

New cancer research program to be based at USC

'The center brings to USC a network of scientists from multiple disciplines to try and control cancer with new ideas.'

—David Agus, professor of medicine at the Keck School of Medicine and director of the USC Center for Applied Molecular Medicine

By James Grant

USC has been selected to establish a \$16 million cancer research center as part of a new strategy against the disease by the U.S. National Institutes of Health and its National Cancer Institute.

The five-year award will create a National Cancer Institute Physical Science-Oncology Center based at USC and involving a consortium of universities.

Partnering in the USC grant will be Arizona State University, the California Institute of Technology, Cold Spring Harbor Laboratory, New York University, Stanford University, the University of Arizona and the University of Texas at Austin.

The Physical Science-Oncology Center initiative differs from past cancer research programs. While cancer biologists

often work with scientists in other fields, this marks the first large-scale recruitment of outside scientists in the battle against the disease.

Noted technology innovator and entrepreneur W. Daniel Hillis, research professor of engineering at the USC Viterbi School of Engineering and professor of research medicine at the Keck School of Medicine of USC, is the principal investigator for the effort.



W. Daniel Hillis

"This funding allows us to bring together a unique team of physicists, mathematicians, engineers and biologists to work together with physicians on the understanding and treatment of cancer," said Hillis, who is also co-chairman of Applied Minds Inc. and a former Disney Imagineering executive.

The new center is one of 12 in the nation to receive the designation as a Physical

Science-Oncology Center.

"By bringing a fresh set of eyes to the study of cancer, these new centers have great potential to advance, and sometimes challenge, accepted theories about cancer and its supportive microenvironment," said John E. Niederhuber, director of the National Cancer Institute. "Physical scientists think in terms of time, space, pressure, heat and evolution in ways that we hope will lead to new understandings of the multitude of forces that govern cancer — and with that understanding, we hope to develop new and innovative methods of arresting tumor growth and metastasis."

The five-year grant will allow the USC center to focus on creating a set of "virtual cancer" models based on measurements from individual cancer patients. The models



David Agus

then would be used to simulate cancer growth and predict drug responses for each patient.

"Clinical tools to accurately describe, evaluate and predict an individual's response to cancer therapy are a field-wide priority," said

David Agus, senior co-investigator on the grant and professor of medicine at the Keck School of Medicine and director of the USC Center for Applied Molecular Medicine and the USC Westside Prostate Cancer Center. "The center brings to USC a network of scientists from multiple disciplines to try and control cancer with new ideas."

The USC-led consortium will develop a single, integrated, virtual cancer model that describes cancer's complexity from the smallest interactions at the molecular-cellular level to large-scale phenomena of how a tumor interacts with its

See **CENTER**, page 2

Glenn Ault named associate dean for clinical administration

By Sara Reeve

As a reflection of the importance of the partnership between the Keck School of Medicine of USC and the LAC+USC Medical Center, Keck School Dean Carmen A. Puliafito has appointed Glenn Ault to the new position of associate dean for clinical administration (LAC+USC Medical Center). Ault, an assistant professor, will represent the school in day-to-day operations with the hospital.

"This is an incredibly important new position for the Keck School," said Puliafito. "For more than 100 years, USC and the County of Los Angeles have worked together to offer quality medical care to the public. In this new position, Dr. Ault will be dedicated to fostering and strengthening this partnership that is so critical for all County residents."

Ault will work in close collaboration with the chairs of the clinical departments, division chiefs and administrative staff at LAC+USC to ensure the clinical and academic missions of the medical school

are realized. He will provide oversight of the contract between the County of Los Angeles and USC that covers the provision of clinical care, resident supervision and clinical research. Ault will be responsible for ensuring that the Keck School meets its



Glenn Ault

obligations under this agreement and for helping to resolve issues that may arise. The current contract was signed in November 2008 and runs through June of 2013.

"Having started out as a resident at LAC+USC in 1994, I know firsthand how important this affiliation is to both the County and the Keck School," said Ault. "It is mutually beneficial—USC doctors and residents provide high quality care for patients of the County of Los Angeles, and the hospital provides an invaluable teaching opportunity for Keck School medical students and residents."

Ault currently serves as medical director of the operating rooms and as chief of service for the division

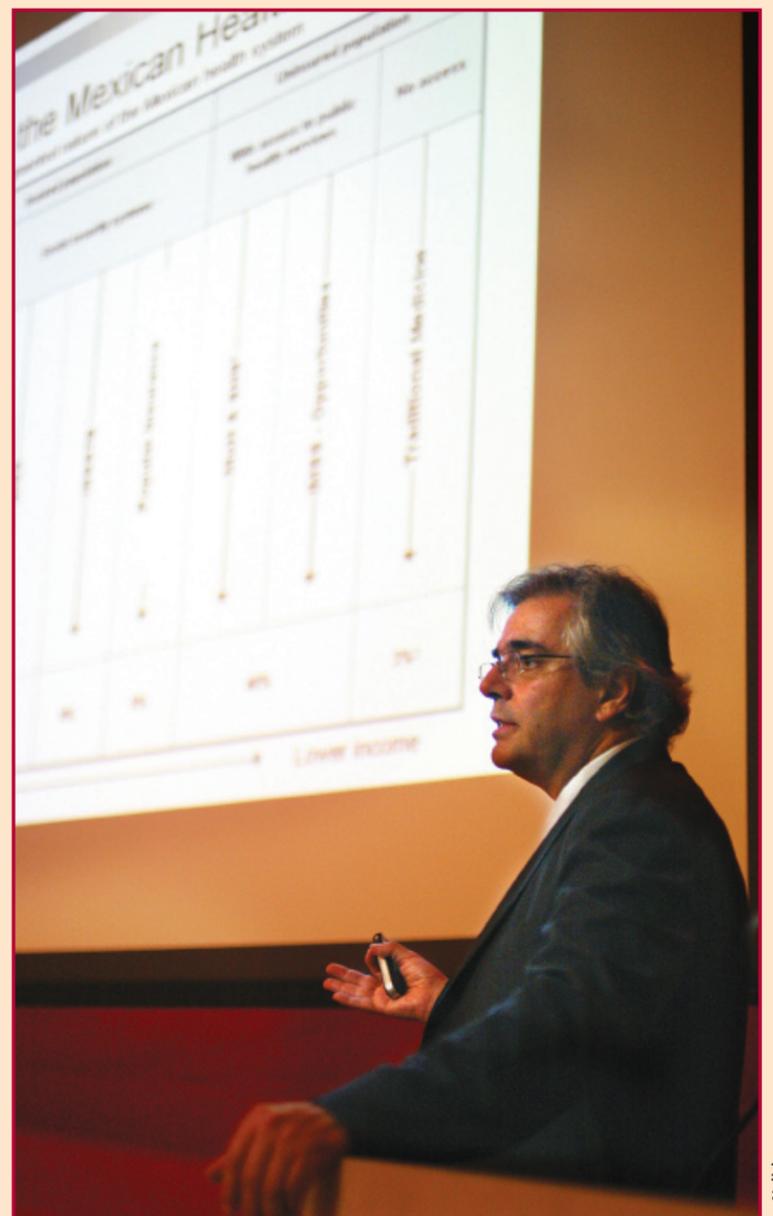
See **AULT**, page 2

VISIONS FOR CHANGE—

Mauricio Hernandez Avila, Mexico's deputy minister of health, presented lectures at the University Park and Health Sciences Campuses on Oct. 21 and 22. He covered topics including the H1N1 influenza outbreak in Mexico, as well as the country's efforts to combat obesity and chronic diseases related to nutrition.

Right, Avila speaks at the Harlyne J. Norris Cancer Research Tower's Aresty Auditorium.

The events were hosted by the USC Center for Public Diplomacy as part of the USC Office for Global Health Visions for Change lecture series.



Jon Mallick

USC cardiology expert highlights women's heart health

By Sara Reeve

Why do women seeking cardiovascular care receive fewer referrals for invasive procedures than men, but experience more complications? Leslie Saxon, chief of cardiology at USC Univer-

sity Hospital had one answer while speaking to a group of women from the USC University Hospital Guild.

"Women are harder to figure out than men; everyone knows that," said Saxon. "But people don't pay attention to

that fact in medicine."

Saxon spoke to an audience of 40 guild members on the topic "Heart Health for Women" at a meeting on Oct. 20 at the Wilshire Country Club in Los Angeles.

She explained that women tend to put off caring for their own physical health, often because they are care providers for their children, spouses and parents. In order to provide care that appreciates the busy schedules of modern women, Saxon argued that cardiovascular care for women should become part of a multidisciplinary collaborative model.

"As physicians, we need to be cognizant of the pressures that women are under, and how many places she needs to go in a day," said Saxon. "A multidisciplinary practice that combines cardiovascular

care, urology, OB/GYN and other specialties can provide optimal patient care and a dynamic education environment."

The USC University Hospital Guild has rendered support and service to hospital programs, faculty, students, patients and the community since 1993.

"The Hospital Guild is one of the most worthwhile organizations that you could ever belong to," said Candy Duncan, membership chair and past-president of the guild. "We are supporting our doctors, future doctors, our hospitals, and our members get very worthwhile information from these speakers, like Dr. Saxon. I've sought medical attention from two doctors who were past speakers at Guild events."



Leslie Saxon, chief of cardiology at USC University Hospital, speaks to members of the USC University Hospital Guild on Oct. 20 on the need for quality heart health care for women.

AULT: New associate dean known as a natural leader and strong collaborator

Continued from page 1
of colorectal surgery at LAC+USC. He also evaluates and treats patients at USC Norris Cancer Hospital.

"Dr. Ault has the knowledge and skills that will enable him to collaborate very effectively with both LAC+USC Medical Center officials and Keck School department chairs and division chiefs," said Edward Crandall, chair of the Department of Medicine, Hastings Professor and Norris Chair of Medicine at the Keck School of Medicine. "This collaboration is essential in order to ensure that

clinical and teaching services provided under this partnership are of the highest quality and accomplished as smoothly and collegially as possible."

The partnership between Los Angeles County and USC began in 1885, seven years after the original County Hospital opened with 100 beds and six staff members. LAC+USC is the largest single provider of health care in Los Angeles County. USC physicians provide patient care, lead clinical research and oversee the training of more than 1,000 medical residents and medical students at the

medical center.

"Dr. Ault is a natural leader, and an excellent choice to represent the Keck School on our campus," said Pete Delgado, chief executive officer of the LAC+USC Healthcare Network. "He is a passionate advocate for patient care and he genuinely cares for this hospital. I'm glad to welcome him to this new position."

A native of Philadelphia, Pa., Ault received his bachelor's degree from Muhlenberg College in Allentown, Pa., his medical degree from Hahnemann University in Philadelphia, and a master of science

in education from USC. He has been an assistant professor in the Keck School division of colorectal surgery since 2004 and is currently program director of the colorectal surgery residency program.

"With the opening of the new County hospital facility last year, it brings potential to grow programs and capitalize on opportunities," Ault said. "I am excited to begin work with all the clinical departments of the Keck School to grow and strengthen this relationship and to help build upon the success of the clinical enterprise there."

CENTER: Aims for interdisciplinary research with transformational potential in the medical sciences

Continued from page 1
host.

Specifically, the consortium will model: networks of interactions at the molecular and cellular levels; tumor molecular phylogenetic evolution; tumor growth, invasiveness

and vasculature; and tumor interaction with host factors and the immune system.

"The models we are going to develop are based on a dataset spanning the many facets of cancer as interrogated by a suite of novel

measurement platforms. Our unique dataset will enable us to rigorously describe cancer as the complex system it is," said Parag Mallick, assistant professor of research at the Keck School of Medicine, one of the project co-leaders who

played a critical role in writing the grant establishing the center at USC. "We will be primarily describing therapeutic response of non-Hodgkins lymphoma to standard chemotherapy, but additionally ensuring the generality of our approach by investigating acute myelogenous leukemia and non-small-cell lung cancer."

According to USC Executive Vice President and Provost C. L. Max Nikias, "This grant honors outstanding interdisciplinary research efforts that have transformational potential within the biological and medical sciences. USC is honored to lead a consortium of such a high caliber."

The winning grant proposal was assembled and submitted with the guidance of USC's Washington, D.C., Research Advancement Office.

"We greatly appreciate the effort of Steven Moldin, executive director of research

advancement, and his colleagues who brought together all the various universities and institutes into the research project," said Randolph Hall, USC vice provost for research advancement. "Without their efforts, the grant would not have been submitted."

In addition to the research partner institutions, the USC-led initiative features consulting researchers from several academic, industry and institutional partners, including: Prognosis BioSciences, the Translational Genomics Research Institute, Princeton University, the University of California, Irvine, the Santa Fe Institute, Applied Proteomics and Applied Minds.

Noteworthy consultants and collaborators include Stanford's Sanjiv Gambhir, Cold Spring Harbor Laboratory's Scott Lowe and the Santa Fe Institute's Nobel Laureate Murray Gell-Mann.

The Weekly

Next Issue: Nov. 6

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.

Associate Senior Vice President, Health Sciences Public Relations and Marketing: Jane Brust

Executive Director of Communications and Marketing: Ina Fried

Editor: Jon Nalick

Contributors: Eva Blaauw, Cheryl Bruyninckx, James Grant, Meghan Lewit, Carol Matthieu, Katie Neith, Joe Peters, Sara Reeve, Leslie Ridgeway and Bryan Schneider

Senior Vice President, University Relations: Martha Harris

Phone: 323-442-2830 Fax: 323-442-2832

E-mail: hscwkly@usc.edu Web: theweekly.usc.edu RSS: http://www.usc.edu/hscw

Keck student leaders honored at awards ceremony

By Sara Reeve

Student leaders from the Keck School of Medicine were recognized at an awards ceremony on Oct. 21 for their achievements in the classroom and community.

The annual ceremony, hosted by Dean Carmen A. Puliafito in the Edmondson Faculty Center, honored 45 second- and third-year students who received Dean's Recognition Awards, as well as 29 recipients of the Association of Pathology Chairs' Pathology Honors Society awards.

Family and friends gathered with students who were called up one by one to receive their awards.

"The best day for us educators is not graduation, because we are sad to see the students leave, but it is the day we see new students come forward," Puliafito said in opening remarks. "Students always have higher expectations and standards than those of us who have been around a while. They show tremendous optimism and compassion, and that's what makes good doctors."

The students selected for the Dean's Recognition Awards have demonstrated excellence in academics, research and service to the community in their first two years of medical school, said Henri Ford, vice dean for medical education at the Keck School. Recipients are chosen based on nominations by faculty members.

The Association of Pathology Chairs' Pathology Honors Society awards recognize students who have excelled in the Keck School's pathology curriculum. Of the 29 Pathology Honors Society recipients, 15 were also Dean's Recognition Scholars.

"Pathology is not an easy discipline," said Karen D. Tsoulas, assistant professor of clinical pathology. "These students have shown discipline and incredible achievement through determination and hard work."

Dean's Recognition Awards

Class of 2012

Aaron B. Case
Rebecca J. Chibnall
Sean W. Delaney
Jacqueline J. Eastman
Graydon S. Goodman
Roshel K.E. Graham
Andrew J. Hollister
Daniel A. Josphe
Daniel M. Lichtmann
Christina Ma
Ian T. MacQueen
Sabrina Martin
Daniel P. Martinez
Selma Masic
Ruzbeh Mosadeghi
Anna E. Rogers
Kais A. Rona
Neda Roosta
Barbara D. Rubino
Raveen Syan
Hamilton C. Tsang

Class of 2011

Emily M. Anton
Nicholas K. Arger
Aaron E. Bond
James W. Brush
Marcia A. Ciccone
David S. Cohen
Charles M.T. DeBoer
Lauren M. Friedman
Benjamin D. Godwin
Emily C. Harnden
Alexis Korostoff
David M. Larson
Michael P. Leathers
Erin M. Meisel
Nathan H. Parker
David L. Pomeranz
Ashley E. Prosper
Brigid A. Quigley

Kelsey L. Richardson
Gaurav Sharma
Erica L. van den Haak
Benjamin A. Weinberg
Oliver L. Yeh
Haig A. Yenikomshian

Association of Pathology Chairs Pathology Honor Society

Class of 2012

Kevin Bechler
Shadi Boutros
Rebecca J. Chibnall
Michael Directo
Jacqueline J. Eastman
Roshel K.E. Graham
Whitney Leatherwood
Daniel M. Lichtmann
Sabrina Martin
Emmanuel Mitsinikos
Ruzbeh Mosadeghi
Jenessa Nyvall
Samuel Phang
Neda Roosta
Sarah Russell

Class of 2011

Sze Wing Au Yeung
Aaron Bond
Henry Chu
Marcia Ciccone
Charles DeBoer
Alexandra Demco
Lauren Friedman
Emily Harnden
Joshua Jeharajah
Marya Leahy
Erin Meisel
Christian Paquet
Brigid Quigley
Kelsey Richardson



Jon Nalick

FIGHTING CANCER ON MULTIPLE FRONTS—Amy Lee (right), professor of biochemistry and molecular biology at the Keck School of Medicine and associate director for basic research at the USC Norris Comprehensive Cancer Center, accepts a plaque from American Cancer Society representatives Lisa Cleary and Joann Piloto for the USC Norris Comprehensive Cancer Center's support of the eighth annual Relay for Life of Alhambra and the Fight Against Cancer held earlier this year. The event, at which Lee spoke, raised funds for ACS patient service programs, cancer research, advocacy and community education. The ACS also supports Lee's work, having recently awarded her a \$360,000 Institutional Research Grant.

Good Neighbors Campaign-funded program proves to be a magnetic force for local students

By Joe Peters

On a recent Friday, Emmanuel Duran, a fourth-grade student at Murchison Elementary School, and his classmates repeatedly added metal washers to one side of a pivotal balance, trying to estimate how many it would take to break the magnetic grip holding down the other side of the balance.

Called "Breaking Magnetic Force," the experiment—and the lesson plan supporting it—is part of a USC Neighborhood Outreach program called "Science For Life," meant to introduce elementary school students to the excitement and relevance of scientific discovery in everyday life.

Duran said he appreciated the experiment and said he especially liked how "it ties things together" conceptually.

The same could be said about Science For Life.

The program, originally started seven years ago as a National Science Foundation-funded longitudinal study of the effectiveness of hands-on science education in schools, has become a close collaboration between Murchison teachers and USC students and professors, including program leader Joseph Cocozza, research assistant professor of the Keck School of Medicine.

For six weeks, students work through a series of modules designed by USC engineering scientists, which emphasize frequent hands-on experimentation and data analysis. The students are tested before the program begins and then retested when it concludes.

"I like the hands-on element," said Suzie Barajas, a Murchison teacher. "We teach three units [of science],

and out of all three, the kids have the highest test scores in this unit."

Jose Aparicio, an USC student volunteer, added: "I like the kids' excitement. They want to do it all themselves."

Cocozza said the program is designed to foster a long-term interest in science by intervening before students lose interest.

The study and affiliated project, he added, are meant to provide the answer to specific questions: "Are [the kids] staying in science? Are they getting better grades in science?"

In future years, he said, "We're looking to involve the parents in some of these activities," with the hope that they will reinforce at home the lessons the children are learning in school.

The Weekly ETCETERA

Students in the Keck School of Medicine's first Master of Science in Global Medicine class successfully submitted three research studies to the 2009 Global Studies Conference in Dubai, United Arab Emirates.

The studies on food stress, medical tourism and alternative medicine were accepted for virtual presentation, and can be seen online at [www.youtube.com](http://www.youtube.com/watch?v=djSEc317Ku8) (<http://www.youtube.com/watch?v=djSEc317Ku8>).

In addition, the students—**Stephanie Bughi, Jennifer Haddad, Vanessa Josef, Michelle Lee, Jesse Tran and Sarah Young**—published a paper on "Food Stress and Health of Immigrant Population" in the *Global Study Journal*, Vol. 2, Issue 2, 2009.

Keck school faculty members **Joseph Miller**, associate professor of cell and neurobiology, and **Julia Borovay**, a part-time lecturer, co-authored the paper and virtual presentation.

This paper explores the concept of food stress

among immigrant populations and the contribution of the global community in reducing this common form of stress and its negative health consequences.

•••

A new Web site showcases the stories of the Keck School of Medicine's first-year medical students.

Read about their diverse backgrounds, motivations for entering medicine, and why they chose the Keck School. Visit: http://www.usc.edu/schools/medicine/school/new_class/

•••

The Keck School of Medicine will host Innovations in Medical Education March 13-14, 2010, in Pasadena and is seeking presenters for the conference on topics including educational innovation studies, innovation exhibits and skills for innovators workshops.

The event, sponsored by the Keck School's division of medical education and the office of continuing

medical education, aims to attract a community of educators interested in promoting innovation in the education of health professionals. This conference will serve as a forum to share ideas, gain new skills, and present ongoing and completed educational research.

Deadline for abstract submission is Nov. 13, 2009.

For more information about the conference or submitting an abstract, please visit http://mededonline.usc.edu/conf_overview.html or e-mail Dixie Fisher, dfisher@usc.edu.

•••

USC General Internal Medicine has extended their hours to better serve our patients. Their practice, located on the first floor of Healthcare Consultation Center II, is now open Monday through Friday from 8 a.m. to 7 p.m., with same day services available.

To schedule an appointment, please call (323) 442-5100.

Calendar of Events

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

Monday, Nov. 2

Noon. KSOM Research Seminar. "Epigenetic Regulation of Transcription, DNA Repair, Aging and Cancer," Jessica Tyler, Univ. of Colorado. NRT Aresty Aud. Info: (323) 442-1144

Tuesday, Nov. 3

9 a.m. Neurology Grand Rounds. "Neurobiology of Middle Aging," Caleb Finch, USC. ZNI 112. Info: (323) 442-7686

11:30 a.m. Psychiatry Grand Rounds. "Suicidal Behavior in Bipolar Disorder: Risk Factors and Interventions," Maria Oquendo, Columbia Univ. ZNI 112. Info: (323) 442-4065

Thursday, Nov. 5

10 a.m. – 3 p.m. HSC Benefits Fair. Harry & Celesta Pappas Quad. Info: (323) 442-1011

Noon. "Transgenic Mouse Models of Altered Glutathione Synthesis: Exploring the Role of Glutamate Cystein Ligase in Acetaminophen-induced Liver Toxicity," Terrance Kavanagh, Univ. of Washington. HMR 100. Info: (323) 442-1283

Saturday, Nov. 7

9 a.m. 8th Annual Moving Targets Symposium. "Drug Delivery and Therapeutics to the Tumor Microenvironment," Various speakers. Radisson Hotel, Los Angeles @ USC. Info: bayan@usc.edu

Monday, Nov. 9

Noon. KSOM Research Seminar. "Chromatin States and Cell Fate," Laurie Boyer, Massachusetts Institute of Technology. NRT Aresty Aud. Info: (323) 442-1144

Tuesday, Nov. 10

11:30 a.m. Psychiatry Grand Rounds. "Post-traumatic Stress Disorder Following 9/11," Susan Turkel, USC. ZNI 112. Info: (323) 442-4065

Noon. USC Staff Assembly Open Forum. "Surviving and Thriving in a Climate of Uncertainty," John Gaspari, USC. MCH 149. Info: (213) 740-8085

Wednesday, Nov. 11

Noon. ZNI Seminar Series. "The Role of Neuronal Activity in the Development of the Visual System," Barbara Chapman, UC Davis. ZNI 112. Info: (323) 442-2144

Monday, Nov. 16

10 a.m. - 7 p.m. KSOM Golf Tournament. Wilshire Country Club. Info: www.usc.edu/esvp code: KeekGolf

Noon. KSOM Research Seminar. "Psychiatric Genetics and the Future of Human Genetics at KSOM," James Knowles, USC. NRT Aresty Aud. Info: (323) 442-1144

Wednesday, Nov. 18

8:30 a.m. "Building Pharmaceutical Anti-Counterfeiting Programs," Various speakers. CHP 106. Info: (323) 442-3102

Thursday, Nov. 19

Noon. "Nonalcoholic Fatty Liver Disease," Sandra Erickson, UC San Francisco. HMR 100. Info: (323) 442-1283

Friday, Nov. 20

8:30 a.m. USC Dept. of Surgery 11th Annual Leonard and Marie Louise Rosoff Visiting Professor Seminar. "Multidisciplinary Strategies for the Treatment of Esophageal Cancer," Wayne Hofstetter, Univ. of Texas. DOH 100. Info: (323) 442-2506

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 eblauw@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.



Jon Naalik



A WELL DESERVED TRIBUTE— Co-workers, friends and family of Wendy Quinn, program specialist of USC Hospitality, recently raised nearly \$2,000 for cancer research to honor her and the doctors and nurses of the Norris Day Hospital. Left, at a private unveiling of the bricks commemorating the gift, are (from left) Wendy Quinn, daughter Meg and ex-husband Pat. The bricks (above) line the perimeter of the Harlyne J. Norris Cancer Research Tower's Hinderstein Family Meditation Garden.

Friends and family raised the funds for research on Quinn's behalf through a Web site called Norris Tributes. To learn more, visit: www.uscnorris.com/NorrisTributes.

Clinical Trials Unit opens at USCUIH

By Cheryl Bruyninckx

USC University Hospital and the Keck School of Medicine hosted guests for an open house on Oct. 19 to celebrate the opening of the new Clinical Trials Unit (CTU) on the 3rd floor "north" at USC University Hospital.

"We are delighted to move closer to USC's growing clinical enterprise," said Thomas Buchanan, director of the CTU. "With the purchase of the two hospitals and the planned expansion of the Keck School of Medicine faculty, this move makes sense for the entire enterprise."

The CTU is the product of collaboration between

the NIH supported General Clinical Research Center (GCRC) and the Health Research Association, which together created the new unit to support a broad array of human mechanistic research and clinical trials with strong support from University Hospital and the Keck School of Medicine.

The new 17,500 sq. ft. unit houses inpatient and outpatient research facilities and provides support in research nursing, bionutrition, exercise testing and body composition, laboratory services, biostatistics and informatics, and research subject advocacy.

It will also offer off-unit testing for projects being conducted across the medical center.

"The new unit will allow us to provide more comprehensive support for the whole spectrum of clinical research being conducted at USC," said Buchanan. "We want to promote not only NIH-funded research, but also enhance academic-industry relationships. Our goal is to help great ideas from a variety of sources get translated into better care for our patients."

For additional information, please contact the CTU at (323) 442-9574.

In case of an emergency...

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.

USC Health Sciences
Public Relations and Marketing
1975 Zonal Ave.
KAM 400
Los Angeles, CA 90033

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