Researcher plucks hairs — to make them grow
By Crissy Lytal

I there’s a cure for male pattern baldness, it might hurt a little. A team led by USC Stem Cell Principal Investigator Chien-Ming Chuang, 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.

“Is it a good example of how basic research can lead to a work with potential translational values,” said Chuang, 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 Chi-Chiang Chen, PhD, arrived at USC from National Yang-Ming University and Eternal General Hospital, Taiwan. As a dermatologist, Chen knew that hair follicle injury affects its adjacent environment, and the Chuang 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

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 Fellowship 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 first-hand experience of visiting Auschwitz and traveling in

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 every 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 procedures, compared with 87,000 in ICD-10. The

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.

By Thorin Tritter of FASPE

See FASPE, page 3

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 Lecture 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 Rabbi Tsur, nominated for the 2007 Nobel Prize in Literature. Written in 1961, the poem 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 Lamb, 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
Possible link between early childhood nutrition and obesity identified

By Leslie Ridgway

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 *Journal of Pediatric Gastroenterology & Nutrition,* demonstrates that mice pups from smaller litters — who get more access to nutrition — developed more unhealthy, inflamed fat. When these animals were put on a high-fat diet in later life, they developed an obesity profile that was more indicative of risk for obesity-related diseases such as Type 2 diabetes.

The takeaway for humans is that the infant nutrition between birth and weaning is a critical period for development, not just for future risk of obesity but also for risk of obesity-related diseases in life, said Michael I. Gorin, PhD, co-corresponding author, and professor of preventative medicine, physiology and biophysics, 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 over-nutrition 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,” Gorin explained. This metabolically dysfunctional fat could produce molecules and hormones that lead to systemic metabolic conditions including inflammation, Gorin 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 Kaysen, PhD, at the Institute for Cardiometabolism and Nutrition, Paris, France, and Sebastien Bourget, PhD, associate professor of pediatrics, who is at the Sahas Research Institute at Children’s Hospital Los Angeles.

Unith ealth project to help children with hearing loss

By Sara Reeve

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.

Unith ealth is an independent private health care foundation that is committed to philanthropy and support of innovative projects that positively impact health.

Calendar of Events

Tuesday, April 28

11 a.m. Eli and Edythe Broad Center for Regenerative Medicine and Stem Cell Research Seminar. “Programming and Regenerative Medicine and Stem Cell Research.”— featuring Dr. B. James A. Thomson, PhD, center director. Eli and Edythe Broad CIRM Center Auditorium.

5:30 p.m. Ophthalmology Grand Rounds. Grace Shih, MD, USC, HSC, Conference Room, 2nd Floor, Info: Tasya Christopher, (323) 409-5233, Tasya.Christopher@med.usc.edu.

Wednesday, April 29


1:30 a.m. – noon. Research Seminar, RNA-Seq of Human Brains and Single Cells, James A. Knowles, MD, PhD, USC, Auditorium, Salban Building, Info: Harlequin Gill, (323) 361-8626, bgill@bkhla.usc.edu, http://CHLA.A.org/TECPAD.

Thursday, April 30, and Saturday, May 9

1 p.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 on “Cooperating Health Policy” PM 547 Students, USC, Arthritis Auxiliary, Info: Helen Dun, (626) 573-8187, haveryt2@usc.edu.


Saturday, May 2


Wednesday, May 6


Thursday, May 7

11:30 a.m. The USC Health Systems Improvement Collaborative. “Doctors, Raters, and Haters: Who is Responsible for Defining Quality in Healthcare?” Tom Jackson, PhD, Eli and Edythe Broad CIRM Center, RCC 101.

Friday, May 8


Thursday, May 14

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

Women who receive a new diag-
osis 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 Di-
vision 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 Keck Diabetes Study Group, which is a collaboration of Keck Medicine of USC and Kaiser Permanente Southern California. The Study Group uses a variety of ap-
proaches to investigate why gesta-
tional 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 and prevent gestational diabetes and to prevent diabetes after pregnancy in mothers who have had 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.

“Keck’s Anthony Xiang, MD, of the Kaiser Permanente Southern California Department of Research and Evalu-
ation said the study results reveal why developing diabetes in preg-
nancy 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 focused a strong effort 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 the exposure to utero to severe maternal diabetes can cause major brain mal-
formations in offspring, but this new information suggests that exposure to relatively mild maternal diabetes, as in gestational diabetes, can also cause more subtle brain ab-
normalities 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 between the two.

“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 possibly during pregnancy.”

Continued from page 1

In February, Buchanan 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 trans-

continental and European travel, food and lodging.

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

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continental and European travel, food and lodging.
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 Medical Ethics and Human Values, 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.

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 29 years, from 1963 to 1992. During that time, he established the Hansen’s Disease Clinic for leprosy at L.A. County+USC Medical Center.

Levan practiced medicine 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

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May 8

Health staff offers services at Festival of Books

By Douglas Morino

More than 50,000 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 celebrat-

ed 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.

“I hope that 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.

Everyday pollutants hurt the environment — and a baby’s brain

A powerful relationship exists between prenatal exposure to a common pollutant and disturbances in part of the brain that support information processing and behavioral control. The findings were made by researchers at the Institute for the Development 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 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. Neurotropic polymeric 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 pla-

centa and affects an unborn child’s brain; previous animal studies had shown prenatal exposure impaired the de-

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 re-

duce mortality when compared to urgent-start hemodialysis, according to research presented at the National Kidney Foundation’s 2015 Spring Clinical Meetings in Dallas, TX.

Most patients who present with end-stage renal disease in the emergency room are given urgent-start hemodi-

alysis with a central venous catheter. But Keck Medicine of USC researchers hypothesized that allowing pa-

tients 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 Ar-

gha Ghaffari, DO, assistant clinical professor of medicine in neurology. “We were also pleased to see that 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 66 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.