

Keck School fetes career of environmental health expert John Peters

By Sara Reeve

John Peters, Hastings Professor and director of the division of environmental health in the Keck School of Medicine's Department of Preventive Medicine, received a standing ovation from the audience at a Feb. 24 forum

recognizing his contributions in the advancement of environmental health over a 30-year career.

The event, held at the Harlyne Norris Cancer Research Tower's Aresty Auditorium, presented the highlights of Peters' long career and featured presen-

tations by several of Peters' colleagues from USC and other institutions, including Harvard, Brigham Young University and the University of Massachusetts, Lowell.

Jon Samet, professor and Flora L. Thornton Chair of the Department of

Preventive Medicine, said that throughout Peters' career, "He has remained quietly—perhaps too quietly—in the background, as work that he started led to major findings and supported the development of young researchers.

"Some of these accomplishments include the first research on smoking and the health of young adults—his doctoral dissertation, findings in pioneering studies of occupational lung disease in firefighters, granite workers and rubber workers, studies of leukemia and environment, and of course, the Children's Health Study," Samet said.

The Children's Health Study is a longitudinal study of respiratory health among children in 12 Southern California communities.

Keck School Dean Carmen A. Puliafito thanked Peters for his leadership and commitment to the school.

"It was a real privilege and pleasure to meet John Peters and have him be one of the first folks I met here," he said.

Puliafito also announced the formation of the John Peters Environmental Education Research Fund, which will help to continue Peters' work by supporting students and postdoctoral candidates researching environmental health. Persons interested in making a donation to the fund may contact Kavita Munjal at (323) 442-2358.)

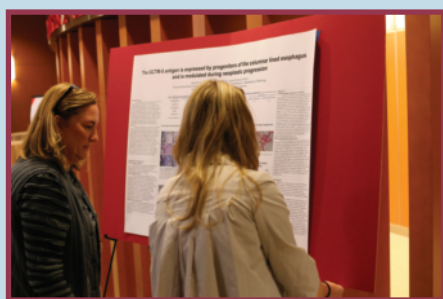
Attendees included many noted academic and community figures, including former Keck School deans Brian Henderson and Stephen Ryan.

Penny Newman, executive director for the Center for Community Action and Environmental Justice (CCAEEJ), a

See PETERS, page 2



Jon Nalick



GETTING STARTED IN RESEARCH—The Keck School of Medicine hosted the Dean's Research Forum on March 2 to invite medical students to participate in a variety of current research projects. Clockwise from above: Michael Goran, professor of preventive medicine, physiology and biophysics, discusses his work on diabetes and obesity; event participants peruse a poster detailing results from a pathology study; Dean Carmen A. Puliafito (at left) discusses with colleagues the educational and experiential value of student participation in research.

NIH awards School of Pharmacy scientist \$1 million for work on brain chemistry

By Kukla Vera

Jean Shih, the Boyd P. and Elsie D. Welin Professor in Pharmaceutical Sciences, received a \$1.01 million grant that continues her research support from the National Institute of Mental Health for the next five years.

Shih's work focuses on monoamine oxidase, also known as MAO, an enzyme that regulates brain chemicals—serotonin, dopamine and norepinephrine. These chemicals help cells communicate, affecting brain functions related to mood and behavior.

Shih's findings have garnered international attention as her lab was the first to clone human MAO-A and MAO-B genes and to unravel their structures, functions and regulations. This work is an important building block in the development of therapeutics for

aggression, anxiety and depression.

"The continuing support of the NIMH will allow us to study the developmental and environmental factors that impact brain function and behaviors.

Ultimately, this will help us better identify and understand the most critical periods for prevention and treatment of these brain disorders," said Shih, whose work has been at the forefront of neuroscience research with 32 years of consecutive funding from the National Institutes of Health.

The news about the award was complemented by the announcement that Shih will receive the Lifetime Achievement Award of the Society of

Chinese Bioscientists in America. This award will be presented at the Biennial International Symposium of the society this summer in Taipei. Shih is a founding member of the society.

Among Shih's numerous honors are two MERIT awards from the National Institutes of Health, recognizing her distinguished scientific achievement in the research community. In 2007, she was named a fellow of the American Association for the Advancement of Science.

Shih is a professor in the Department of Pharmacology and Pharmaceutical Sciences at the School of Pharmacy and in the Department of Cell and Neurobiology at the Keck School of Medicine of USC.



Jean Shih

AACP honors USC School of Pharmacy for 'transformative community service'

By Kukla Vera

The USC School of Pharmacy recently received the 2008-09 AACP Inaugural Award for Transformative Community Service at the American Association of Colleges of Pharmacy Interim Meeting Awards Ceremony in Arlington, VA.

The award, presented on Feb. 23, recognized the school's institutional commitment to addressing unmet community needs through education, practice and research.

Highlighting community service as an important element of the academic mission, this award honors institutions that serve as examples of social responsiveness on the part of the academic medical community.

Lucinda L. Maine, executive vice president and CEO of the AACP, said, "The key word in selecting the recipient of this new award is 'transformative.'

The lives of a broad and diverse population of people have been changed positively because of USC's mission-driven commitment to invest faculty and student resources on such projects."

The School of Pharmacy works with community partners to integrate clinical pharmacy services into their medical services, including hiring pharmacists on staff at safety-net clinics where pharmacist intervention improves health outcomes and quality of life.

An example of a successful collaboration is with QueensCare Family Clinics, where a critical aspect of the program is the medication therapy management component, a disease management approach that provides one-on-one pharmacist counseling to patients, resulting in more successful medication compliance and overall improved disease management.

In a health center where more than 60 percent of the patient population suffers from chronic diseases, the disease management component of the pharmacist's role can become a matter of life and death.

Supporters of the school's safety-net work include the QueensCare Family

Clinics, UniHealth Foundation, the Merck Company Foundation, JWCH Institute, and the South Central Family Health Center. The initial grant that started the project in 2002 was from the Department of Health and Human Services Health Resources and Services Administration.

"At USC, we're committed to giving back to our community. The School of Pharmacy's work in these clinics, as well as our health literacy projects, make it possible for us to directly impact the health of some of LA's most at-risk residents," said School of Pharmacy Dean R. Pete Vanderveen. "We've seen firsthand how our pharmacists have improved patient outcomes while saving precious health care dollars. To be honored for this commitment makes it even more rewarding."

Leading the effort and on hand to receive the award were Kathleen

Johnson, the William A. and Josephine A. Heeres Chair in Community Pharmacy and the chair of the School's Titus Family Department, and Mel Baron and

Steven Chen, both associate professors. At the ceremony, Dean Vanderveen spoke about the tremendous dedication of the community pharmacy group.

Unable to attend but mentioned as award recipients were Elizabeth Cervantes, Stephanie Iniguez and Cecilia Wu, clinical staff pharmacists at QueensCare Family Clinics. Also part of the award team are faculty members Jeff Goad, Edith Mirzaian and Mike Rudolph.

Previously, the school's work in safety-net clinics garnered the 2007 Pinnacle Award of the American Pharmacists Association Foundation and the 2008 Best Practices Award of the American Society of Health-System Pharmacists.

On Feb. 12 and 13, the School of Pharmacy hosted a national conference, "Developing Partnerships between Schools of Pharmacy and Safety-Net Clinics," attended by more than 30 schools of pharmacy and various clinical, government and association groups.

'We've seen firsthand how our pharmacists have improved patient outcomes while saving precious healthcare dollars. To be honored for this commitment makes it even more rewarding.'

**—School of Pharmacy
Dean R. Pete Vanderveen**



Veronica Jauriqui

John Peters (center), Hastings Professor and director of the division of environmental health in the Keck School of Medicine's Department of Preventive Medicine, appears at the event with his wife, Ruth, and Jon Samet, professor and Flora L. Thornton Chair of the Department of Preventive Medicine.

PETERS: Recognized for pioneering work

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Riverside, Calif.-based nonprofit organization working on environmental justice issues, hailed Peters and his colleagues for their work with community groups.

"Certainly we have seen the scientific research that John Peters has been involved in, and that is well documented," said Newman. "But what isn't documented are the thousands of human lives that he has helped make better."

Peters closed the event by acknowledging the work of many of his col-

leagues and his confidence in the future of the Department of Preventive Medicine. "I am happy to see at the end of my academic career that the university cares about the medical school, and has appointed a strong dean, and one who cares about the Department of Preventive Medicine. Proving it, Carmen has recruited the best new department head in the world, longtime friend and colleague, Jon Samet," said Peters. "I believe you are poised, with Jon and assembled colleagues, to stay number one indefinitely."

Heart Assn. funds USC research on arterial plaques

Ryan Hamilton wants to know if targeting energy levels in arterial cells can reverse high cholesterol and reduce plaque formation in the arteries.

And an American Heart Association fellowship is helping him find the answer with a two-year \$75,000 award as part of the American Heart Association Western States Affiliate Postdoctoral Fellowship Program, supporting promising new researchers as they begin careers in cardiovascular and stroke research.

"My research is aimed at understanding how changes in structure of 'bad cholesterol' can cause energy and antioxidant loss in arterial cells, resulting in heart disease," said Hamilton, a postdoctoral researcher at the USC School of Pharmacy. "When cell energy is increased, artery function improves."

Hamilton's previous studies found

that arterial cells with bad cholesterol had lower energy levels and a higher rate of cell death.

In the laboratory, Hamilton will continue this research by using alpha lipoic acid and acetylcarnitine in the cells to see if the agents can reverse or prevent these negative effects.

Hamilton's goal is to lay the foundation for the development of therapeutics that can prevent or reverse damage to the arteries, ultimately aiding in the treatment of heart disease.

Hamilton's research sponsor is Enrique Cadenas, the Charles Krown Alumni Professor and associate dean for research at the School of Pharmacy. His co-sponsor is Howard Hodis, the Harry Bauer & Dorothy Bauer Rawlings Professor of Cardiology and director of the Atherosclerosis Research Unit at the Keck School of Medicine.

Conference focuses on helping pediatric cancer patients navigate young adulthood

By Katie Neith

For many, the transition from teen to adult life is full of challenges. But for survivors of pediatric cancer, this particular time in life can present a wide array of questions and concerns. Luckily, there is a growing movement among young advocates and health care providers to build support programs aiming to aid in the transition of care from pediatrics to adult oncology and primary care.

A recent conference held at the USC Norris Comprehensive Cancer Center brought together experts in survivorship and young patients seeking advice in navigating the jump from pediatrics to adult care.

Held Feb. 7 in the Aresty Auditorium, Rise to Action-Los

Angeles (RTA-LA) welcomed young adult cancer survivors and their families to talk about the next stages of cancer care and life as a survivor.

According to David R. Freyer, medical director of the LIFE Survivorship and Transition Program at Childrens Hospital Los Angeles, who presented at RTA-LA, most childhood cancer survivors are healthy, have no serious medical problems resulting from the disease or their treatment and enjoy a very good quality of life.

However, the possibility of late effects from pediatric cancer treatments represents a continuing need for follow-up care into adulthood for the approximate 300,000 childhood cancer survivors in the U.S.

Freyer pointed to proper adult care

and survivorship follow-up as important early detection tools of any late effects.

"Survivor care is increasingly available and improving," said Freyer. "It's something that needs to occur. Survivors need to embrace it and start planning early. There's a lot that needs to move with the patient. When you hit 18, it's no longer appropriate to receive adult care in a pediatric environment."

More than 125 participants, which included survivors and their families and friends, attended the day-long conference made up of a series of plenary sessions and breakout discussions. Topics included health insurance, political activism, navigating care, fertility, employment and other issues that

survivors of pediatric cancer may encounter as they transition into adulthood.

At the end of the day, participants were treated to a closing reception and musical performance by Valerie Sun. Sun is a 27-year-old survivor of aplastic anemia who also gave an inspirational presentation during the conference about her struggles with cancer and how she found strength through advocacy. She graduated from USC in 2002.

The conference was organized by the Children's Cause for Cancer Advocacy, a non-profit organization, and co-sponsored by the USC Norris Comprehensive Cancer Center, Childrens Hospital Los Angeles and others.

Keck School surgeons develop new technology to treat gastroesophageal reflux

A new device to treat gastroesophageal reflux disease (GERD) is now in the second phase of clinical trials, in which the Keck School participates as well as serves as a training center for other institutions.

For a number of years, John Lipham, assistant professor of surgery, and Tom DeMeester, professor of surgery at the Keck School of Medicine, have been working on alternative ways to treat GERD.

"Reflux is known to cause adenocarcinoma of the esophagus," said Lipham. "Over the last 25 years, we have seen somewhere between a 400 and 600 percent increase in reflux caused esophageal cancer."

Traditionally, reflux disease is treated using a surgical procedure called a Nissen fundoplication, which involves recreating a sphincter—a muscle that constricts and relaxes as required for normal physiological functioning—at the end of the esophagus.

According to Lipham, USC has an approximately 90 percent success rate with entirely stopping the reflux.

"Although the success rates of the surgery are good, there are problems associated with this procedure," said Lipham. "One of the biggest problems is that it prevents the ability to belch or vomit and patients experience severe bloating and gas problems."

But with new technology called the Linx Reflux Management System, now being used in the department of surgery, the treatment of reflux disease has improved. The device is like a bracelet made up of magnetic 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.

The new device is designed to augment the native sphincter and return it to a competent valve. The magnetic beads open with a given 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 the gas and bloating issues.

"This is a much simpler procedure," said Lipham. "There is much less surgery involved to implant the device, making patient recovery quicker."

The Keck School was one of only two institutions in the United States to participate in the first phase of the Linx Reflux Management System clinical trial. According to Lipham, the trial showed excellent results with an approximate 75 percent success rate.

For more information on reflux disease, please call (323) 442-6814.

Online clinic's virtual patients designed to test dental students' diagnostic skills

By Beth Dunham

A new clinic located within the online universe of Second Life will give dental students the opportunity to test their logic and decision-making skills with interactive virtual patients.

Second Life is an extensive online world in which users create avatars in order to interact with the virtual environment as well as each other. Users also can create their own property and structures.

This capability was used to create the USC School of Dentistry Island, which

houses the virtual dental clinic and its patients.

The clinic's patients consist of chatbots, computer programs designed to respond to and mimic human conversation, said Glenn Clark, director of the Orofacial Pain and Oral Medicine Program with the USC School of Dentistry.

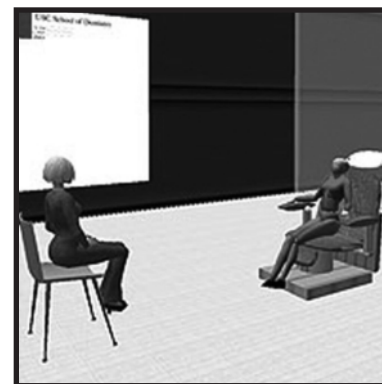
With a large question and answer bank written by Clark, the virtual patients can respond to nearly 400 different queries and have a variety of ailments, including lockjaw, oral lesions

and neuralgia.

The virtual dental clinic allows students to complete the entire patient care experience, from taking medical histories and ordering tests to diagnosing the problem and prescribing treatment. Students will be evaluated on how accurately and efficiently they treat their virtual patients, and each patient has a 30-minute time limit similar to a real-life dental appointment.

Points can be lost if a student does not complete the appointment in time, orders unnecessary tests or treatments, or misdiagnoses the problem.

"The data is all there, but the students have to make sense of the data,"



Screenshot of a virtual patient interview

Clark said. "If they don't hone in on the good questions, they'll lose points."

The virtual clinic allows for easy evaluation and also lets students log on at their leisure and practice treatment at any time. While every dental student completes a one-week rotation

observing faculty members in the Orofacial Pain and Oral Medicine Clinic, the virtual clinic will safely give them experience addressing complex orofacial problems independently.

"Dental students are usually not the primary doctor for these types of problems, but their knowledge isn't really tested if they are simply observing me treat a patient," Clark said.

In Case of An Emergency...

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.

Call the Emergency Information Phone:
213-740-9233

The emergency telephone system can handle 1,400 simultaneous calls. It also has a back up system on the East Coast.

Calendar of Events

The HSC Calendar is online at www.usc.edu/hscalendar

Saturday, Mar. 7

8:30 A.M. "Contemporary Stereotactic Radiosurgery of the Central Nervous System: A Primer and Update," Various speakers. Los Angeles Marriott Downtown. Info: (323) 442-2555

Monday, Mar. 9

NOON. "NEPHSAP: Acute Renal Failure (2008)," Mitra Nadim, USC. GNH 4420. Info: (323) 226-7307

NOON. "Transplant Pathology Board Review—Part III," Michael Koss, USC. GNH 4420. Info: (323) 226-7307

Wednesday, Mar. 11

11:30 A.M. "Damnably Hard, Agonizingly Protracted, and Utterly Vital: Health Care Reform in the United States," Henry Aaron, Brookings Institution. UPC: Andrus Gerontology Ctr. Info: (213) 740-1354

NOON. "Type 2 Diabetes Prevention and Early Treatment," Thomas Buchanan, USC. GNH 4420. Info: (323) 226-7307

Thursday, Mar. 12

NOON. Cellular Homeostasis Lecture Series. "A Novel Role for Caspase-8 In Initiating a Wound Healing Response," Colin Jamora, UC San Diego. MCH 156. Info: (323) 442-3121

Friday, Mar. 13

11 A.M. Hematology Grand Rounds. "CMV in Hematopoietic Stem Cell Transplantation: Optimizing Strategies for Disease Prevention," Drew Winston, UCLA. IPT C2J103. Info: (323) 865-3950

NOON. "Vectorborne Diseases of California," Rachael Civen, Dept. of Public Health. IPT Conference Rm. B. Info: (323) 226-7504

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 HSC Weekly, KAM 400 or fax to (323) 442-2832, or e-mail to ebalauw@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.

Monday, Mar. 16

NOON. "Edema & Diuretics V," Mirosław Smogorzewski, USC. GNH 4420. Info: (323) 226-7307

NOON. Basic Science Seminar. "Functional Genomics, Experimental Models and Cancer," William Hahn, Harvard. NOR 7409. Info: (323) 442-1144

4 P.M. "Research in Progress," Jacob Ahdoor, USC. GNH 4420. Info: (323) 226-7307

Wednesday, Mar. 18

NOON. "Plasmapheresis," Melanie Osby, Hemocare Corp. GNH 4420. Info: (323) 226-7307

NOON. "Structural Basis of Protein Phosphatase 1 Regulation," Wolfgang Peti, Brown Univ. ZNI 112. Info: (323) 442-3219

Thursday, Mar. 19

4 P.M. ZNI Seminar. "Serotonin, Fetal Brain Wiring and Materno-fetal Interactions," Alexandre Bonnin, Vanderbilt Univ. ZNI 112. Info: (323) 442-2144

Friday, Mar. 20

NOON. Pharmacology and Pharmaceutical Sciences Seminar. "Endosomal Protein Trafficking Hermansky-Pudlak Syndrome and Schizophrenia," Esteban C. Dell'Angelica, UCLA. PSC 104. Info: (323) 442-1445

4 P.M. USC Norris Cancer Hospital National Colorectal Cancer Awareness Month Reception. Aresty Conference Ctr. Info: (323) 865-3873

Monday, Mar. 23

NOON. "Hemophagocytic Lymphohistiocytosis," Stratos Christianakis, USC. GNH 6441. Info: (323) 442-1946

USC opens chapter of Associated Students of Pharmacy

The USC chapter of the Student National Pharmaceutical Association has been officially recognized by the Associated Students of Pharmacy.

The student affiliate of the National Pharmaceutical Association dedicates itself to minority representation in pharmacy and other health care fields. The new chapter will play a part in the School of Pharmacy's diversity initiative and reach out to current and prospective students of color.

The chapter will take part in outreach activities such as the "Operation Immunization" campaign, "Power to End Stroke/Smoking Cessation" and "Remember the Ribbon," a national program aimed at promoting AIDS education. The chapter also will join forces with the Pharmacy Explorers Program, launched by the school in November, to introduce area high school students to careers in pharmacy.

Members of the chapter will have the opportunity to develop leadership skills, promote active participation in national health care issues, develop the role of the minority health professional, and increase community awareness and understanding of diseases. In addition, members are eligible to receive scholarships from the Student National Pharmaceutical Association.

Officers of the USC chapter include Pharm.D. students Yazmin O'Quinn, president; Chandra Smallwood, president-elect; Ryan Martinez, secretary; Karla Martinez, treasurer; and Cynthia Mercado, historian.



Marketing materials for the campaign has included student artwork (above) from the USC Family of Schools.

Applications sought for Neighborhood Outreach Grants

Applications are now being accepted for USC Neighborhood Outreach grants, which are funded by USC faculty and staff contributions to the annual USC Good Neighbors Campaign.

HSC faculty and staff may apply for grants to create programs or assist current programs that serve the communities surrounding both USC campuses. Programs must clearly reflect a partnership between USC and the community. Examples include school or nonprofit organizations.

For information on the application process, visit www.usc.edu/ext-relations/gnc/grant_application. The application deadline is March 31.

HSC NEWSMAKERS

Complete listing at: www.usc.edu/uscnews/usc_in_the_news/

A Feb. 26 *Wall Street Journal* article quoted **Songtao Shi** of the USC School of Dentistry about the discovery of the gene responsible for controlling tooth growth. An Associated Press article on the discovery ran widely.

A Feb. 25 *Wall Street Journal* article noted that Tenet Healthcare Corp. has agreed to sell USC University Hospital and USC Norris Cancer Hospital to USC. The sale was also noted in Associated Press stories that ran in the *New York Times*, *Los Angeles Times* and the *Los Angeles Business Journal*.

A Feb. 23 *New York Times* article highlighted research by epigenomic expert and USC Norris Comprehensive Cancer Center director **Peter Jones** in a story on epigenomics, the study of a second layer of information embedded in proteins that package the DNA of a genome.

A Feb. 23 *Los Angeles Times* article quoted CHLA pediatrician **Wilbert Mason** about Haemophilus influenzae type b (Hib), a childhood disease that is making a comeback.

A Feb. 19 WebMD article highlighted a USC study on coffee consumption which found that the more cups of coffee participants drank, the less likely they were to report ever being diagnosed with a stroke.

A Feb. 20 *Los Angeles Times* article quoted gerontologist **Freddi Segal-Gidan** about an elder abuse case.

A Feb. 12 *Philadelphia Inquirer* article quoted pathologist **Darryl Shibata** about how the evolutionary history of a cancer may eventually inform doctors on the best possible treatments.

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