

Keck School faculty honored with WSCI/WAFMR awards

By Amy E. Hamaker

The Western Society for Clinical Investigation and the Western American Federation for Medical Research recently honored two faculty members of the Keck School of Medicine for their inspiring work as researchers.

Shelly Lu, professor of medicine in the division of gastrointestinal and liver diseases, was presented with the WSCI Mayo Soley Award for her longstanding achievement in research and mentoring. Kathleen Page, assistant professor of clinical medicine, was presented with the Western American Federation for Medical Research Outstanding Investigator Award for outstanding work in scientific

investigation. The awards were presented as part of the combined society's Western Regional Meeting, held on Jan. 25-28 in Carmel, Calif.

Lu has worked in the field of hepatic methionine and glutathione metabolism for nearly 20 years, and her research has been continuously funded by the National Institutes of Health since 1992. She has also mentored 26 researchers since 1990, including undergraduate and graduate students, medical students, Ph.D. students and postdoctoral fellows, many of whom have gone on to receive grants and university positions of their own.

"I was floored when I was told I had received this pres-

tigious award," said Lu, who is also the associate director of the USC Research Center for Liver Diseases.

"I immediately thought I had not yet done enough to merit a lifetime achievement in science and mentoring award. I truly appreciate the honor of this peer recognition," she said.

Page has focused her research not only on the causes and prevention of Type 2 diabetes, but also on the central nervous system regulation of appetite control and energy balance in humans.

"It is such an honor to receive this award," said Page. "It's very exciting to be here at USC, where I've continued to pursue my work



Shelly Lu

on the brain and hormonal responses to fructose and glucose consumption. It is an exciting time to be a physician scientist, and I look forward to continuing this journey of developing research ideas into scientific discovery."

The shared mission of



Kathleen Page

WSCI and WAFMR is to cultivate and enrich medical research in the western United States and western Canada, with a special focus on encouraging younger M.D. and Ph.D. researchers to pursue goals in academic medicine.



Jon Nalick

Canine companion Hershey visits with patient Shelley Hart as part of a new Pet Therapy Program at Keck Hospital of USC designed to provide patients and visitors with a more relaxed, comforting healing environment.

Hospital program cheers patients with the power of pooches

By Tania Chatila

Keck Hospital of USC is enlisting the help of some furry, four-legged friends in its quest to provide compassionate care.

The hospital launched a new Pet Therapy Program this week to help enhance patient experience and to provide patients and visitors with a more relaxed, comforting healing environment.

Still in its beginning stages, the program is being rolled out in the Norris Inpatient Tower Lobby and 6-East, where pups will make weekly visits with patients and families. The Patient Experience Department is facilitating the program, and administrators hope to expand it to other areas of the hospital in the future.

"I can't say enough what an emotional boost this is providing to everyone—from our patients to our staff," said Karen Chapman, hospitals associate administrator

of safety and support services, who helped lead the initiative. "Hospitals can be stressful places. These dogs bring a sense of warmth and compassion that really changes the environment and provides a more holistic approach to healing."

The USC Division of Occupational Science and Occupational Therapy initially approached the hospitals with the idea of a pet therapy program last year, according to Chapman. It is a service provided at several other area hospitals, including Los Angeles County + USC Medical Center, Hollywood Presbyterian Medical Center, Kaiser Foundation Hospital—West LA, Kaiser Sunset and St. Vincent Medical Center.

After forming a committee to work out the details, Keck Hospital connected with Love On 4 Paws, a Los Angeles-based nonprofit organization that provides

controlled, animal-assisted therapy. All of their dogs are screened, trained and certified, and strict guidelines ensure the animals are safe and immunized.

At Keck Hospital, the program will be provided only in clinically appropriate areas. For example, dogs will not visit critical care or transplant units, and will not visit with high-risk patients, such as those with allergies or in isolation. Coordinators will work closely with physicians and staff to identify patients who would be suitable and interested in a pet therapy visit.

"This is really about going that extra mile for our patients—providing one more service that might help lift their spirits while in our care," said Sevanne Sarkis, administrative director of patient experience.

For questions about the program, call Chapman at (323) 442-8862.

USC scientists make key colorectal cancer discovery

By Martin Booe

In an article published in the online scientific journal *Nature Genetics*, the Keck School of Medicine of USC Epigenome Center reports a significant breakthrough in cancer research expected to have a long-term impact on both the diagnosis and treatment of cancer.

In the new study, using a cutting-edge sequencing technique, the center's research team is one of the first groups to profile the complete methylome from a clinical colon tumor sample—in other words, the complete methylation profile of the tumor at the smallest unit of the tumor's genetic information.

"This research represents a huge step forward in identifying the specific genetic instructions that a cancer cell is interpreting," said Benjamin P. Berman, who led the study. "It brings the cancer research community closer to our goal of providing treatment that is more specific, more personalized and more effective."

The paper also represents a landmark sequencing study for the

See **CANCER**, page 3

Method of cooking fish influences its ability to deter prostate cancer

By Alison Trinidad

New research from the Keck School of Medicine and Cancer Prevention Institute of California (CPIC) has found that eating salmon and other dark, fatty fish may decrease the risk of developing prostate cancer, while consuming flounder and other white, lean fish may increase the overall risk. It depends on how the fish is cooked. Previous studies have emphasized the health benefits of dark fish—rich in omega-3 fatty acids—linking their consumption to the prevention of various diseases.

“One would expect eating dark and oily fish would be beneficial in preventing prostate cancer, but that protective effect seems lost if fish are cooked with high-temperature methods, in particular pan-frying. Similarly, diets high in lean, white fish seem to mostly increase risk when the fish is pan-fried, and appear to offer no protective benefit when cooked using other methods,” said Mariana Stern, associate professor of preventive medicine at the Keck School.

Stern led the analysis, “Fish intake, cooking practices, and risk of prostate cancer: results from a multi-ethnic case-control study,” which appears online in the journal *Cancer Causes & Control*. It is the first study to show that fish type and its method of cooking may be relevant in terms of protecting against or increasing the risk of prostate cancer, Stern added.

In the United States, more than 240,000 men are diagnosed annually with prostate

cancer and about 33,720 die from the disease, according to the National Cancer Institute.

According to the Prostate Cancer Foundation, there are no proven strategies for preventing the disease, but changes in diet and lifestyle may reduce the risk of disease progression.

The researchers analyzed data from nearly 3,000 men who participated in the California Collaborative Prostate Cancer Study in the Los Angeles and San Francisco Bay areas. Sue A. Ingles, associate professor of preventive medicine at the Keck School, and Esther M. John of the CPIC headed that collaborative project. Study participants completed a comprehensive survey that included questions about the amount and types of fish they consumed on a weekly basis and how the fish was cooked. More than 60 percent of the men were diagnosed with advanced prostate cancer.

The analyses found that diets high in dark fish like salmon and mackerel reduced the risk of prostate cancer if the fish were cooked at low temperatures, like baking or boiling. This effect disappeared when the fish was cooked at high temperatures, such as broiling, grilling or pan-frying.

Surprisingly, men who ate two or more servings per week of white fish cooked using high-temperature methods were



Mariana Stern

twice as likely to develop advanced prostate cancer as men who never ate any fish. The study found no association between cancer and diets high in white fish cooked using low-temperature methods.

The study also noted that high intake of deep-fried fish, such as fish sticks and fish sandwiches, was linked to an increased risk of prostate cancer among Hispanic men, but not among non-Hispanic whites or African-Americans, who reported the highest intake of fried fish of any ethnic group studied.

Although researchers do not know what causes the disparities they observed, they believe that carcinogens may form while cooking fish at high temperatures, harm from which may be negated by the omega-3 fatty acids in dark fish. Alternatively, given that white fish absorbs more oil than dark fish when pan-fried, this cooking method could alter the ratio of good fats to bad ones.

“It’s too early to make any dietary recommendations but, given the few known risk factors for prostate cancer, the results of this study emphasize that diet may be a relevant modifiable factor for prostate cancer risk,” Stern said.

Co-authors include Amit D. Joshi, who received his Ph.D. in molecular epidemiology from the Department of Preventive Medicine at the Keck School; Ingles of USC; CPIC’s John and Jocelyn Koo, also of the CPIC.

‘One would expect eating dark and oily fish would be beneficial in preventing prostate cancer, but that protective effect seems lost if fish are cooked with high-temperature methods.’

—Mariana Stern, associate professor of preventive medicine at the Keck School

In an uncertain funding climate, strong grant writing skills are paramount

By Amy E. Hamaker

Grant writers will likely face challenges in the coming year thanks to possible cuts in the National Institutes of Health (NIH) budget, said Elizabeth Fini, vice dean for research at the Keck School of Medicine of USC, at a Faculty Town Hall held at Aresty Auditorium.

According to Fini, Lewis-Burke Associates, a government relations firm located in Washington, D.C., has noted that NIH’s budget for 2012 and 2013

may see drastic cuts due to the Congressional “Super Committee’s” failure to come to terms on deficit reduction. A panel of USC faculty members offered several writing tips to faculty to help them prepare grant submissions in today’s harsher financial climate:

Focus on the significance of the study. Today, reviewers look for grant proposals that focus on the significance and impact of the study, rather than simply on the approach. Because of this, it

can be difficult to get grants renewed if they contain only incremental advances or if there hasn’t been a great deal of visible impact. Grant writers might shorten their proposals to give reviewers less chance to focus on approach, and cover easy criticisms early on.

Show reviewers how you think. Reviewers may not know an investigator if he or she is not a star in the field. Writers must show themselves to be independent (published from their own labs) and

attend meetings to become known by reviewers. Panel members suggested using the biography sketch portion of the proposal to show strengths and to give an alternative approach to the research—for instance, what will you do if the result is different from what you predict will happen?

Explain field-specific terminology. Reviewers of a particular proposal may not know the field discussed or its terminology. Use the background section to fill gaps in reviewer knowledge.

Write well. To catch reviewers’ attention, they must be engaged from the very first sentence. Create a tight, specific aims page—tell reviewers very explicitly what ends are expected at the conclusion of the research.

Panel members warned writers against shortchanging writing time and suggested having someone read a first draft of the proposal at least one month before submission. Also, writers must understand

the online review process and that reviewers may not be as engaged as if the grant were reviewed in a sitting study section.

Panel members at the Dec. 5, 2011, meeting included Zea Borok, professor of medicine, biochemistry and molecular biology; David Conti, associate professor, division of biostatistics, Department of Preventive Medicine; Brent Polk, chair of pediatrics and professor of biochemistry and molecular biology; Sarah Hamm-Alvarez, chair and associate dean for research affairs, USC School of Pharmacy, and associate professor of physiology and biophysics; Deborah Johnson, professor of biochemistry and molecular biology; Robert Maxson, professor of biochemistry and molecular biology; Michael Stallcup, chair, Department of Biochemistry and Molecular Biology; and Henry Sucoy, associate professor of cell and neurobiology.

Staff Achievement Award nominees sought

All members of the USC community are invited to submit nominations for the President’s Award for Staff Achievement.

The award is presented annually to a current, full-time member of the staff who has made outstanding contributions to the enhancement of USC.

The award is presented by President Nikias each spring at the Staff Recognition luncheon.

The deadline for 2012 nominations is March 2. For more information, visit www.usc.edu/dept/hr/saa.

The Weekly

Next Issue: Feb. 17

The Weekly is published for the faculty, staff, students, volunteers and visitors in the University of Southern California’s Health Sciences Campus community. It is written and produced by the Health Sciences Public Relations and Marketing staff. Comments, suggestions and story ideas are welcome. Permission to reprint articles with attribution is freely given.

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CANCER: USC study elucidates epigenetic components of colon cancers

Continued from Page 1

USC Epigenome Center. The center was established in 2007 to bring innovative molecular and computational analysis techniques to the study of epigenetics. Center director Peter W. Laird is the paper's senior author.

The genome is the instruction manual for building all cells, and genome sequencing is the prominent focus of most current large-scale cancer mapping projects. While all cells within an individual have identical or very similar genomes, different cells "read" those instructions in a highly selective manner.

The sub-specialty of epigenomics seeks to analyze the unique interactions between

cells and their DNA, and is essential to understanding molecular biology of cancerous or diseased cells. Clinical cancer research focuses on DNA methylation, a biochemical process crucial to the development of organisms, because methylation information can be easily recovered from a broad range of tissue or blood samples, Berman said.

For this setup, "We sequenced the complete methylome of a colon tumor and matched adjacent tissue samples from the same patient," Berman said.

By comparing the tumor's methylome to normal colon tissue from the same individual, the group identified several important new classes of alteration.

Most importantly, they found that two common types of methylation changes, hypermethylation and hypomethylation, were linked to the physical three-dimensional organization of the cell nucleus, with those regions gaining alterations being mostly restricted to a specific compartment called the nuclear lamina. This nuclear organization plays a key role in turning specific genes on and off and therefore has important implications for the basic biology of cancer and the changes that take place during tumor growth. This basic mechanism provides important clues as to which aspects may be targeted therapeutically, according to Berman.

A second important finding was that methylome profiling could be used to monitor the state of an important class of DNA sequences called gene enhancers. Enhancers have a critical role in controlling the cell type specific expression level of genes, but have not been widely studied at the DNA methylation level. The USC Epigenome Center group is currently applying this new technique, called whole-genome bisulfite

Falling costs make sequencing easier

As sequencing time and costs decrease, the approach used in Berman's study could have clinical applications in the future, especially for personalized treatment. New sequencing technologies have resulted in a more than 10,000-fold decrease in the cost to sequence a human genome—from about \$70 million in 2005 to about \$5,000 now, according to Berman.

"We're looking for the cost to decrease even further, to \$1,000, which would put this technology within reach of large numbers of cancer patients," he said.

sequencing (WGBS), to a number of tumor types as part of The Cancer Genome Atlas consortium.

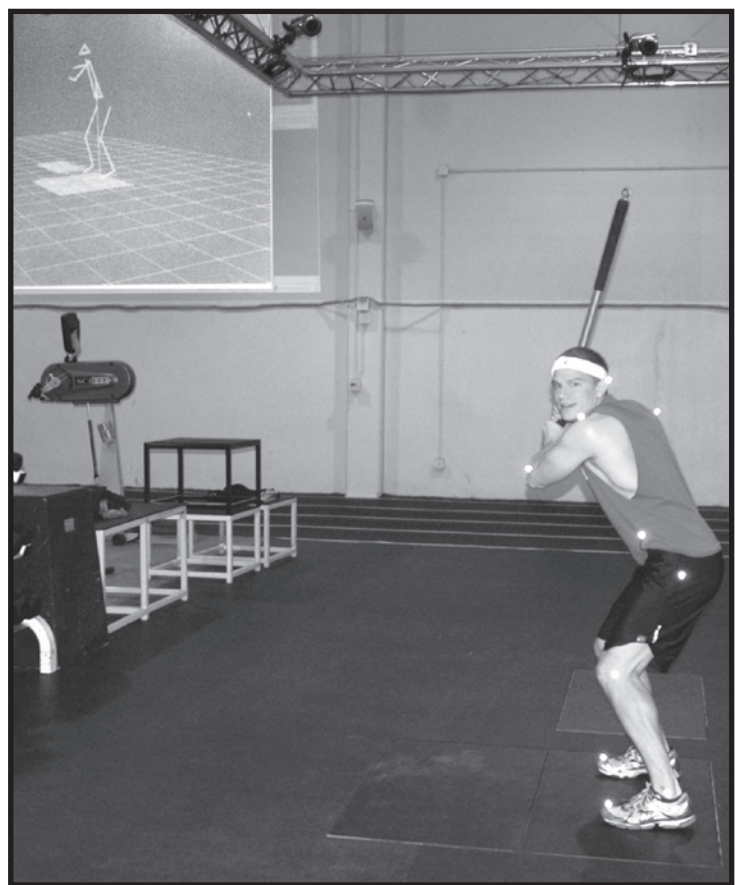
Berman credits the USC Center for High-Performance Computing and Communications for helping to analyze the many terabytes of genomic data involved.

The USC Epigenome Center, established under the leadership of Laird to perform large-scale epigenomics studies, was created with a \$10 million gift from the Kenneth T. and Eileen L. Norris Foundation, which also funded the methylation study. The center provides the epigenomics component of The Cancer Genome Atlas, an NIH-sponsored, multi-institution, national consortium whose mission

is to unlock the cellular underpinnings of cancer by comprehensively studying thousands of tumors.

Berman is one of the founding members of the USC Epigenome Center and an assistant professor in USC's new Division of Bioinformatics in the Department of Preventive Medicine. This new division was created in 2010 under the leadership of Paul D. Thomas to address the need for cutting-edge computational research in order to analyze and interpret high-throughput biomedical datasets.

The new paper is titled "Regions of focal DNA hypermethylation and long-range hypomethylation in colorectal cancer coincide with nuclear lamina-associated domains."



Art Aghourian

NEW HUMAN PERFORMANCE LAB—The Division of Biokinesiology and Physical Therapy at the Herman Ostrow School of Dentistry of USC recently celebrated the opening of the Human Performance Laboratory, a joint effort of the division and the Competitive Athlete Training Zone (CATZ). The new exercise and rehabilitation research lab is housed in the 14,000-square-foot CATZ facility at Huntington Hospital in Pasadena. CATZ, a leader in fitness and performance training for people of all ages, provides physical therapy rehab, a senior fitness program and sports performance training. Above, Rich Peterson, a doctor of physical therapy student, demonstrates the use of motion analysis equipment at the new lab.

CIRM awards CHLA \$2.5 million for stem cell research training

A three-year extension of a major training grant from the California Institute of Regenerative Medicine was recently awarded to the Developmental Biology and Regenerative Medicine Program at The Saban Research Institute of Children's Hospital Los Angeles.

The \$2.5 million grant will fund an ongoing stem cell training program for postdoctoral scientists and medical fellows.

"Developmental biology and regenerative medicine is one of our main scientific priorities. Stem cell-based therapies show tremendous promise for treating pediatric conditions, that may also lead to cures for later-in-life diseases," said Brent Polk, chair of the Keck School of Medicine Department of Pediatrics and director of The Saban Research Institute.

Over the last six years, the CIRM grant has already funded the training and career development of several young investigators and they, in turn, have made significant medical discoveries.

Among the findings, investigators have pinpointed how the early-stage human embryo organizes stem cells for particular functions in the body. With this information scientists can now understand how blood vessels direct the formation of organs from these stem cells. Additionally, stem cells are being isolated from amniotic fluid and show promise for therapeutic purposes. These findings shed light on new theories for healing and regenerating the damaged tissues of several vital organs.

Fellows participating in the training grant also have the opportunity to incorporate the larger ethical issues into their work with embryonic and other stem cells. A steering committee has incorporated medical ethics education into the program to promote awareness of the ethical, legal and societal implications for the emerging stem cell-based therapeutic applications.

The Weekly NEWSMAKERS

A Feb. 5 article in *The Washington Post* quoted **Andrea Hricko**, associate professor of preventive medicine at the Keck School, about the potential effects of a government study on the health risks associated with diesel fumes.

PBS News' Charlie Rose interviewed **David Agus**, professor of medicine at the Keck School, about his new book, *The End of Illness*, on Feb. 3. Agus said that inflammation plays a large part in causing illness, and healing it can require solutions such as walking more during the day, wearing comfortable shoes and taking meals at the same time every day. Comedy Central's *The Daily Show*, *CBS This Morning* and

CBC Radio's *The Current* (Canada) also interviewed Agus about his book.

A Feb. 3 story by My Health News Daily quoted **Richard Paulson**, professor of clinical obstetrics and gynecology at the Keck School and director of USC Fertility, about attitudes toward older women becoming pregnant. "I think society has become comfortable with [alternative] parent situations," Paulson said.

A Feb. 2 story on *ABC News* quoted Anne Peters, professor of clinical medicine at the Keck School and director of the USC Westside Center for Diabetes, about pre-diabetes not

being recognized by many primary care doctors.

A Feb. 1 broadcast on KPCC-FM highlighted research by **Penina Segall-Gutierrez**, assistant professor of clinical obstetrics and gynecology, and family medicine at the Keck School, that determined that Depo-Provera, an injection-delivered contraceptive, may put obese women at higher risk of diabetes.

A Feb. 1 blog post on The Guardian (U.K.) highlighted research by **Robert Kloner**, professor of medicine, linking an increase in cardiac deaths to the timing of the Super Bowl, and quoted

him on the subject. *Smart Money* also referred to Kloner's research.

A Jan. 31 story on *Annenberg TV News* reported on the **Keck Medicine Initiative** and \$150 million gift from the W. M. Keck Foundation, both of which were celebrated at a special event at USC Health Sciences Jan. 30.

A Jan. 30 article in *The New York Times* quoted **Joel Aronowitz**, clinical assistant professor of plastic surgery at the Keck School, about his specialty. "A doctor may be good and well trained in his or her specialty, but it takes more than a weekend seminar to achieve mastery in plastic surgery," he said.

Calendar of Events

This Calendar of Events is also online at www.usc.edu/hscalendar for the Health Sciences Campus community

Monday, Feb. 13

6 p.m. Medical Monday Lecture Series. "Asthma: A Chronic Lung Disease that Inflames and Narrows the Airways," Edward Hu, USC. San Marino Crowell Library. Info: (323) 226-6571

Tuesday, Feb. 14

Noon. Women in Management Guest Speaker Series and Luncheon. "Understanding Power and Projecting Confidence," Florence Clark, USC. NRT LG503/504. Cost: \$15 members, \$18 non-members and guests. Info: (323) 865-0669

Wednesday, Feb. 15

3 – 5 p.m. Center For Excellence in Research Workshop. "Developing Funded Research Programs," Randolph Hall, USC. NML West Conference Rm. Info: (213) 740-6709

Friday, Feb. 17

8:30 a.m. Surgical Grand Rounds Chief Resident Presentation. "Gallbladder Cancer: Here and Now," Ziqing Wang, USC. DOH 1st Floor Auditorium. Info: (323) 442-2506

Noon. Medicine Grand Rounds. "Transcatheter Valve Implantation," Azadeh Beheshtian, USC. IPT Conference Rm. B. Info: (323) 226-7556

Tuesday, Feb. 21

11 a.m. Keck Hospital Guild of USC Speaker Series and Luncheon. "Knowing Your Numbers: Risk Factors and Prevention of Heart Disease in Women in the 21st Century," Helga Van Herle, USC. DEI 3rd Floor Auditorium. Luncheon following program: \$25. Info: (323) 254-0600

Wednesday, Feb. 22

4 p.m. USC Levan Institute For Humanities and Ethics Annual Distinguished Lecture. "Know Thyself Origins, Identity, Ethos, Authenticity," Nikki Giovanni, world-renowned poet. UPC: TCC The Forum. Info: (213) 740-5499

Friday, Feb. 24

8 a.m. Department of Pathology and Laboratory Medicine Grand Rounds. "HistoMosaic: A Novel PCR-Based Technique for Tissue Analysis," Emil Kartalov, USC. NOR 7409. Info: (323) 442-1180

8:30 a.m. Surgical Grand Rounds Visiting Professorship Lecture. "Mentorship: The Critical Investment in the Future of Academic Surgery," Michael Bentz, University of Wisconsin. DOH 1st Floor Auditorium. Info: (323) 442-2506

Noon. Medicine Grand Rounds. "Elevated Troponins in Non-Cardiac Disease vs. Timing of Treatment for Endocarditis," Ronald Garcia, USC. IPT Conference Rm. B. Info: (323) 226-7556

Saturday, Mar. 3

6 p.m. KSOM Medical Faculty Family and Friends and the Salerni Collegium Alumni Assoc. Annual Scholarship Benefit Dinner. "Miracles are Happening Every Day," honoring Jim and Mindy Halls, Vaughn and Julie Starnes, and the 2012 Scholarship Recipients. The Jonathan Club. Cost and information: <http://keck.usc.edu/scholarshipdinner>

Wednesday, Mar. 7

3 p.m. Nephrology Lecture. "Showing Nephropathy Progression: New Twists on Old Ideas," George Bakris, University of Chicago. BCC 101. Info: (323) 226-7307

Wednesday, Mar. 21

7:30 a.m. – 4 p.m. Nurses of USC Critical Care Symposium. Speakers include Carol Jacobson, Karen Marzlin and Cindy Webner, Cardiovascular Nursing Education Associates. NRT Aresty Auditorium. Registration and Info: (323) 442-8660

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. 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.

FDA panel endorses device used at USC to treat heartburn

A U.S. Food and Drug Administration (FDA) advisory panel has endorsed approval of a novel device to treat severe acid reflux. The device was tested in clinical trials at USC.

John Lipham, associate professor of surgery at the Keck School of Medicine, led clinical investigation of the device as part of his ongoing work to find alternative ways to treat gastroesophageal reflux disease (GERD), also known as heartburn. USC was one of 15 sites across the country—one of only two in California—to study the device.

"This device is a huge advance for the treatment of reflux, which affects millions of people in the U.S.," Lipham said. "In fact, I have a list of patients waiting for it to be implanted."

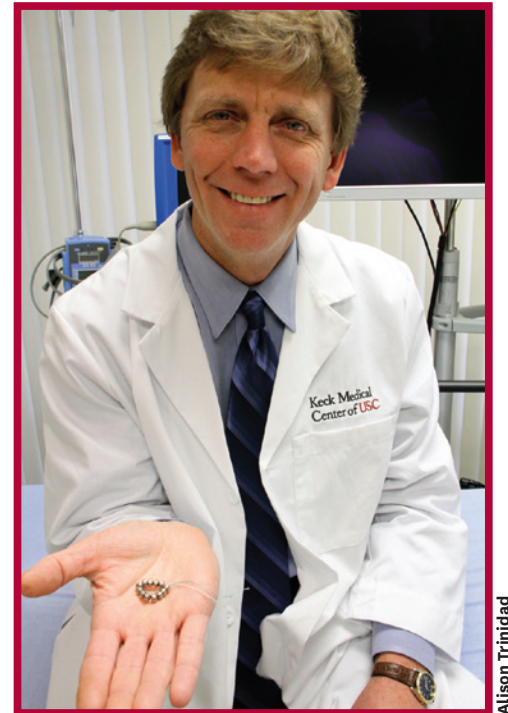
The LINX Reflux Management System, manufactured by Minnesota-based Torax Medical Inc., is like a bracelet made up of magnetic, titanium beads implanted around the end of the esophagus, where the lower esophageal sphincter is located. The lower esophageal sphincter is the valve that prevents reflux, and GERD develops when this valve is weakened.

Implantation of the device is potentially an outpatient procedure that can be completed in 15 to 20 minutes, Lipham said.

Lipham noted that the LINX device is best for patients with mild to moderate reflux that cannot be adequately controlled by medication or for patients who do not want to take medication to manage the disease. More than 60 million Americans experience heartburn at least once a month, and some studies have suggested that more than 15 million experience

heartburn symptoms every day, according to the American College of Gastroenterology.

Traditionally, reflux disease is treated using a surgical procedure called a Nissen fundoplication, which involves recreating the esophageal sphincter. While fundoplication is recommended for those with severe reflux, it is a complicated procedure that prevents the ability to belch or vomit and often leads to



John Lipham, associate professor of surgery at the Keck School of Medicine of USC, holds the LINX Reflux Management System. The device, under review by the FDA, is designed to treat gastroesophageal reflux disease.

bloating or gas problems.

The new LINX device, which has been available in Europe for about two years, is designed to augment the patient's native sphincter and return it to a competent valve. The magnetic beads open with pressure, allowing patients to belch, vomit and swallow normally. By allowing patients to belch normally, the device allows air to escape from the stomach, preventing gas and bloating issues.

Global Health multidisciplinary case competition set for Feb. 27

The USC Institute for Global Health will hold its first multidisciplinary global health case competition beginning late this month.

This competition is designed to engage students from diverse backgrounds in real-world global health challenges by introducing them to diverse factors that impact decision-making.

Teams will have five days to analyze a global health issue and develop a presentation that assesses current interventions and proposes innovative strategies for addressing the issue.

The case will be announced Feb. 27, and students will present March 2 from 11 a.m. to 5 p.m. at the Soto Street Building (SSB) 114.

The winning team will travel to Atlanta, to represent the University of Southern California at the Emory University Global Health Case Competition on March 31, and compete for the first-place prize of \$3,000.

Teams must be comprised

of four to six students (undergraduate and/or graduate) from three or more USC schools.

Students may register as individuals and be assigned to a team, or can assemble their

own team provided that three or more USC schools/disciplines are represented.

To register, email the registration form at <http://tinyurl.com/6nduy2y> to iefflores@usc.edu by Feb. 17.

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Call the Emergency Information Phone: (213) 740-9233 The emergency telephone system can handle 1,400 simultaneous calls. It also has a backup system on the East Coast.

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.