

Published for the Students & Employees of the USC Health Sciences Campus

research pro-

grams, with

focus on inter-

disciplinary col-

laboration; grow-

ing the depart-

ment's already

excellent resi-

dency training

program; and

creating new

teaching pro-

grams and tar-

geted symposia

to position USC

VOLUME 14, NUMBER 36

DECEMBER 5, 2008

Keck School names Gill as chair of Department of Urology

weekly

By Cheryl Bruyninckx

After a national search, Dean Carmen A. Puliafito has appointed Inderbir S. Gill as chair of the Catherine and Joseph Aresty Department of Urology, effective Feb. 1, 2009. He will also be the director of the newly created USC Institute of Urology and will serve as associate dean for clinical innovation at the Keck School of Medicine.

"Dr. Gill is an outstanding addition to our faculty, particularly during this exciting time of expanding our clinical enterprise," said Puliafito.

Gill comes to USC from Cleveland Clinic, where he is professor and chairman of the Department of Urology, which is ranked number two in urology, according to U.S. News and World Report rankings.

He is also director of the Center of

Laparoscopic and Robotic Surgery and professor of surgery at the Cleveland Clinic Lerner School of Medicine at Case Western Reserve University.

As the incoming professor and chair of the Department of Urology, Gill has identified several goals including creating a world-renowned

USC Institute of Urology with regional satellites, providing an entire range of sub-specialization; further strengthening the department's already strong basic, translational and outcomes

as a leading edu-Department of Urology, beginning in February 2009. cational resource in the field of urology.

"USC is a world-class institution with a world-class urology department," said Gill. "I am most excited about creating the USC Institute of Urology with regional outreach programs.'

Widely acknowledged as the world leader in minimally invasive nephronpreserving surgery-saving the normal part of the kidney and removing only the tumor-for renal cancer, Gill has refined the techniques of laparoscopic and robotic partial nephrectomy and renal cryoablation, which destroys the tumor through the process of freezing. He and his team have now performed these procedures in more than 1,500 patients-more than any other surgical team.

Gill's team has pioneered a vast series of techniques on laparoscopic and robotic radical prostatectomy, and laparoscopic radical cystectomy. A cystectomy is the removal of the urinary bladder for patients with cancer.

See UROLOGY, page 3

Faculty take vision for the future of medicine to Beverly Hills

Inderbir S. Gill will lead the Keck School's

By Cheryl Bruyninckx

Sharing a new vision for the future of medicine at USC, a distinguished panel of faculty experts from the Keck School of Medicine spoke on Nov. 17 at the Regent Beverly Wilshire in Beverly Hills.

"There is a reason why we are here in Beverly Hills," said Carmen A. Puliafito, dean of the Keck School. "It has become very clear that reaching out into the community both west toward Beverly Hills and east toward Pasadena is an important part of our strategy going forward."

More than 125 friends of the Keck School of Medicine gathered to hear the panel of speakers moderated by Puliafito.

Five USC physicians and researchers made presentations about innovative advances in their areas of expertise:

• Vaughn A. Starnes, Hastings Distinguished Professor and chair of cardiothoracic surgery:

"Innovative Strategies in Cardiovascular Disease"

• Heinz-Josef Lenz, chair of the

Gastrointestinal Oncology Program and co-director of the Colorectal Center: "The Conquest of Colon Cancer"

• Mark S. Humayun, professor of ophthalmology, cell and neurobiology, and biomedical engineering at the Keck School of Medicine of USC, the Doheny Eye Institute and the USC Viterbi School of Engineering: "Restoration of Sight to the Blind"

• Francine R. Kaufman, distinguished professor of



Keck School Dean Carmen A. Puliafito (center) listens to Board of Overseers member Selim Zilkha (right) and his guest, Mary Hayley (left).

pediatrics and communications at the Keck School of Medicine and the Annenberg School of Communications: "A Focus on Preventing Childhood

> Diabetes" • Martin Pera, professor and founding director of the Eli and Edythe Broad Center for Regenerative Medicine and Stem Cell Research at USC: "Stem Cells and the Future of Medicine"

Puliafito closed the event with thanks for speakers and attendees.

"It's wonderful to have such a great audience for these outstanding speakers," said Puliafito. "I think you can really sense the excitement surrounding the innovative work that's going on at the Keck School, Childrens Hospital Los Angeles and our USC University and Norris Cancer Hospitals."

PHASES OF HOPE—"Clinical trials are the link between cancer and cures," says Anthony El-Khoueiry, assistant professor of clinical medicine - oncology, speaking Nov. 19 at a reception at the USC Norris Comprehensive Cancer Center. About 100 guests learned about clinical trials, heard from cancer survivors, and talked with clinical researchers about current projects.



© Steve Cohn Photog



USC Researchers Identify Novel Approach For Suppressing Prostate Cancer Development

By Meghan Lewit

Researchers at the Keck School of Medicine have found that inactivating a specific biomarker for aggressive prostate cancer blocks the development of prostate cancer in animal models.

Researchers say the upcoming study in the *Proceedings of the National Academy of Sciences*—now available online—may lead to a novel cancer therapy for humans.

"This research has far-reaching implications in a wide range of human cancers," said Amy Lee, the study's principal investigator and the associate director for basic research and holder of the Freeman Cosmetics Chair at the USC Norris Comprehensive Cancer Center. "It is a breakthrough study."

Prostate cancer is the most common cancer in men and develops through successive stages. The glucose-regulated protein GRP78 has been identified as a crucial entity in the development of prostate cancer by promoting cancer cell proliferation, mediating oncogenic signaling and protecting cancer cells against cell death resulting from the stress of tumor development, explained Lee, who is also professor of biochemistry and molecular biology at the Keck School.

By suppressing GRP78 expression or activity, the USC researchers found that they could block prostate cancer activation and development resulting from the loss of PTEN, a powerful tumor suppressor gene for a number of human cancers.

Researchers spent more than three years monitoring prostate cancer development in animal models that had been genetically engineered to have both the GRP78 and PTEN tumor suppressor genes inactivated. The research was conducted by Yong Fu, a Ph.D. candidate at the Keck School of Medicine and the first author on the study, in collaboration with Ph.D candidates Shiuan Wey, Miao Wang, Risheng Ye and Chun-Peng Liao, along with Pradip Roy-Burman, professor of pathology, biochemistry and molecular biology at the Keck School.

Future research should test the role of GRP78 in other types of cancer and isolate drugs that inhibit GRP78, Lee said. "To our knowledge, this is the first demonstration that inactivation of a specific molecular chaperone from the mouse prostate epithelial cells can potently block prostate cancer development and suppress the activation of AKT, which is a protein kinase that promotes cell proliferation and survival and is a major factor in many types of cancer," she said. "With the recent advances in identifying agents that suppress GRP78 expression, anti-GRP78 therapy may open up an entirely new approach to stop human cancer."

The study was funded by a grant from the National Cancer Institute that has been awarded to Amy Lee for the past 28 years. BRAND NEW DAY—As President-Elect Barack Obama prepares to take office in January 2009, how will his administration and a more liberal Congress affect federal support in science research? That was the topic of a special hour-and-a-half lecture hosted by the USC Office of Federal Relations on Nov. 19 in the Edmondson Faculty Center. Jennifer Grodsky, the office's executive director, joined consultants from Lewis-Burke Associates, including Michael Ledford (right), to discuss the impending changes affecting health and science research funding. The slides from the presentation can be accessed online at www.usc.edu/federal.



Nobel laureate Peter Agre to speak at USC on Dec. 12

Nobel laureate Peter Agre, professor of biological chemistry at the Johns Hopkins University School of Medicine and director of the Johns Hopkins Malaria Research Institute, will present "Aquaporin Water Channels: From atomic structure to malaria," on Friday, Dec. 12, at the Aresty Conference Center in the Harlyne J. Norris Cancer Research Tower.

The presentation, which begins

at noon, is free and open to the public.

Agre was awarded the 2003 Nobel Prize in chemistry by the Royal Swedish Academy of Sciences. The academy recognized him for his laboratory's 1991 discovery of the long-sought "channels" that regulate and facilitate water molecule transport through cell membranes, a process essential to all living organisms. The discovery of the water channel, dubbed "water pore" or aquaporin, ushered in a new and fundamental understanding of malfunctioning channels associated with many diseases of the kidneys, skeletal muscles and other organs.

Agre's presentation is sponsored by the Keck School's Department of Medicine and the USC Will Rogers Institute Pulmonary Research Center.

School of Dentistry works to rebuild tooth enamel

By Beth Dunham

Tooth enamel has remarkable resistance to wear and tear that is not matched by materials currently used for dental repair and restoration. Yet researchers at the School of Dentistry's Center for Craniofacial Molecular Biology have taken a promising step toward one day recreating natural enamel on tooth surfaces.

Associate Professor Janet Oldak, along with researchers Yuwei Fan and Zhi Sun, published the study, "Controlled remineralization of enamel in the presence of amelogenin and fluoride," in the Nov. 8 issue of *Biomaterials*.

For the study, third molars ("wisdom teeth") extracted from patients at the USC School of Dentistry were sliced and etched with acid to remove debris, dissolve minerals and model tooth decay. The slices were then placed in a biomimetic solution containing fluoride and calcium phosphate, ions needed to form hydroxyapatite, the mineral component of tooth enamel.

By adding amelogenin, an extracellular protein found in developing tooth enamel, and varying its concentration within the solution, Oldak and her team found the optimal concentrations for the formation of organized hydroxyapatite crystal layers.

Scanning electron microscope images of the tooth

samples revealed progressively more elegant bundles of the nano-rods attached to the etched enamel surface.

The goal of reconstructing enamel on teeth surfaces is an unique challenge, as enamel mineralization is an extracellular process that can't simply be bioengineered with specialized cell lines or other common biological approaches.

The development of enamel-making cells is intimately related to the development of underlying dentin tissue, Oldak said.

"In our lab it's more about the chemistry than the cell biology," she said.

While the structure of tooth enamel is much more complex than the hydroxyapatite layers synthesized during the project, Oldak hopes that one day, full enamel remineralization will be possible. Synthetic enamel would be a very attractive option compared to amalgam or composite for patients looking to repair tooth decay or damage and regain the original strength of their teeth, she said.

"This is one of the primary steps toward the development and design of novel biomaterial for future application in reparative and restorative dentistry," Oldak said.

The study is available online at http://dx.doi.org/10.1016/j.biomaterials.2008.10.019.

weekly

Phone: 323-442-2830 Fax: 323-442-2832 Email: hscwklv@usc.edu Web: uscnews.usc.edu/hscwe

HSC Weekly is published for the faculty, staff, students and community of the University of Southern California's Health Sciences Campus. It is written and produced by the Health Sciences Public Relations and Marketing staff. Comments, suggestions and story ideas are welcome via the contact points listed above. Permission to reprint articles with attribution is freely given. Assoc. Senior Vice Pres., Health Sciences Public Relations and Marketing: Jane Brust Executive Director of Communications and Marketing: Ina Fried Acting Editor: Sara Reeve

Next Issue: December 12

Senior Vice President, University Relations: Martha Harris Contributors: Eva Blaauw, Cheryl Bruyninckx, Beth Dunham, Veronica Jauriqui, Meghan Lewit and Katie Neith

Keck scholarship luncheon connects donors and students

By Veronica Jauriqui

Fourth-year medical student Erin Jones has taken the road less traveled on her way to a degree in medicine. By her own admission, hers was a circuitous path. And over the years, she's toyed with various jobs -English teacher, community outreach organizer, even a brief stint as a parole officer. But each step led her closer to her eventual medical career.

On her personal path to the Keck School of Medicine of USC, Jones also amassed quite a bit of student loan debt. Though the average amount of debt for a recent medical school graduate nears \$140,000, according to the Association of American Medical Colleges, for Jones it was nearly triple that.

"Can you believe that? It is like dealing in Monopoly money," Jones said.

Scholarships become a lifeline in financing a student's dream to become a physician. Twenty-one scholarship recipients took the opportunity to personally thank their scholarship donors on Nov. 18 at the Annual Scholarship Luncheon held in Hoffman Hall.

Jones herself has received numerous scholarships over the years, including the Frances Silver Primary Care Award, and gave the keynote speech at the event.

In her speech, she acknowledged the generosity of her patrons, Steven and Merle Sapkin, and told how

their funding has given her opportunities to enhance her medical education that would be otherwise impossible. The scholarship aid also influenced her choice to pursue work in family medicine-one of the lowest paying among physician salaries.

"Family medicine is a difficult specialty to choose today," she said to the nearly 80 people in attendance. "Through generous donors like all of you here today, I will not only be able to pay off what my husband and I lovingly refer to as 'our debt' in a shorter amount of time...but I have also been able to use some of these funds to enhance my education while in school."

This has included volunteer outreach in places like Swaziland, Africa

(which has the world's highest HIV infection rate), as well as extracurricular opportunities like learning alternative therapies, nutrition and holistic patient care.

According to Erin Quinn, associate dean for admissions at the Keck School, scholarships allow students to pursue their passions without worrying about



Scholarship recipient Erin Jones (left) is seated with donors Merle and Steven Sapkin at the Nov. 18 Annual Scholarship Luncheon in Hoffman Hall.

debt. "It frees students like Erin [Jones] to choose an area they are interested in that may not be as lucrative as a specialty field," she said.

"These scholarship luncheons give donors a chance to meet the students they are funding. That is magic. They know the money they are giving to the Keck School is going to a good cause," she said.

UROLOGY: Gill to raise profile of USC

Continued from Page 1

He has a national and international referral base, with 70 percent of his patients coming from out of state for his expertise.

"Dr. Gill is an internationally renowned innovator in the field of minimally invasive urologic surgery," said Puliafito. "With approximately 3,000 cases to date, he is arguably the most experienced laparoscopic/robotic surgeon in the United States."

For his outstanding work, Gill has received numerous prestigious awards, including the Dr. B.C. Roy National Award, presented by the President of India for Eminent Medical Person in India. It marked the first time a physician living outside of India was selected for this national award. Gill also was awarded the St. Paul's Medal by the British Association of Urological Surgeons, which is the highest honor bestowed by the organization.

In addition to his clinical expertise, Gill is also a distinguished researcher. His research interests include developing novel robotic devices and image-guidance systems, augmented reality imaging, and innovative focal ablation therapies for

prostate and kidney cancer. Focal ablation destroys only the tumor, preserving the rest of the normal prostate and/or kidney. He and his team are developing and refining natural orifice and single-port laparoscopic surgery in urology, both innovative concepts toward scar-free surgery.

A prolific scholar, Gill has published more than 350 peer-reviewed scientific papers, 50 book chapters and eight textbooks. He is on the editorial board of nine urologic journals. He has been an invited visiting professor to more than 250 institutions and societies worldwide and has performed live surgery demonstrations at more than 55 centers. He was elected to the prestigious American Association of Genito-Urinary Surgeons in 2003.

"The USC Department of Urology has an excellent international reputation," said Gill. "I look forward to creating a strong and powerful team, one that symbolizes innovation and excellence across all subspecialties. Together, we will further strengthen USC's stature, making USC a world leader in the field of urology."

Gill succeeds Donald Skinner, who has served as chair of the Department of Urology for 28 years.



A TROJAN WELCOME—Jonathan Samet, director of the USC Institute for Global Health and chairman of the Department of Preventive Medicine at the Keck School of Medicine, was formally welcomed to his new academic home at a Nov. 21 reception. Faculty, administrators and staff greeted Samet at the event, held at the Edmondson Faculty Center.

ETCETERA

The Health Sciences Libraries raised \$4,800 for the Good Neighbors Campaign, with 34 donors and a 100 percent participation rate (including three one-percent donors).

Lourdes Baezconde-Garbanati, associate professor of preventive medicine and sociology, was recognized as a "Public Health Hero" by Research!America for her work on tobacco control and prevention in the Hispanic community.

David M. Breslow, PharmD '71, CEO of United Pharmacists Network Inc., will be presented with the Alumni Service Award at the 76th Annual USC Alumni Awards Gala in May 2009.

Rebecca Z. Sokol, professor of obstetrics and gynecology and medicine, delivered the Bruce Stewart Lecture at the Annual Meeting of the American Society of Reproductive Medicine in San Francisco in November.

STORY UPDATE

Regarding the story "USC Norris receives \$20 million bequest" (Nov. 21 issue), HSC Weekly would like readers to be aware that a total of four chairs have been funded by the late Henrietta Lee.

Two that were not mentioned in the story were the Patricia Jones Chair in Ovarian Cancer and the Dr. Arthur and Priscilla Ulene Chair in Women's Cancer.

Calendar of Events

The HSC Calendar is online at

www.usc.edu/hsccalendar

Monday, Dec. 8

10 A.M. – 12:10 P.M. Pharmacology and Pharmaceutical Sciences Mini Symposium. Various speakers. PSC 104. Info: (323) 442-1451

Tuesday, Dec. 9

NOON. Cancer Ctr. Grand Rounds. "Prostate Cancer Risk and the IGF Pathway," Frederick Schumacher, USC. NOR 7409. Info: (323) 865-0801

Wednesday, Dec. 10

NOON. Pharmacology and Pharmaceutical Sciences Seminar. "Towards Designer Therapeutics: Discovery of Prosecretory Mitogen Lacritin, Off/On Switch Mechanism, Surprising New Properties and Preclinical Studies," Gordon Laurie, Univ. of Virginia. PSC 104. Info: (323) 442-1445

NOON. "Synaptic and Circuitry Mechanisms of Obsessive Compulsive-like Behavior in Mice," Guoping Feng, Duke Univ. ZNI 112. Info: (323) 442-3219

Friday, Dec. 12

11 A.M. Hematology Grand Rounds. "How to Improve the Outcome of Adults with Acute Lymphoblastic Leukemia," Dan Douer, USC. IPT C2J103 Info: (323) 865-3950

NOON. "Aquaporin Water Channels: from atomic structure to malaria," Peter Agre, Johns Hopkins. NRT Aresty Conference Center. Info: (323) 226-7593

Tuesday, Dec. 16

NOON. Cancer Ctr. Grand Rounds. "Brain Tumor Trends and Risk Factors," Roberta McKean-Cowdin, USC. NOR 7409. Info: (323) 865-0801

Friday, Dec. 19

8 A.M. Pathology and Laboratory Medicine Grand Rounds. "Histiocytic and Dendritic Neoplasms," Lawrence Weiss, City of Hope. NOR 7409. Info: (323) 442-1180

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 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.

CUERATENT SURGER CUERCAL PERCEP PLAZA LEVEL-FLOOR UDG OTTERNAL AND CARDIOV/SCULOP ENDOC

The Doctors of USC program manager Hasmig Kitsinian (right) points a patient in the right direction as he makes his way to his doctor's appointment.

A friendly greeting from The Doctors of USC

By Cheryl Bruyninckx

The Doctors of USC has launched a new greeter program designed to improve the patient experience from the moment of arrival on the Health Sciences Campus.

Started as a pilot this summer, The Doctors of USC Greeter Program is part of an ongoing effort to establish a culture of exceptional patient service.

"The new Greeter Program is a great example of how we are working to create a more patient-friendly environment for our patients," said Carmen A. Puliafito, dean of the Keck School of Medicine. "Our patients are counting on clinical expertise, but they also want and deserve a friendly atmosphere that is convenient to navigate."

Volunteers and USC employees who serve as greeters are stationed in the lobby areas of the Healthcare Consultation Buildings during peak hours, Monday through Friday from 7:45 a.m. to 3:30 p.m. Their job is to smile and greet patients and family members, offer directions and answer questions as needed.

"The Greeter Program creates a culture of

hospitality," says Hasmig Kitsinian, program manager for The Doctors of USC. "Our greeters provide a warm welcome and comfort to our patients. This is especially helpful to new patients who are forming a first impression of us."

Working in two-hour shifts, the greeters not only perform a service for patients, but also provide feedback to USC's clinical operations staff.

"As a greeter, I have the unique opportunity to observe the operational flow," says Kitsinian. "I am able to provide suggestions to help improve the patient experience."

The program has been so successful based on feedback from patients that additional greeters are now being recruited. Volunteer greeters must be 18 years of age or older, able to work independently, and have strong interpersonal and communication skills. A cheerful, outgoing and friendly manner is also essential.

To find out more about becoming a greeter for The Doctors of USC, call the Greeter Program at (323) 442-5955 or e-mail Kitsinian at hasmig@usc.edu.

HSC NEWSMAKERS

A Nov. 25 *Washington Post* article cited an editorial by Alzheimer's expert **Lon Schneider** that accompanied a scientific article on gingko biloba's ineffectiveness in preventing dementia. A Nov. 23 *USA Today* article also quoted Schneider about how an Alzheimer's diagnosis can bring couples closer together.

A Nov. 25 Science Daily article featured a study led by USC Norris cancer researcher Amy Lee which found that inactivating a specific biomarker for aggressive prostate cancer blocks the development of prostate cancer in animal models. The study was also featured by Medical News Today and Asian News International.

A Nov. 24 *Los Angeles Times* article quoted obesity researcher **Jaimie Davis** about why Thanksgiving dinner makes people sleepy.

On Nov. 20, ABC News interviewed fertility expert **Richard Paulson** about the higher death

risk for twins or triplets, and the higher likelihood of twins and triplets for women undergoing in-vitro fertilization.

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

A Nov. 20 *San Gabriel Valley Tribune* article quoted transplant surgeon **Robert Selby** about liver transplantation.

A Nov. 19 *Orange County Register* article quoted plastic surgeon **Brian Kinney** about cosmetic acupuncture.

A Nov. 17 *Technology Review* article highlighted USC Norris researcher **Emil Kartalov** in a story on blood chips that monitor how diet and exercise influence blood-protein composition. *Portfolio* also covered the story.

In a new book, *Rickles' Letters*, comedian Don Rickles includes a letter to diabetes expert **Anne Peters**. USC Health Sciences Public Relations 1975 Zonal Ave. KAM 400 Los Angeles, CA 90033

Non-Profit Organization U.S. POSTAGE PAID University of Southern California