

# Keck volunteers provide care to marathon runners

**‘I am very proud of all our volunteers. Their level of commitment was truly remarkable.’**  
**—Glenn Ault,**  
**associate dean of the Keck School**

**By Carole Omoumi**

Nearly 24,000 runners pounded the pavement on St. Patrick’s Day in the 2013 ASICS LA Marathon. To help runners through this exciting event, more than 150 Keck Medical Center of USC and Keck School of Medicine of USC volunteers staffed 10 medical stations along the 26.2-mile course that started at Dodger Stadium and ended near the Santa Monica Pier.

As part of a multi-year agreement, physicians, faculty, students and staff provided comprehensive medical services on a pro bono basis to marathon participants. A mobile hospital equipped to perform emergency surgery was also available at the finish line to enhance the medical services provided. While surgery was not needed on race day, the medical team, led by Sean Henderson, chairman of the Keck School Department



Photos/Gus Ruelas

Above: Instructor and team leader Maria Maldonado and Olga Lopez care for a runner at mile 20 of the LA Marathon. Right: Nurse Eugenia Chong ices up a runner.

of Emergency Medicine, and emergency medicine resident doctors Clare Roepke and Jamie Eng, provided critical, on-the-spot care to runners along the course.

Over 500 runners were treated, mostly for minor issues, and there were

12 emergency medical service transports from the race. The USC team also provided training to the nurses, paramedics, EMTs and athletic training volunteers who staffed the marathon on race day.

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## USC study shows cell mutations increase with age

**By Ina Fried**

Like an old car that gradually rusts as it ages even if there is no lethal damage to a specific critical part of the car, a human body accumulates genetic damage as it ages.

For the first time, research at the Keck School of Medicine of USC showed evidence that cell mutations increase with age, causing supposedly identical cells to diverge genetically. The report is featured as the cover article in the April 2013 issue of the journal *Aging Cell*, which is online now.

“We’ve suspected for a long time that there are genetic deviations in cells even from birth,” said Michael R. Lieber, the Rita and Edward Polusky Professor in Basic Cancer Research. “This is true even when the cells should be identical,” such as two cells from the same organ of one person.

Because technology is not currently capable of analyzing the genome of one individual cell, there previously was no good method to detect genetic deviations from one cell to the next. The structure of the colon, or large intestine, provided a way to overcome this limitation, an insight originally suggested to Lieber by Darryl Shibata, professor of pathology at the Keck School and the USC Norris Comprehensive Cancer Center.

The lining of the colon is made up of crypts, sections composed of about 2,000 cell clones. The researchers were able to analyze and

compare the genome of crypts from different areas of the same person’s colon.

Examining cell samples from people across a spectrum of ages, the researchers found that mutations—chromosome deletions, duplications and other consequences of chromosome breaks—were significantly more frequent in colons from older individuals.

“We are literally falling apart as we age because our cells are falling apart, or diverging, genetically,” Lieber said. “Most of the mutations make us function less well.” In the colon, genetic mutations are implicated in cancer, and the mutations increase in cases of severe inflammatory bowel disease. Cell divergence in other parts of the body may play a role in other diseases as well.

“Our article allows researchers to put the question [about the increasing divergence of cells with age] to rest and move on to other areas that will help people,” he said. “This

allows us to focus on ideas that might work, such as ways to stop specific cancers.”

Other authors of the article are John C. F. Hsieh, David Van Den Berg, Haeyoun Kang and Chih-Lin Hsieh. The work was supported primarily by a grant from The Ellison Medical Foundation.

For the complete journal article, see <http://tinyurl.com/crbqdeg>.



The cover image of the journal *Aging Cell* shows a common type of genetic damage to a cell, when breaks occur in both strands of DNA. The image was created by Albert Tsai, a former student in the lab of Michael R. Lieber, to accompany their research showing that such damage increases with age.

## Inpatient rehab unit opens at Keck Hospital of USC

**By Josh Grossberg**

For the first time in more than 10 years, Keck Hospital of USC has an inpatient rehabilitation unit.

Unveiled earlier this month with a ribbon-cutting ceremony, the facility will act as a place for patients to recuperate and regain their strength while recovering from a variety of ailments, including strokes, spinal cord and brain injuries, limb amputations, burns, cardiac disorders and neurological disorders, such as multiple sclerosis and Parkinson’s disease.

“This will serve a critical need for our hospital,” said Janice White, the unit’s director of inpatient rehabilitation. “It will allow for patients to have continuation of medical care.”

Although work started in January, the makeover of 3 North Rehabilitation Center is already complete. There is a large gym, a generous day and dining room, and 17 private rooms.

In just those few months, White has assembled a team of rehabilitation nurses, with the majority being Certified Rehabilitation Registered Nurses. Also, all physical therapists and occupational therapists are clinical faculty at USC.

“This was an all-hands-on-deck team effort to get this done,” White said.

To be admitted to the unit, patients must meet certain criteria, including having a medical diagnosis that results in functional impairment, being medically stable, but continue to need supervision and care, and having a functional impairment interfering with their ability to perform activities of daily living.

The average stay is 12-14 days, but patients’ time on the unit will vary based on medical necessity and functional goals, White said.

To help them transition back to their regular lives, patients will be encouraged to behave as if they’re not in

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# Keck School inks student exchange agreement with Seoul National University

**‘Both Keck School and Seoul National University students will benefit from the expertise of the innovative and skilled faculty on both sides of the Pacific Ocean.’**

**—Keck School of Medicine of USC Dean Carmen A. Puliafito**

**By Leslie Ridgeway**

With an eye on broadening the medical school experience for students, the Keck School of Medicine of USC and Seoul National University College of Medicine have agreed to establish a student exchange program between the two schools.

The agreement was signed March 14 by Keck School Dean Carmen A. Puliafito and Seoul National University College of Medicine Dean Daehee Kang.

“This agreement presents an exciting opportunity for our students and students at Seoul National University,” Puliafito said. “Both Keck School and Seoul National University students will benefit from the expertise of the innovative and skilled faculty on both sides of the Pacific Ocean.”

The agreement calls for qualifying students to spend up to 12 weeks studying at either the Keck School or Seoul National University. Students will receive credit toward their degree at their originating university.

“We are proud to work in partnership with the Keck School of Medicine of USC



From left: Seoul National University College of Medicine Dean Daehee Kang and Keck School of Medicine of USC Dean Carmen A. Puliafito sign the agreement establishing the student exchange program between the two schools.

to enhance the medical education of students from both institutions,” said Kang. “These are the students who will determine the future of health care worldwide.”

The exchange program will begin this summer. Students will enroll in classes and have opportunities for clinical learning experiences while at both universities.

The Seoul National

University College of Medicine was established 60 years ago and is considered one of that nation’s leading institutions in medical education, research and clinical performance.

According to the Seoul National University College of Medicine website, the college’s goal is “to train our students to become true leaders with warm hearts

and respect for principles, to lead the way for medical and life sciences research through creativity and novelty, to realize a healthy society through devoted service and participation, and to rank with the top 10 medical schools across the globe by the year 2017.”

## INPATIENT: New unit provides a “bridge to home”

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a hospital—they will wear street clothes and have family visit. There are even fold-out beds in the rooms for loved ones.

“This is a bridge to home,” White said. “Here they can start mimicking home life.”

The unit also includes an Activities of Daily Living Training Room, with a kitchen, a bed and

a bathroom. It will act as a bridge for patients to be able to function more independently when they return to their home environment.

“It addresses not only the physical, but the psychosocial aspect of recovery,” said hospital administrator Sharon Lee.

Lee said the unit allows physicians to keep a closer eye on patients during their rehabilitation.

“Our patients really need this type of environment to expand the continuum of care we provide to them,” she said.

“Prior to the unit opening, we were sending our patients to other rehabilitation facilities in the community,” she continued. “Now, we are able to keep those patients in the USC family.”

## USC to host LA Times Festival of Books

As part of multi-year partnership with the *Los Angeles Times*, USC will host the LA Festival of Books at the University Park campus next month, April 20 and 21.

In its third year at the USC campus, the Festival of Books has been very successful. More than 150,000 people attended last year’s weekend event, which was filled with signings and performances by authors, poets, musicians, USC faculty and students, as well as a host of vendors spread throughout campus.

The Keck Medical Center of USC Health and Wellness Pavilion will again have a large presence at the festival. The pavilion includes programs from the Health Sciences campus, such as internal medicine, pharmacy, infection prevention, occupational therapy and physical therapy to name a few.

Each program will provide interactive activities such as medical screenings, health education and healthy tips for kids. Oral health screenings and education will be provided by the Ostrow

School of Dentistry at USC mobile clinic.

More details about the Health and Wellness Pavilion schedule, festival programming, parking and inter-campus shuttle services can be found at [festivalofbooks2013.usc.edu](http://festivalofbooks2013.usc.edu).

### Donate A Book

For the third year in a row, Civic Engagement announced its annual online book drive, launching March 25, to coincide with the Festival of Books.

With 25,000 books already donated by Los Angeles-based Piccolo Books, the online book drive has taken

off fast. The challenge is to have the community match the donation to extend the contributions beyond classrooms and provide students with books they can call their own.

Civic Engagement and the USC Bookstores will set up a user-friendly online donation system and book drop-off stations on the University Park campus, the Health Sciences campus and the *Los Angeles Times* building. Visit [festivalofbooks2013.usc.edu/bookdrive](http://festivalofbooks2013.usc.edu/bookdrive) for more information.

The Weekly

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# Women’s Conference features Keck Medical Center of USC physicians

**By Carole Omoumi**  
The fifth annual University of Southern California Women’s Conference attracted nearly 1,000 USC alumni, parents, students, faculty and staff on March 7, making this year’s conference the most well-attended to date.  
The Keck Medical Center of USC hosted two health workshops featuring three renowned USC physicians—Helen Baron, Helena Chui and Sharron Orrange.

Shawn Sheffield, chief strategy and business development officer, moderated the two standing-room-only workshops. The health sessions were meant to educate women on diseases that may be hereditary, such as diabetes, dementia and breast cancer, and provide useful tips on how to prevent them.  
Baron, assistant professor of medicine at the Keck School of Medicine of USC and director of the Bone Mineral Density Unit,

talked about the prevalence of diabetes, which affects 25.8 million people of all ages and 8.3 percent of the U.S. population.  
Baron explained that the major risk factors for type 2 diabetes include family history (such as parents or siblings with diabetes), obesity, physical inactivity and hypertension.  
“Exercise and weight loss are effective ways to reduce the incidence of diabetes,” Baron said. “Obesity is one of the most preventable diseases. Balancing your energy intake and maintaining a healthy weight are key to staying healthy.”  
Chui, chair of neurology, spoke about the causes of dementia and ways to prevent it. According to Chui, factors causing dementia can be degenerative (Alzheimer’s and Parkinson’s diseases), vascular (stroke) or metabolic.  
Chui explained that there are two types of stroke—one

caused by a blocked blood vessel, which requires the administration of a clot buster to dissolve the clot, and another caused by a ruptured blood vessel that allows blood to leak into the brain. “Both types of stroke require immediate medical attention,” said Chui.  
“Women who are non-smokers, have a healthy diet and exercise regularly lower their risk of having a stroke,” she said.  
Orrange, assistant professor of clinical medicine, discussed hot topics in women’s health including breast cancer screening and melanoma.  
According to Orrange, breast density has an impact on mammography screening. “The breast is almost entirely fat, which could obscure detection of small masses,” Orrange said. “Since September 2012, USC Norris Cancer Hospital offers a new digital mammography with breast tomosynthesis. This new



Stephen Blaha

During the USC Women’s Conference, Helen Baron, assistant professor of medicine and director of the Bone Mineral Density Unit, talks about the prevalence of diabetes and ways to control it.

technology improves cancer detection in women with dense breasts.”  
Orrange also warned against tanning beds, which are used daily by one million Americans. “Even a single tanning episode can significantly increase the risk for melanoma,” she said. “The spike in melanoma cases appearing in women aged 25 years or older is exactly when you’d expect

to see melanomas based on high-level exposure at age 17-18.”  
Participants in the conference also enjoyed panel discussions, networking activities and interactive workshops that covered such topics as professional development and financial strategies.

## The Weekly NEWSMAKERS

The March/April 2013 issue of *The Saturday Evening Post* ran an op-ed by **Ken Murray**, retired clinical assistant professor of family medicine at the Keck School of Medicine, about how doctors view end-of-life care.

A March 25 article in *Time Magazine* noted **Peter Jones**, the Sawyer Chair in Cancer Research and a distinguished professor of urology, biochemistry and molecular biology at the Keck School of Medicine, as a leader of Stand Up 2 Cancer’s epigenetics team. Stand Up 2 Cancer is a multidisciplinary initiative created to accelerate cancer research and therapies.

A March 25 story in *Men’s Journal* noted a study by **David Agus**, professor of medicine at the Keck School of Medicine, that compared the risks of prolonged sitting to smoking a pack and a half of cigarettes a day.

A March 25 post by Medical Xpress noted that **Mark Humayun**, the Cornelius Pings Professor of Biomedical Sciences and professor of ophthalmology, biomedical engineering, cell and neurobiology at the Keck School of Medicine and USC Viterbi School, led the Artificial Retina Project and developed the Argus II.

On March 23, *The New York Times* ran an obituary for **Jacquelin Perry**, a former USC professor of surgery who established a scholarship at the Keck School of Medicine for the study of the human gait.

A March 22 article in *The New York Times* quoted **Rebecca Sokol**, professor in the department of obstetrics and gynecology and internal medicine at the Keck School of Medicine, about the long-term effect of steroid use on male fertility.

A March 22 post on Mother Nature Network featured a new study co-authored by **Rob McConnell**, professor of preventive medicine at the Keck School of Medicine, that found a link between living near high-traffic roads and childhood asthma rates.

A March 21 story in the *Los Angeles Times* quoted **Emil Bogenmann**, an associate professor in the Department of Pediatrics and the Department of Molecular Microbiology and Immunology at the Keck School of Medicine, about an endowment to his Latino and African-American High School Intern Program at Children’s Hospital Los Angeles. *Fort Mill Times* also quoted Bogenmann and Brent Polk, chair of the Department of Pediatrics at the Keck School, about the endowment.

A March 19 episode on CNN’s “The Next List” featured **Leslie Saxon**, professor of clinical medicine at the Keck School of Medicine, and her work using technology to improve health. As executive director of the USC Center for Body Computing, Saxon researches digital tools that allow doctors and patients to monitor health data together. The broadcast also featured an interview with **Joshua Lee**, chief information officer of USC Health. CNN also ran an article by Saxon on wireless health on its blog.

A March 19 broadcast on KPCC-FM featured research by **Neeraj Sood**, associate professor of clinical pharmacy and pharmaceutical economics and policy at the USC School of Pharmacy, and colleagues, finding that the “test and treat” model of prevention for HIV could result in more drug-resistant strains of the virus. The model has been shown to reduce the number of infections, but Sood’s study found that the prevalence of multi-drug-resistant HIV strains could double from 4.79 percent to 9.1 percent.



Steve Cohn

BUSINESS AND MEDICINE—Keith Vaughn, assistant dean of admissions for the USC Marshall School of Business M.B.A. Program, spoke to 70 prospective M.D./M.B.A. students at an information session Feb. 12 on the Health Sciences campus. Keck School of Medicine of USC Dean Carmen A. Puliafito hosted the event featuring information about the M.D./M.B.A. Dual Degree Program, offered jointly by the Marshall and Keck schools.

## MARATHON: USC is “world-class” partner

**Continued from page 1**  
Glenn Ault, associate dean of the Keck School, served as the marathon’s medical commissioner. In that role, Ault managed the hundreds of medical personnel along the route and served as the marathon’s medical spokesman to news media.  
“I am very proud of all our volunteers. Their level of commitment was truly remarkable,” Ault said. “The exposure we gained through this event was tremendous.”  
Keck School Dean Carmen A. Puliafito said, “Our partnership with the LA Marathon is a commitment that we honor with great pride. By volunteering each year, our faculty, students and staff demonstrate USC’s dedication to our community’s well-being.”  
Nick Curl, chief operating officer of the ASICS LA Marathon, said, “We are grateful to Dr. Ault and his team for providing medical care to our runners. We are honored to count USC as one of our world-class partners.”



# Calendar of Events

## Monday, Apr. 1

**Noon.** Medicine Grand Rounds. “Myocardiac Viability,” Vamshi Gade, USC. IPT Conference Room B. Info: (323) 226-7556

## Tuesday, Apr. 2

**7:30 a.m. – 9 a.m.** USC Institute for Integrative Health Breakfast Reception and Speaker Seminar Series. “Pre-Clinical and Clinical Studies of Botanical Agents for Breast Cancer,” Debu Tripathy, USC. Breakfast reception at 7:30 a.m., speaker at 8 a.m. NRT LG 503/504. Info: (323) 442-2638

**Noon.** Broad Center for Regenerative Medicine and Stem Cell Research at USC Seminar. “Directed Differentiation of Pluripotent Stem Cells Towards Somatic Precursor Cells: Insights into Human Developmental Biology and possible Applications in Regenerative Medicine,” Tiziano Barberi, Australian Regenerative Medicine Institute. BCC 1st Floor Seminar Room. Info: (323) 442-8084

## Wednesday, Apr. 3

**Noon.** ZNI Seminar. “Information Flow in the Auditory Cortex: Anatomical and Physiological Correlates,” Troy Hackett, Vanderbilt University. ZNI 112. Info: (323) 442-2144

## Thursday, Apr. 4

**Noon.** Cellular Homeostasis Lecture Series. “Epigenetic and Transcriptional Mechanisms that Guide Stem Cells into the T Lymphocyte Developmental Pathway,” Ellen Rothenberg, CalTech. MCH 156. Info: (323) 442-3121

**Noon.** Global Health Week Short Film Screening. “Women: The Face of AIDS.” BCC 101. Info: (323) 865-0419

**4 p.m.** USC Visions & Voices Lecture: The Ethical Dimensions of Medical Discovery. “Lessons from *The Immortal Life of Henrietta Lacks*,” Rebecca Skloot, award-winning science writer. KAM Mayer Auditorium. Info: (323) 442-1763

## Friday, Apr. 5

**8:30 a.m.** Surgical Grand Rounds. “Globalization of Healthcare and its Impact on Surgery,” Raina Sinha, USC. DOH 100. Info: (323) 442-9064

**11:30 a.m. – 1 p.m.** Southern California Environmental Health Sciences Center Seminar. “Best Practices for Designing Built Environments to Promote and Protect Health,” Jean Armbruster, LA County DPH. SSB 116. Info: (323) 442-1096

**Noon.** Medicine Grand Rounds. “Pulmonary HTN,” Liliane Idylle, USC. IPT Conference Room B. Info: (323) 226-7556

## Saturday, Apr. 6

**8 a.m. – 1 p.m.** 6th Annual Fight for Air Climb. The Keck Medical Center of USC is a proud sponsor of this event to raise awareness for the 37 million Americans who suffer from lung disease. Aon Center, Los Angeles. Register online at <http://www.lung.org/pledge-events/ca/los-angeles-climb-fy13/>.

## Monday, Apr. 8

**Noon.** Research Seminar. “Modularity in Development and Evolution of the Human Skeleton,” Charles Kimmel, Univ. of Oregon. NRT Aresty Auditorium. Info: (323) 442-7732

## Tuesday, Apr. 9

**Noon.** Psychiatry Grand Rounds. “Human Factors in Surgery and Team Handoffs,” Ken Cathpole, Cedars Sinai. ZNI 112. Info: (323) 442-4065

**2 p.m.** Breast Cancer Educational Forum. “Meaningful Interactions: How to Work with Your Surgeon,” Katherine Kopkash and Debu Tripathy, USC. NRT G-501. RSVP: (323) 865-3520

**4 p.m.** Women’s Cancers Program Research Seminar. “Can an Antifungal Agent be the Next Potential Therapeutic Drug for Endometrial Cancer Patients?” Paulette Mhaweche-Faucegla, USC. NOR 7409. Info: (323) 865-3520

**Notice:** Deadline for calendar submission is 4 p.m. Monday to be considered for that week’s issue—although three weeks’ advance notice of events is recommended. Please note that timely submission does not guarantee an item will be printed. Send calendar items to *The Weekly*, KAM 400 or fax to (323) 442-2832, or email to [eblaauw@usc.edu](mailto:eblaauw@usc.edu). Entries must include day, date, time, title of talk, first and last name of speaker, affiliation of speaker, location and a phone number for information.

# Patient and race car driver to return to Keck Hospital of USC to promote organ donation



Photo courtesy of Bill Widen

Drag racer and lung transplant recipient Bill Widen stands with his Donate Life race car. Widen will bring his car to Keck Hospital of USC on April 5 in an effort to raise awareness of organ and tissue donation. April is National Donate Life Month.

## By Josh Grossberg

A man who has made it his life’s mission to raise awareness about organ donation is returning to Keck Hospital of USC, where 10 years ago he received a life-saving lung transplant.

When he comes April 5, Bill Widen will bring with him his Donate Life car.

Widen drives the Chevy Nova to drag-racing events and hospitals as a way to encourage people to become organ and tissue donors. Donor families across the country have signed the car to show their support.

April is National Donate Life Month. “People are afraid to put the [organ donor] dot on their licenses,” said Widen, who runs Donate Life/Signatures Across America. “We talk to them about that.”

Widen, who is now 60, was suffering from emphysema and could barely walk across a room when he received his transplant a decade ago. He doesn’t know the 18-year-old man whose lung takes in the air he breathes, but he remains profoundly grateful for the act of generosity.

“How do you give back for this gift of life, this second chance?” he said. “You can’t say thank you enough.”

Widen will have his car parked in the first stall of Keck Hospital’s valet area from 10 a.m. to 6:30 p.m. on April 5. All staff and physicians are encouraged to stop by and sign the car, and learn more about organ donation.

For more information about Widen’s project, visit [www.donorracing.com](http://www.donorracing.com).

# Immortal Life of Henrietta Lacks author to speak on ethics

## By Josh Grossberg

USC Visions & Voices program brings award-winning author Rebecca Skloot to the Health Sciences campus to discuss her *New York Times* bestselling book, *The Immortal life of Henrietta Lacks*, in Mayer Auditorium on Thursday, April 4.

The book, which took more than a decade to research and write, tells the story of a young black woman who left behind an unbroken line of cells known as HeLa after she died of cervical cancer in 1951.

Harvested without her knowledge, Lacks’ cells have been used in generations of medical breakthroughs, including the polio vaccine, cancer treatments, in vitro fertilization and the understanding of how human cells are impacted by space travel. Millions of dollars have been made with Lacks’ unknowing assistance, and her children—who were also used in research without their

consent—have never seen a penny of it.

Skloot’s talk is titled “The Ethical Dimensions of Medical Discovery: Lessons from *The Immortal Life of Henrietta*

*Lacks*.” The talk begins at 4 p.m., with a reception to follow. Admission is free. For more information, visit [usc.edu/visionsandvoices](http://usc.edu/visionsandvoices) or call (323) 442-1763.

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**Visit the USC Web: <http://emergency.usc.edu>** This page will be activated in case of an emergency. Backup Web servers on the East Coast will function if the USC servers are incapacitated.