach to categorizing diseases and patient conditions, along with surgical, diagnostic and therapeutic procedures. It is the international standard used to monitor diseases and other health problems, providing a picture of health situations among populations across the globe.

ICD-9 has 11,000 procedure codes, compared with 87,000 in ICD-10. The

See **ICD-10**, page 3



Chief nursing officers from across the country toured the Keck Medical Center of USC during the forum.

## Keck Medicine of USC hosts 100 at national nursing forum

By **Les Dunseith**

Keck Medicine of USC and Cerner Corporation recently hosted more than 100 nursing leaders from across the country during the 2015 CNO Forum.

Participants received education on industry topics related to nursing and spent time networking with peers during the three-day conference that began March 31 with a welcome reception at the Langham Huntington Hotel in Pasadena.

The next day began with a full slate of presentations in Aresty Auditorium inside Norris Comprehensive Cancer Center, including talks by nursing industry leaders and Cerner executives. Among the speakers was Pamela F. Cipriano, PhD, RN, the president of the American Nurses Association.

Annette Sy, RN, MSN, chief nursing officer at Keck

See **FORUM**, page 2

## FORUM: HSC hosts 100 chief nursing officers

Continued from page 1

Medicine of USC, said this was the first time that Keck Medical Center had hosted the CNO forum. "It was an opportunity for us to showcase all the great work being done with our electronic health record and nursing's involvement," Sy said.

In the afternoon, nursing leadership from Keck Medicine of USC provided an overview and history of Keck Medicine of USC and discussed the drivers for the decision to move quickly to implement technology that would improve efficiency and safety of practice and drive clinical quality for our patients.

"Our electronic health record is transforming health care by reducing error, reducing variance and waste for providers and nurses," Sy said.

Terry Pickering, MSN, RN, chief of clinical applications and associate administrator of nursing and clinical informatics, explained the system, which relies in part upon data input by the nurs-

ing staff. He also reviewed some of the challenges that had to be overcome when creating the system and talked participants through the benefits that have resulted from its implementation.

One innovation is a recently unveiled web-based app that presents information about the 24 operating rooms in the main OR. The app, which was built by Keck Medicine of USC staff based on data from Cerner's system, allows physicians and staff to view and analyze data related to the performance of their operating rooms and find ways to improve or root out inefficiencies.

After that presentation, participants split into three groups for tours of the Health Sciences campus and face-to-face Q&A sessions with Keck Medicine officials. For example, Joshua Lee, MD, chief information officer, showed forum participants how patient data can be input directly by staff members at mobile workstations inside Healthcare Cen-



Chief Information Officer Joshua Lee talks with attendees. Ellen Harper and Eva Karp of Cerner Corporation, below at right, thank nursing leaders Terry Pickering and Annette Sy of Keck Medicine of USC and Janet Brooks of USC Verdugo Hills Hospital for hosting the forum.



ter II. The forum wrapped up April 2 with a round of morning sessions on the Health Sciences campus that included Mary Dee Hacker, MBA, RN, the chief nursing officer and vice president of patient care services at Chil-

dren's Hospital Los Angeles.

Sy was pleased with the forum. "It was a wonderful opportunity to network with other chief nursing officers from across the country to share best practices," she said.

Photos by Les Dunsenith

## Unihealth gift to help children with hearing loss

By Sara Reeve

A new project will promote early intervention services for children with hearing loss.

UniHealth Foundation has awarded a \$500,000 grant to a USC-Children's Hospital of Los Angeles unit that provides audiology and speech language pathology services to children with hearing loss from birth to adulthood. The Center for Childhood Communication, known as C3, is part of the Keck School of Medicine of USC's Department of Otolaryngology – Head and Neck Surgery.

Childhood deafness impacts linguistic skills and social, emotional and intellectual development. Because children experience a sequence of developmental milestones in the first few years of life, early intervention in the form of hearing technologies and rehabilitation can have an enormous impact on a child's long-term development.

"Treating children with hearing loss early is critical to their development," said Mary Odell, president of UniHealth Foundation. "We want to bridge the gap between the diagnosis of early onset hearing loss and a full continuum of intervention services."

The project seeks to provide intervention services as close to the time of diagnosis as possible. Doing so will provide these children a better change to experience an optimal outcome in all areas of their development — particularly their ability to listen, talk, and acquire language and literacy skills.

Unihealth is an independent private health care foundation that is committed to philanthropy and support of innovative activities that positively impact health.

## Possible link between early childhood nutrition and obesity identified

By Leslie Ridgeway

The long-term risk for obesity and its complications, including Type 2 diabetes, may be established during a critical period between birth and weaning, according to scientists at Keck Medicine of USC.

The research, published April 2, in the peer-reviewed journal *Public Library of Science (PLOS) One*, demonstrates that mouse pups from smaller litters — with more access to nutrition — developed more unhealthy, inflamed fat. When these animals were placed on a high-fat diet in later life,

they developed an obesity profile that was more indicative of risk of obesity-related diseases such as Type 2 diabetes.

The takeaway for humans is that infant nutrition between birth and weaning is a critical period for healthy development, not just for future risk of obesity but also for risk of obesity-related diseases later in life, said Michael I. Goran, PhD, corresponding author and professor of preventive medicine, physiology and biophysics and pediatrics, Keck School of Medicine of USC and director, USC

Childhood Obesity Research Center.

"The human translation would be a parent overfeeding his or her baby, giving the baby more formula or other sugary beverages in the bottle, to keep the baby happy, or to get the baby to sleep," he said.

"We found that overnutrition early on primed the fat in the mice to be more dysfunctional. They gained the same amount of fat as mice in larger litters, but the fat they gained was more metabolically dysfunctional," Goran explained.

This metabolically

dysfunctional fat could produce molecules and hormones that lead to systemic metabolic conditions including inflammation, Goran said. The next step in the research is to conduct a clinical trial in mothers and babies, he said.

Other researchers contributing to the study were first author Brandon Kayser, PhD, at the Institute for Cardiometabolism and Nutrition, Paris, France, and Sebastien Bouret, PhD, associate professor of pediatrics, who is at the Saban Research Institute at Children's Hospital Los Angeles.

## Calendar of Events

### Tuesday, April 28

**11 a.m.** Eli and Edythe Broad Center for Regenerative Medicine and Stem Cell Research Seminar. "Programming and Reprogramming Cell Fate," Kenneth S. Zaret, PhD, University of Pennsylvania. Eli and Edythe Broad CIRM Center Auditorium.

**5:30 p.m.** Ophthalmology Grand Rounds. Grace Shih, MD, USC. HC4, Conference Room, 3rd Floor. Info: Tyaisha Christopher, (323) 409-5233, Tyaisha.Christopher@med.usc.edu

### Wednesday, April 29

**8 a.m. - noon.** Environmental Health and Safety Workshop. "FBI Academic Biosecurity Workshop," James Peaco and William So, FBI. Aresty Auditorium. Info and RSVP: Deona Willes, (323) 442-2200, dwilles@usc.edu

**Noon.** Saban Research Institute Seminar. "Research Seminar, RNA-Seq of Human Brains and Single Cells," James A. Knowles, MD, PhD, USC. Auditorium,

Saban Building. Info: Harleen Gill, (323) 361-8626, hgill@chla.usc.edu, <http://CHLA.org/TECPAD>

### Thursday, April 30, and Saturday, May 9

**7 a.m. - 1 p.m.** (8 a.m. - 4 p.m., May 9) Office of CME and Department of Orthopaedic Surgery Continuing Medical Education. "The Masters Series: Techniques in Arthritis," Lawrence D. Dorr, MD, USC. 1401 S. Oak Knoll Ave., Pasadena. Info: Teresa Ball, (323) 442-2555, uscme@usc.edu. **6 - 8 p.m.** Master of Public Health - PM 547 Symposium. "Cooperative Health Policy," PM 547 Students, USC. Aresty Auditorium. Info: Kathy Tran, (626) 537-5817, kathyt@usc.edu

**7 a.m. - 1 p.m.** Office of CME and Department of Orthopaedic Surgery Continuing Medical Education. "Masters Series: Techniques in Arthritis," Lawrence D. Dorr, MD, USC. 1401 S. Oak Knoll Ave., Pasadena. Info: Teresa Ball, (323) 442-2555, uscme@usc.edu

### Saturday, May 2

**7 - 10 a.m.** Division of Hepatobiliary and Pancreatic Surgery. "Purple Stride Los Angeles 2015," Exposition Park, 3855 S. Figueroa St.. Info: Rick Selby, (323) 442-7996 RSVP: Timothy Chung, (323) 442-7996, timothy.chung@med.usc.edu

### Wednesday, May 6

**Noon.** Zilkha Neurogenetic Institute Seminar. "Smells, Worms and Turns: Dissecting C. Elegans Neural Circuits," Sreekanth Chalasani, PhD, Salk Institute. Herklotz Seminar Room, ZNI 112. Info: Julie Carl, (323) 442-3219, jcarl@usc.edu

**Noon.** The Saban Research Institute Seminar. "Research Seminar, Bugs, Guts and Brains: How Your Gut Microbiota Shapes Your Body and Your Mind," Helen E. Raybould, PhD, UC Davis School of Veterinary Medicine. Auditorium, Saban Building. Info: Harleen Gill, (323) 361-8626, hgill@chla.usc.edu, <http://CHLA.org/TECPAD>

### Thursday, May 7

**11:30 a.m.** The USC Health Systems Improvement Collaborative. "Doctors, Raters, and Payers: Who is Responsible for Defining Quality in Healthcare?" Tom Jackiewicz, USC. Eli & Edythe Broad CIRM Center, BCC 101.

### Friday, May 8

**Noon.** Pharmacology and Pharmaceutical Sciences Seminar. "Development, Endocrine Functions and Metabolism of Marrow Adipose Tissue", Ormond A. MacDougald, PhD, University of Michigan Medical School. John Stauffer Pharmaceutical Sciences Center, PSC 104. Info: Ruth Ballard, (323) 442-3400 ellisbal@usc.edu

### Thursday, May 14

**6 p.m.** Orthopaedic Surgery Grand Rounds. "Amputation Surgery: Operative Principles & Future Directions." Benjamin Kyle Potter, MD, Walter Reed National Military Medical Center. Aresty Auditorium. Info, RSVP: Sylvia Suarez, (323) 226-7204, sylsua@usc.edu

# Maternal gestational diabetes linked to autism risk for offspring

By Les Dunseith

Children are more likely to develop autism if their mothers were diagnosed with gestational diabetes early in pregnancy, a new study shows.

Women who receive a new diagnosis of gestational diabetes by the 26th week of pregnancy were 42% more likely to have a child diagnosed later with autism, according to the study of more than 322,000 children born between 1995 and 2009.

Thomas A. Buchanan, MD, vice dean for research and chief of the Division of Endocrinology and Diabetes in the Department of Medicine at the Keck School of Medicine of USC, coauthored the study, which was conducted at Kaiser Permanente and was published in the *Journal of the American Medical Association*.

Overall, about 1 percent of the children in the study were diagnosed with autism by a median age of 5½. Researchers found no increase in autism risk if mothers were diagnosed

with gestational diabetes after 26 weeks of pregnancy

Buchanan said this study is part of the field-leading work being done by the Gestational Diabetes Study Group, which is a collaboration of Keck Medicine of USC and Kaiser Permanent Southern California. The Study Group uses a variety of approaches to investigate why gestational diabetes occurs, how and why it turns into diabetes after pregnancy, and what it does to children who are exposed to diabetes in utero.

“We then use that information to develop better approaches to treat or prevent the complications of gestational diabetes,” Buchanan explained. “In the past we have developed more efficient ways to treat gestational diabetes during pregnancy and to prevent diabetes after pregnancy in mothers who have had gestational diabetes.”

The new study found no increased risk of autism if women had type 2

diabetes before becoming pregnant, possibly because these women already had their blood sugar under control.

Anny Xiang, MD, of the Kaiser Permanente Southern California Department of Research and Evaluation said the study does not reveal why developing diabetes in pregnancy increases the risk of autism. It’s possible that high blood sugar levels have long-lasting effects on a fetus’ organ development and function, said Xiang, the study’s lead author.

Buchanan said that many of the current recommendations for clinical care of mothers during and after pregnancy are the result of work that has been done by the Gestational Diabetes Study Group, of which he and Xiang are founding members.

In recent years, the group has developed a strong focus on what exposure to diabetes in utero does to children, he said.

“We know that they tend to be more obese and at higher risk for

diabetes than other children,” Buchanan said. “Dr. Katie Page at USC is studying why that occurs.”

It has been known for a while that exposure in utero to severe maternal diabetes can cause major brain malformations in fetuses. Buchanan said the new information suggests that exposure to relatively mild maternal diabetes, as in gestational diabetes, can also cause more subtle brain abnormalities that become manifest as autism spectrum disorders, or ASD.

Both gestational diabetes and ASD have been on the rise in the past decade, so the new study suggests a possible link to help explain why.

“We don’t know yet whether earlier diagnosis and treatment of gestational diabetes can reduce the risk of ASD in offspring, but treatment can reduce the risk of other complications,” Buchanan said. “The study provides an important rationale for diagnosing and treating this type of diabetes as early as possible during pregnancy.”



Featured speakers Yevgeny Yevtushenko, seated, and James Ragan begin their reading of Yevtushenko’s poetry, including *Babi Yar*.

## ZELMAN: Lecture features acclaimed Russian poet

Continued from page 1

Program Director James Ragan read Yevtushenko’s poetry in English.

They were introduced to the audience in Aresty Auditorium on April 1 by Lumb, who credited Zelman, PhD, MD, professor and co-chair of the Department of Anesthesiology, for his work to attract cultural events that intellectually stimulate students, faculty and staff.

“Dr. Zelman is not only a scientist, but he also believes our campus benefits

from cultural activities with significance,” Lumb said. “All the guests who have been invited and accepted to the lecture series have been quite remarkable.”

Yevtushenko published his first book of poetry in 1952 and was featured on the cover of *Time* magazine 10 years later. He teaches Russian and European poetry, as well as the history of world cinema, at the University of Tulsa and Queens College of the City University of New York.

## ICD-10: Transition to new coding system gets underway at HSC

Continued from page 1

detailed nature of ICD-10 is expected to produce better data analytics, resulting in higher quality information for measuring health care quality, safety, and efficiency in reimbursement and billing processes. It is also expected to accommodate advances in medicine, technology and the development of innovative treatments for new diseases.

“ICD-10 is changing the paradigm of documentation,” Lee said.

The ICD-10 replaces ICD-9, which is limited in its level of detail in code assignment and leads to grouping of newer innovative procedures with current

or older procedures. ICD-9 has been used for about 35 years, but it is no longer considered viable for today’s treatment, reporting and payment processes, according to the American Medical Association.

Health care providers, payers and billing services must comply by the Oct. 1 deadline. Upgrading to ICD-10 is a HIPAA requirement.

All physicians and staff involved in patient care across Keck Medicine of USC will need to go through training. Information sessions that begin this May will include specialty-specific review sessions, web-based learning programs and refresher training.

## FASPE: Med student chosen for international program

Continued from page 1

Germany and Poland, where the fellows study the past and consider how to apply the lessons of history to the current ethical challenges of their own professions.

In the pre-World War II era, professionals in Germany were known and respected internationally. Yet, leaders and practitioners in each of the five professions — and often the institutions they represented — played a fundamental role in designing, enabling or executing the crimes of Nazi Germany.

Run under the auspices of the Museum of Jewish Heritage — A Living Memorial to the Holocaust in New York, FASPE examines what role professionals in

business, journalism, law, medicine and the clergy played in Nazi Germany and underscores that the moral codes governing these essential professions can break down or be distorted with devastating consequences.

A third-year medical student at the Keck School of Medicine, Schamber is considering a career in internal or family medicine.

“I am eager to have the opportunity to discuss with others what we can learn from the mistakes of the past, and how we can incorporate those lessons into our daily medical practice, as well as into our approach to health policy and health care in general,” she said about participating in FASPE.

A graduate in psychology from Wesleyan University in Connecticut, Schamber spent several years after college as an AmeriCorps volunteer at a free medical clinic in San Francisco.

“All of us have the potential to be perpetrators. If we remain silent, we become a participant,” Schamber said. FASPE, she added, will help prepare her for the sorts of ethical challenges she will face as a future physician.

Schamber will join a group of 62 FASPE fellows chosen through a competitive process that drew nearly 1,000 applicants from around the world. FASPE covers all expenses, including transatlantic and European travel, food and lodging.

## HAIR: Research tests baldness-related theory

Continued from page 1

use the environment to activate more follicles.

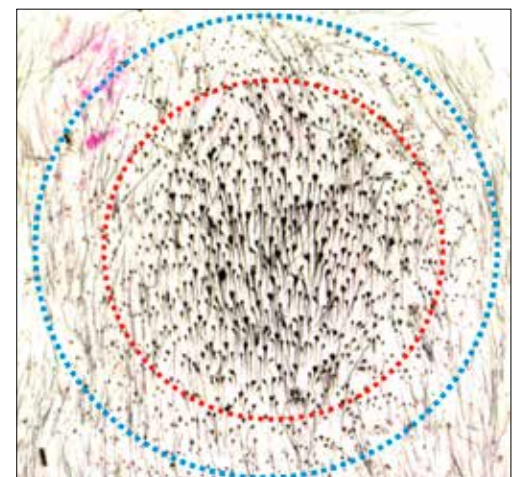
To test this concept, Chen devised an elegant strategy to pluck 200 hair follicles, one by one, in different configurations on the back of a mouse. When plucking the hairs in a low-density pattern from an area exceeding six millimeters in diameter, no hairs regenerated. But higher-density plucking from circular areas with diameters between three and five millimeters triggered the regeneration of between 450 and 1,300 hairs, including ones outside of the plucked region.

Working with Arthur D. Lander, MD, PhD, from the University of California, Irvine, the team showed that this regenerative process relies on the principle of “quorum sensing,” which defines how a system responds to stimuli that affect some, but not all, members. In this case, quorum sensing underlies how the hair follicle system responds to the plucking of some, but not all, hairs.

Through molecular analyses, the team showed that these plucked follicles signal distress by releasing inflammatory proteins, which recruit immune cells to rush to the site of the injury. These immune cells then secrete signaling molecules such as tumor necrosis factor alpha (TNF-), which, at a certain concentration, communicate to both plucked and unplucked follicles



Cheng-Ming Chuong



Plucking hairs from circular areas with diameters between three and five millimeters triggered the regeneration of between 450 and 1,300 hairs, including ones outside of the plucked region.

that it’s time to grow hair.

“The implication of the work is that parallel processes may also exist in the physiological or pathogenic processes of other organs, although they are not as easily observed as hair regeneration,” Chuong said.

In addition to these latest findings, *Science* recently selected Chuong’s work on how the regulation of feather follicle stem cells contributed to the evolution of feathered dinosaurs into modern birds as one of the Top 10 breakthroughs of 2014. Chuong was also inducted as a fellow of the American Association for the Advancement of Science (AAAS) in February.

## 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:



C. L. Max Nikias, left, and Michael Quick, right, flank Presidential Medallion honorees Percival Everett and Roberta Williams.

### Faculty physician Roberta Williams is Presidential Medallion recipient

STANDOUT STUDENTS, FACULTY and administrators celebrated the heights of Trojan scholarship at the 34th annual Academic Honors Convocation on April 15. USC President C. L. Max Nikias presented the Presidential Medallion, the university's highest honor, to Roberta G. Williams, MD, and Percival Everett. Williams, professor of pediatrics and past chair of the Department of Pediatrics at the Keck School of Medicine of USC, is a pioneer in the field of children's cardiology. Everett, Distinguished Professor of English at the USC Dornsife College of Letters, Arts and Sciences, was most recently honored with a prized \$25,000 fellowship for creative writing from the National Endowment for the Arts. Also among the award winners at the event held at Town and Gown on the University Park Campus were Donald Skinner, MD, former chair of the Catherine and Joseph Aresty Department of Urology at the Keck School, who received the Faculty Lifetime Achievement Award; and Amy Lee, PhD, the Judy and Larry Freeman Cosmetics Chair in Basic Science in Cancer Research at the USC Norris Comprehensive Cancer Center, who received the Phi Kappa Phi Faculty Recognition Award.

### Everyday pollutants hurt the environment — and a baby's brain

A POWERFUL RELATIONSHIP EXISTS between prenatal exposure to a common pollutant and disturbances in parts of the brain that support information processing and behavioral control. The findings were made by researchers at the Institute for the Developing Mind at Children's Hospital Los Angeles (CHLA) and colleagues at Columbia University's Center for Children's Environmental Health. They studied 40 children from before birth until 7 to 9 years of age as part of a large community-based cohort. The study was published online March 25 by *JAMA Psychiatry*. Neurotoxic polycyclic aromatic hydrocarbons (PAH) are ubiquitous in the environment, in the home and in the workplace. Sources of exposure include emissions from motor vehicles, oil and coal burning for home heating or power generation, wildfires and tobacco smoke. PAH readily crosses the placenta and affects an unborn child's brain; previous animal studies had shown that prenatal exposure impaired the development of behavior, learning and memory. — **Debra Kain**

### Urgent-start peritoneal dialysis curbs infections, boosts survival

A PROTOCOL FOR URGENT-START PERITONEAL dialysis results in less blood stream infections and appears to reduce mortality when compared to urgent-start hemodialysis, according to research presented at the National Kidney Foundation's 2015 Spring Clinical Meetings in Dallas, TX.



Ghaffari

Most patients who present with end-stage renal disease in the emergency room are given urgent-start hemodialysis with a central venous catheter. But Keck Medicine of USC researchers hypothesized that allowing patients the option of starting with peritoneal dialysis (PD) could improve long-range outcomes. "In general, the overall outcomes for urgent-start PD patients are no different than patients who start planned PD or planned hemodialysis (HD)" said lead researcher Arshia Ghaffari, DO, assistant clinical professor of medicine in nephrology. "We were also pleased to see we didn't see a higher rate of complications, such as peritonitis, that we thought we might have in these urgent-start PD patients." The research is based on 161 dialysis patients, of which 46 were urgent-start PD patients. Those who had urgent-start hemodialysis with a central venous catheter had a 43 percent higher hospitalization rate, 4 times higher adjusted rate of catheter-related bacteremia, and 66 percent higher number of dialysis access procedures compared to urgent-start PD patients. Urgent-start PD patients had a lower rate of mortality and technique failure as well.



Irene Esteves, dental hygienist at the School of Dentistry Faculty Practice, examines a youngster's teeth.

### Health staff offers services at Festival of Books

By Douglas Morino

More than 150,000 book lovers descended on the University Park Campus this past weekend for the Los Angeles Times Festival of Books, an annual event considered the largest public literary celebration in the country.

Held at USC since 2011, the two-day event celebrated its 20th year.

A centerpiece of the festi-

val was the Keck Medicine of USC Health and Wellness Pavilion, which hosted a variety of health-related screenings for adults and children including those for skin cancer, sleep apnea, glucose, BMI, blood pressure and oral health.

The Health and Wellness Pavilion doubled in size over previous years, attracting thousands of visitors and featuring volunteers from

across the Keck Medicine of USC enterprise, including physicians, nurses, medical students and hospital staff members.

"The Health and Wellness Pavilion showcases so much USC has to offer — we're not just a university, we're also a medical enterprise," said Adam Rosen, assistant vice president, office of cultural relations and university events.

### Norman Levan leaves remarkable medical legacy

By Sharon Brock

When Norman Levan, MD, passed away at the age of 98, he left a gift totaling \$12 million to the Keck School of Medicine of USC. Levan, a professor emeritus and former chief of Dermatology at the Keck School, left \$10 million upon his death in May 2014 to support scholarships and \$2 million in support for the Norman E. Levan Chair in Medical Ethics, which he established in 2010 with an original gift of \$2 million.

In 2007, Levan donated nearly \$6 million to establish the USC Levan Institute for Humanities and Ethics, thus totaling \$20 million in donations to the school he loved.

"Norman Levan was a gifted clinician and so much more," said Dean Carmen A. Puliafito, MD, MBA, who gave the eulogy at Levan's funeral. "He was an intellectual with boundless curiosity about human nature and the human condition, which explains why he thought that medicine and medical ethics was so vitally important."

This generosity reflects Levan's 82-year connection with USC. At age 16, Levan enrolled as a literature major at USC. He later returned to attend the School of Medicine, from which he graduated in 1939. After serving in the Army Medical Corps during World War II, he began a practice in dermatology and joined the faculty of the Keck School. He was chair of the Department of Dermatology for 20 years, from 1961 to 1981. During that time, he established the Hansen's Disease Clinic for leprosy at L.A. County+USC Medical Center.

Levan practiced medicine

for 70 years and saw patients at his private practice in Bakersfield until age 95.

Although the monetary gifts are remarkable, perhaps the greatest contribution Levan made to the Keck School was integrating ethics into the medical curriculum. Collaborating with a USC professor of religious studies, Levan helped to create the Keck School's first classes in bioethics, which led to ethics classes being required for medical students.



Norman Levan

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