JULY 16 • 2010

The Weekly

USC UNIVERSITY OF SOUTHERN CALIFORNIA

theweekly.usc.edu PUBLISHED FOR THE USC HEALTH SCIENCES CAMPUS COMMUNITY VOLUME 16 • NUMBER 22

NIH awards $56.8 million for clinical, translational research

By Alana Klein Prisco

The Keck School of Medicine of the University of Southern California has received a prestigious $56.8 million Clinical and Translational Science Award from the National Institutes of Health (NIH) to support and promote scientific discoveries and their application in real-life settings to health and health care. The award will have an important focus on health issues of people living in densely populated urban environments.

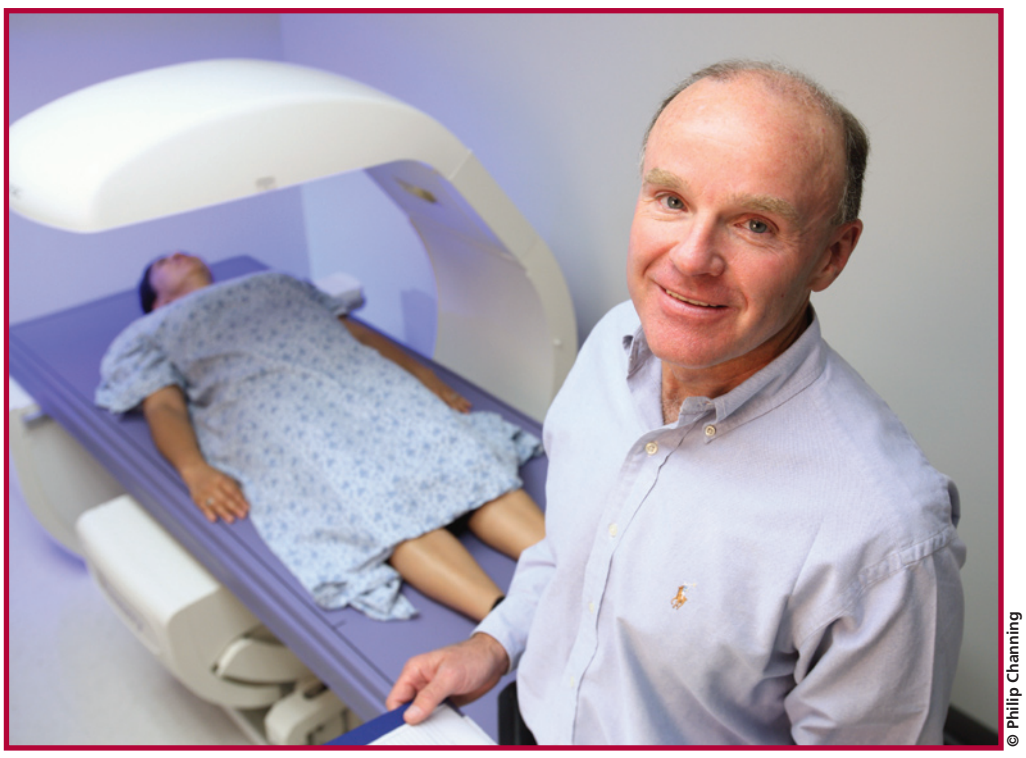
The award, which will be distributed over the next five years, was given to the USC-based Los Angeles Basin Clinical and Translational Science Institute (CTSI). Principal investigator is Thomas A. Buchanan, director of the Los Angeles Basin CTSI and associate dean for clinical research at the Keck School of Medicine.

"We congratulate principal investigator Dr. Tom Buchanan and the highly interdisciplinary USC team for winning this award," said Carmen A. Puliafito, dean of the Keck School of Medicine. "An extraordinarily strong grant application resulted in USC receiving the first Clinical and Translational Science Award in Los Angeles." The application received a score of 12 on a scale of 10 to 90, where 10 is a perfect score.

Faculty from eight USC schools and Childrens Hospital Los Angeles will partner with Kaiser Permanente Southern California, the Los Angeles County departments of Health Services and Mental Health, the Community Clinic Association of Los Angeles County, and more than 30 community health organizations in greater Los Angeles to address the specific needs of the urban and diverse patient populations found in USC's backyard of downtown Los Angeles.

'We're excited to have this opportunity at USC to bring different people, departments, schools and institutions together to make health care better.'

—Thomas A. Buchanan, associate dean for clinical research at the Keck School of Medicine



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Thomas A. Buchanan, associate dean for clinical research at the Keck School of Medicine, serves as principal investigator and director of the Los Angeles Basin Clinical and Translational Science Institute.

"We positioned our CTSI as not only an institute focused on health research, but also as a partnership among some of the largest providers of health care in Los Angeles. We are working collaboratively with others on campus and off campus, using L.A. as a real world laboratory to address issues that are important to the community here," Buchanan said.

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• CTSI targets inner-city health problems

With this award, USC joins a consortium of 55 health research centers in 28 states and the District of Columbia that are developing new ways to advance medical research in many disease areas and conditions, including cancer, mental illness, neurological disorders, cardiovascular disease, diabetes and obesity.

Funded through Clinical and Translational Science Awards (CTSA), consortium members share a common vision to reduce the time it takes for laboratory discoveries to become treatments for patients, to engage communities in clinical research efforts and

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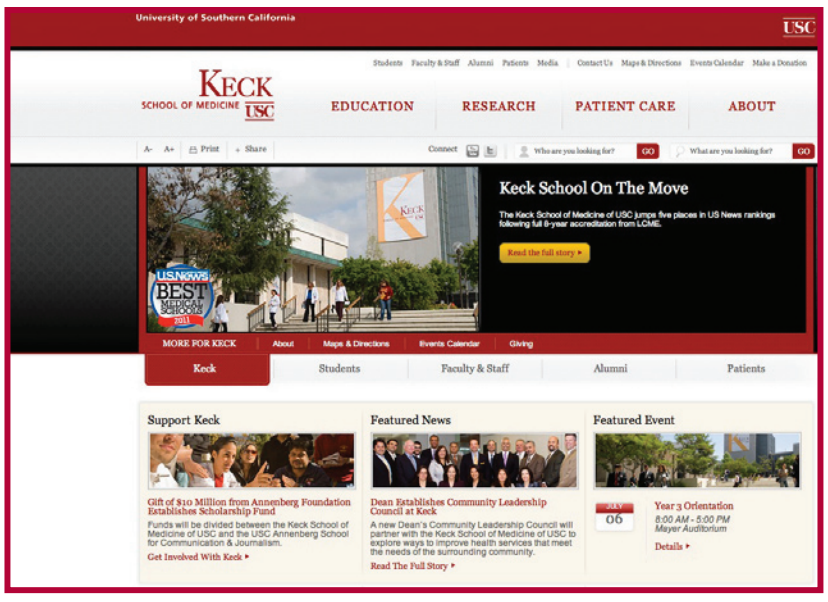
Keck School overhauls its website, adds key features



Launched July 1, the new Keck School of Medicine website features a content management system to enable departments to update their pages quickly and easily.

The new website for the Keck School of Medicine of USC, launched July 1, features improved functionality, an engaging new graphic design, customized content for key audiences and a user-friendly content management system allowing departments to update their own pages in a timely manner.

The new Web address is keck.usc.edu.

"The new site will be a valuable resource for faculty, staff, students, alumni and donors, while serving as an important public face for the Keck School," said Dean Carmen A. Puliafito. "The website is an important communications tool that supports research advancement, fundraising, student admissions, faculty recruitment and many other activities."

Phase I of the website redevelopment project began a year ago in response to the growing demand for an online presence that more accurately reflects and serves the medical school's constituents. Stanford School of Medicine's website served as a model for the Keck School's new online presence.

Key elements of the new site include a more user-friendly interface and dynamic user experience, an engaging new design template, enhanced navigation, a master calendar application for all Health Sciences Campus events, and ease in updating and expanding site pages.

Health Sciences Public Relations and Marketing staff led the redevelopment project in collaboration with IT staff and the marketing firm Swanson Russell.

"The new Keck School site is our first step toward a more robust

See **WEB**, page 3

USC invests $17 million in new hospital equipment

By Jon Nalick

To improve physician efficiency and patient comfort and to expand inpatient and outpatient services, USC's hospitals are spending more than $17 million for new equipment, including state-of-the-art endoscopy scopes and computers, high-definition monitors and diagnostic scanners.

Ashley Wagman, manager of administrative operations for USC Norris Cancer Hospital and USC University Hospital, said much of the equipment has already been installed as part of the recent modernization of USC University Hospital's 1991 Tower and the refitting of the USC Norris Endoscopy Center.

Big-ticket items include modernization and expansion of the operating rooms, and a $1.3 million replacement cardiac catheterization laboratory for the radiology/diagnostic department at USC University Hospital, as well as $3 million of new endoscopic equipment for both hospitals.

The capital spending is intended to bolster services in virtually every department and program at the hospitals. It includes cardiac monitors and telemetry, photophoresis systems, digital camera systems for microscopes, neurosurgery microscopes, automatic tissue processors, refrigerator/

See **EQUIPMENT**, page 3

Oncology symposium seeks novel approaches to fighting cancer

Recent cancer research 'has been predominantly to understand cancer, not necessarily to control cancer, and so we need to bring in different ways of approaching and thinking about cancer.'

— David Agus, professor of medicine at the Keck School of Medicine

By Imelda Valenzuela

Magicians don't typically give keynote speeches at medical conferences, but then again, the first Physical Sciences in Oncology Center (PSOC) Symposium on June 18 was no typical meeting.

"We're taking a different approach to cancer here," said David Agus, senior scientific investigator on a grant from the National Cancer Institute (NCI) that funded the center and the symposium. He is 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 death rate of cancer over the last five to six decades really hasn't changed," said Agus. "Cancer research for the last multiple decades has been predominantly to understand cancer, not necessarily to control cancer, and so we need to bring in different ways of approaching and thinking about cancer."

The PSOC Symposium, which was held at the Davidson Conference Center on the University Park Campus, brought researchers from the physical sciences, including physicists and mathematicians, together with biological scientists, in hopes of creating new paradigms in which to approach and treat cancer.

The featured speaker at the event was former intellectual property attorney and magician, Michael Weber, whose work as a magic consultant has appeared in numerous motion pictures including *Forest Gump*, *Casino*, *Ocean's Thirteen* and *The Illusionist*. His presentation focused on the historical impacts made by physical scientists that eventually transformed the field of magic.

According to Agus, the presentation set the tone for the meeting and helped attendees begin to engage with one another and think creatively: "We wanted to make people think; we wanted to push people to be different."

Agus' research partner and principal investigator on the PSOC grant is 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.

"One of the great strengths of our center here at USC is that we can bring people together from science, medicine and engineering," said Hillis. "Cancer is complex, and this is the kind of interdisciplinary effort that is required to tackle it."

Last year, the NCI designated USC as one of 12 PSOCs across the country and funded the program with a $16 million grant to be used over five years.

"This program is different in that we are not bringing together people who are traditional [NCI] investigators, and because of that, we wanted to generate new knowledge and bring new people in who bring in new perspectives," said Larry Nagahara, NCI's PSOC program director, speaking at the symposium. "We're not looking at new tools just to do better science. We really want to make this paradigm shift in science. Which is why we've assembled this team of people from the physical sciences and people from the medical world."

Jon Nalick

W. Daniel Hillis (left), research professor of engineering at the USC Viterbi School of Engineering and professor of research medicine at the Keck School of Medicine, and David Agus, professor of medicine at the Keck School, hosted the first Physical Sciences in Oncology Center (PSOC) Symposium, intended to create new paradigms in which to approach and treat cancer.

Nagahara used cell migration as an example to illustrate what the NCI is trying to achieve, noting that a biologist would approach the process differently than a physical scientist. "The physical scientist might ask how much force is required to do this, whereas the cancer biologist would ask a totally different question. If you combine these two questions, do you get a better understanding of how cancer initiates and how it progresses? That's what we're getting at," he said.

The symposium drew 140 people with another 60 who viewed the live streaming video of the event.

USC researchers examine social networks, implications for disease

By Meghan Lewit

Keck School of Medicine researchers have developed a new measure that identifies "bridging individuals" in social networks. These individuals act as critical connectors, facilitating the flow of information or spread of diseases between social networks and communities.

The new measure will enable researchers, policymakers and public health professionals to better understand how information or behaviors move from group to group, said Thomas Valente, professor and director of the Master of Public Health program at the Keck School of Medicine of USC, and the principal investigator of the study.

The paper will appear in an upcoming issue of the journal *Social Networks* and is now available online.

"Past research has focused on identifying central individuals, or leaders, in the group to accelerate behavior change or stem disease spread within groups, organizations or communities," Valente said. "This study shows that identifying bridging individuals who connect two otherwise disconnected subgroups is a more efficient way to achieve these same goals."

While central individuals or opinion leaders in the group are more inclined to maintain the status quo, bridging individuals may be more open to new ideas and practices. Central individuals may also have less capacity to persuade any one individual in the group because they must spread their persuasive energies across many people.

In order to calculate an individual's bridging, the team systematically deleted each link in the network and calculated the resulting changes in network cohesion. The average change for each person's links is a measure of bridging. A person with two links to members in two different groups when no one else links the groups is a perfect bridge.

The findings may have particular significance for disease prevention, Valente noted.

"To prevent diseases from spreading within communities, researchers and public health experts usually advocate immunizing central individuals, as they have the greatest effect on preventing further spread. To prevent disease from spreading between communities, however, bridging individuals should be immunized," he said.

Valente, T.W., Fujimoto, K., "Bridging: Locating Critical Connectors in a Network." Social Networks (2010). Doi: 10.1016/j.socnet.2010.03.003.

The Weekly **Next Issue: July 30**

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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USC hospitals to make switch to smoke-free environment on Oct. 1

By Tania Chatila

The USC clinical enterprise is going smoke-free on Oct. 1 to provide a healthier environment for the community.

The initiative will span USC University Hospital, USC Norris Comprehensive Cancer Center and Hospital, Doheny Eye Institute, Doheny Vision Research Center, Healthcare Consultation Centers I and II and the Parkview Medical Buildings.

By going smoke-free, smoking will be prohibited in those facilities, the parking structures and open spaces surrounding those buildings. Also, the designated smoking areas outside of USC University Hospital and USC Norris Comprehensive Cancer Center and Hospital will be closed. The Biggy Street parking structure will not be affected.

"The decision to go smoke-free was largely motivated by a desire within the USC academic medical enterprise to fulfill a commitment of health and wellness," said hospitals CEO Mitch Creem. "We need to embrace this initiative as an opportunity to Fight On not only for our patients, but also for our health and the health of the communities we serve."

There are more than 2,100 hospitals countrywide that have adopted smoke-free policies, including several Los Angeles-area hospitals. Guidelines regulating smoking in the restaurant and airline industries have also been widely adopted in recent years.

"The adverse health effects of smoking have been so widely documented that it only makes sense we support such a policy," said hospitals Chief Medical Officer Don Larsen. "The decision to go smoke-free further solidifies our ongoing commitment to healing and promoting wellness and healthy behaviors."

For those interested in smoking cessation, two informational sessions will be held this month to provide information on cessation programs available at USC. The first will be from noon to 1 p.m. on July 23 in Room 503/504 of the Harlyne Norris Research Tower. A second will be held from noon to 1 p.m. on July 26 in the Coliseum Room of USC University Hospital.

Jon Nalick

USC University Hospital Operating Room Nurse Erin Livingston examines a tissue specimen using the BioVISION specimen radiography system, recently purchased by USC as part of $17 million effort to upgrade and modernize hospital equipment.

EQUIPMENT: USC invests in patient care tech

Continued from page 1

freezers, mammography systems, digital dictation systems and portable radiographic units.

USC hospitals Chief Financial Officer Jonathan Spees said the purchases "reaffirm USC's commitment to providing our patients the best possible care and our physicians and staff with state-of-the-art medical technology. "

WEB: Easy updating of pages is key feature of new site

Continued from page 1

online presence that matches the caliber of our medical school's academic programs," said Jane Brust, associate senior vice president for health sciences public relations and marketing. "Websites are like living, breathing organisms that must continue to evolve and grow just as our medical school is evolving and growing with new academic programs."

Behind the new site is the Sitecore content management system, which allows for easy updating of pages by authorized personnel using any computer with an Internet connection. Keck School departments and administrative offices will be asked to designate a person or persons to be trained on Sitecore, so that they can efficiently update their own pages with minor revisions, which will meet the goal of keeping the new site fresh and up-to-date. Training sessions for designated content editors will take place in the fall.

Phase II of the Keck site redevelopment project will begin immediately. A major priority of the second phase will be bringing the websites for research institutes into the new Keck template. At launch, division-level pages within departments temporarily appear in the old Keck site template while the project team works to transfer these pages to the new design template. Other sites and pages associated with the Keck School that appear in different design templates will be reviewed for integration with the new Keck template in order to ensure consistency in identity and branding.

Plans for Phase II also include furthering the calendar application to allow for customized calendars for individual offices and departments, enhancements to the search function and the faculty directory, and the addition of a new video player.

The website redevelopment project began last spring when Keck faculty, staff, students and other stakeholders were interviewed and surveyed to assess how the website could better serve both internal and external audiences. Dean Puliafito then appointed a Keck Website Redevelopment Advisory Committee comprised of leaders representing administrative, clinical, research and education offices. Input and feedback from this group was instrumental in developing a strategy for a Web presence that more closely reflects Keck's reputation as a medical school on the leading edge of science and technology.

Department chairs and administrators were asked to appoint Web content liaisons to work with the project team to update content on department and office pages. The assistance of the liaisons was key to updating pages throughout the Keck site.

The Keck School Web redevelopment project follows the launch of other new sites for the Health Sciences Campus including the award-winning Doctors of USC site launched in July 2008, and new sites for USC University Hospital and USC Norris Cancer Hospital, unveiled in 2009. Health Sciences Public Relations and Marketing staff teamed up with Swanson Russell on all three sites.

"While Phase II of the Keck site redevelopment project gets under way, we are working to create a new Web development staff to manage not only the Keck School site, but also the more consumer-friendly clinical sites for The Doctors of USC, the USC University Hospital and the USC Norris Cancer Hospital," Brust said. "We are finalizing plans for this important new staff dedicated to Web development, and details will be announced soon."

The new Web development team, supported by Dean Puliafito and USC hospitals CEO Mitch Creem, will have dual reporting to Brust in PR and Marketing and to Mark Amey, chief information officer for the Health Sciences.

Questions and comments regarding the new Keck website are welcome and may be directed to the project team via the following URL: keck.usc.edu/feedback.

Construction now underway to expand Health Sciences Campus dining options

By Sara Reeve

Faculty, staff and students may have noticed some changes in the available dining options this summer on the Health Sciences Campus. Much of the old food court in the Seaver Marketplace is closed, covered with plastic sheeting, while people with blueprints and work boots labor behind.

The changes underway are more than cosmetic. USC Hospitality Services is preparing a major upgrade to on-campus dining, complete with new chain eateries and—in time—extended hours.

"We are very excited that the construction has already begun on a unique and often requested improvement to the Health Sciences Campus," said Travis Summers, senior manager for Health Sciences and Figueroa Corridor, USC Hospitality Services.

The new and improved food court will house a full-service Starbucks, Panda Express, Poquito Mas and Marketplace Concept–a "grab-and-go" station for premade salads, sandwiches and other items. Construction is expected to continue until late September, when the new food court is scheduled to open. Summers anticipates that dinner hours will be extended when the new units open, although final decisions on that matter have not yet been made.

According to Summers, requests from students, faculty and staff spurred USC Hospitality to make the changes to the Seaver Marketplace. "We believe there are not enough good options in the area that are convenient and accessible to all who study, work and visit the Health Sciences campus," he said.

While construction is under way, several dining options are available during the week. A coffee and ready-made item station is open from 7 a.m. to 5 p.m. Also inside the Seaver Marketplace, a salad bar and Mexican buffet are available from 11 a.m. to 3 p.m. The outdoor grill is open for breakfast from 7 a.m. to 10:30 a.m., and then for lunch from 11 a.m. to 3 p.m.

USC Hospitality staff are working in the temporary units while construction is under way and will have the opportunity to transfer to the new units prior to the hiring of new team members.

Another addition to the summer dining options are gourmet food trucks, which are present from 11:30 a.m. – 2:30 p.m. on a rotating schedule in the Harry & Celesta Pappas Quad, in front of the Hoffman Medical Research Building. Trucks scheduled to appear include Crepes Bonaparte, Don Chow, and the Grilled Cheese Truck, among others.

Information about food truck schedules, construction and other events will soon be online at http://hospitality.usc.edu/Restaurants/RetailCafes_HSC.aspx, and at the USC Hospitality Facebook page, www.facebook.com/uschospitalityfan.

Good Neighbors Campaign slates funding for 10 area programs

Calling the 2009-2010 Good Neighbors Campaign "spectacular," Thomas S. Sayles, USC vice president for government and community relations, gave special thanks to departmental campaign leaders who helped the campaign exceed its goal with a record $1.2 million given by USC faculty and staff.

Sayles was joined at a May 21 ceremony at the Edmondson Faculty Center by Deans Carmen A. Puliafito of the Keck School of Medicine of USC and R. Pete Vanderveen of the USC School of Pharmacy.

"One of the key things about this campaign is that it benefits people in the community surrounding the campus," Puliafito said.

Vanderveen said the university's civic engagement was one of the factors that attracted him to USC. Programs funded by the Good Neighbors Campaign, such as the School of Pharmacy's FUENTE Initiative, "affect thousands of people in the neighborhood, particularly thousands of children."

Following is a list of programs receiving USC Neighborhood Outreach Grant awards at the Health Sciences Campus ceremony.

Signature Programs, funded continuously for three years

Expanding STARS, $27,700

Community Partner: Francisco Bravo Medical Magnet High School

University Partner: USC School of Pharmacy

Provides high school students with a mentored, hands-on science experience in a USC laboratory. In addition, 1,000 9th–12th grade students have the opportunity to conduct an inquiry-based research project as part of their academic science curriculum.

HSC Community Health and Wellness Fair 2010, $14,960

Community Partners: HSC Family of Schools

University Partner: USC Civic & Community Relations

Booths run by 150 USC Pharmacy, Dentistry and Keck School student volunteers provide health services to over 1,200 local parents, school children and community residents.

HSC Health & Science Expo 2011, $14,170

Community Partners: Griffin, Murchison, and Sheridan Elementary Schools and Francisco Bravo Medical Magnet High School

University Partner: USC Civic & Community Relations

Approximately 400 5th graders participate in an essay contest and work with 20 HSC students to develop a wide range of science projects. Culminates in a one-day science fair competition on the Health Sciences Campus.

Health/Sports Programs

From the Ground Up, $12,010

Community Partner: Community Services Unlimited, EXPO Center

University Partner: Keck School of Medicine of USC, Childhood Obesity Research Center

Workshops at the EXPO Center/ CSU Mini-Farm train residents in home gardening and healthy cooking. Health education and training aim at increasing consumption of fruits and vegetables to reduce obesity and diabetes.

FUENTE Initiative, $7,420

Community Partners: East Los Angeles Occupational Center, the East Los Angeles Skills Center, and the HSC Family of Schools

University Partner: USC School of Pharmacy

Local pharmacists and student pharmacists provide poison prevention, appropriate drug-use and self-management education for children and parents in the East Los Angeles community.

Proyecto Pastoral, $7,500

Community Partner: Proyecto Pastoral (Centro de Alegria)

University Partner: USC Civic and Community Relations

More than 400 women and girls from Boyle Heights and the surrounding area convene at an annual women's conference.

USC Neighborhood Mobile Dental Van Prevention Project, $37,955

Community Partners: USC Family of Schools

University Partner: Herman Ostrow School of Dentistry of USC

Allows the mobile dental clinic to purchase the necessary supplies to provide preventive oral health services and referrals to elementary school children. Incorporates USC faculty and dental hygiene students attending local health fairs to perform dental screenings, provide anti-tobacco education, and perform oral cancer screenings to adults.

USC Physical Therapy Fit Families Program, $18,830

Community Partners: HSC Family of Schools

University Partner: Department of Biokinesiology and Physical Therapy

Provides pro-bono preventive, wellness and rehabilitative physical therapy services to underserved elementary school children who are diagnosed with or at higher risk for diabetes and conditions associated with physical inactivity.

HSC PartnerNews Newspaper, $18,980

Community Partners: HSC Family of Schools

University Partner: USC Civic & Community Relations

A bilingual, bimonthly newspaper featuring positive news and events about HSC neighborhood schools, the HSC neighborhoods and USC community-outreach efforts. Its target audience is parents and guardians of the more than 4,000 students in the HSC Family of Schools and the local community.

Science for Life Outreach Program, $11,670

Community Partners: Murchison Elementary School and El Sereno Middle School

University Partner: Keck School of Medicine, Department of Ophthalmology

Lessons use the research of the Biomimetic MicroElectronic Systems Engineering Research Center as focal points to make science relevant to young children. Hands-on, inquiry-based activities demonstrate the scientific method of discovery and emphasize analytical skills.

Photos courtesy of Hollywood Presbyterian Medical Center

FETAL THERAPY REUNION— *Above, Ramen Chmait, director of the Childrens Hospital Los Angeles-USC Fetal Therapy Program and assistant professor of clinical obstetrics and gynecology, division of maternal-fetal medicine at the Keck School of Medicine of USC, rejoices at the second reunion of fetal therapy patients at Hollywood Presbyterian Medical Center, where the program is housed. At right, clinical nurse coordinator Terri Maitino (left) and patient Lisa Denninger show off Denninger's healthy twins at the May 15 event.*

Journal publishes five papers by USC researcher

The *American Journal of Ophthalmology* published five scientific manuscripts by Rohit Varma, director of the Ocular Epidemiology Center at the Doheny Eye Institute, in its May edition, as well as an editorial on a study he led.

The papers focused on research conducted as part of the Los Angeles Latino Eye Study (LALES), for which Varma is principal investigator.

"This study showed that Latinos develop certain vision conditions at different rates than other ethnic groups," said Varma. "The burden of vision loss and eye disease on the Latino community is increasing as the population ages, and many eye diseases are becoming more common."

There were 45 million Latinos in the United States as of 2007, according to the U.S. Census Bureau. LALES researchers examined more than 4,600 Latinos four years after they enrolled in the study to determine the development of new eye disease and the progression of existing conditions, including visual impairment, blindness, diabetic eye disease, age-related macular degeneration and cataracts.

"The publication of five articles in a single issue is a remarkable accomplishment for any clinician scientist," said Ronald Smith, chair of the Department of Ophthalmology at the Keck School of Medicine. "LALES has already led to health policy changes in the United States, including Congressional action to promote glaucoma screening in this country. We're proud of the contributions of Dr. Varma and his team."

Rohit Varma

LALES researchers found that during the four-year study, Latinos developed visual impairment and blindness at a higher rate than any other ethnic group in the country, when compared with estimates from other U.S. population-based studies.

U.S. Latinos were also more likely to develop diabetic retinopathy than non-Hispanic whites. Over the four-year period, 34 percent of Latinos who had diabetes developed diabetic retinopathy, with Latinos aged 40 to 59 having the highest rate.

Though increasing age did not play a role, Latinos with a longer duration of diabetes were more likely to develop the disease. In fact, 42 percent of Latinos with diabetes for more than 15 years developed diabetic retinopathy.

Also, among participants who had diabetic retinopathy at the beginning of the study, 39 percent showed worsening of the disease four years later.

"These results underscore the importance of Latinos, especially those with diabetes, getting regular, dilated eye exams to monitor their eye health," Varma said. "Eye care professionals should closely monitor Latinos who have eye disease in one eye because their quality of life can be dramatically impacted if they develop the condition in both eyes."

CTSI targets inner-city health problems

Like other members of the Clinical and Translational Science Award consortium, the Los Angeles Basin Clinical and Translational Science Institute (CTSI) is committed to strengthening connections between scientists in the lab and clinicians who interact with patients.

But what makes this CTSI at USC distinct is the unique patient demographic it serves.

"While we are trying to support a breadth of health concerns, we have also framed our CTSI to focus on diverse populations, specifically highly urban inner-city communities. That is what sets us apart from other centers," said Michele Kipke, professor in the departments of Pediatrics and Preventive Medicine at the Keck School of Medicine and associate CTSI director for community engagement.

Some of the issues that affect urban communities include:

- communicable diseases
- mental health
- obesity
- health care access and quality
- risky behaviors
- environmental hazards

"The goal is to eliminate the disparities that exist between these populations and the general population," Kipke added.

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Keck School of Medicine diabetes researcher Enrique Trigo (right) interviews patient Susana Rodriguez as part of a study on the genetics of beta cell failure in Mexican-Americans.

For example, the following new translational projects are under way to address some of the health issues:

1) Health Problem: Relationship between childhood obesity and leukemia.

Opportunity: To understand why overweight children respond less favorably to leukemia treatment than non-overweight children.

Translational Goal: To identify a drug target that could enhance the effectiveness of leukemia therapy for overweight children.

2) Health Problem: The disparities in health outcomes between sickle cell anemia patients in Los Angeles and patients elsewhere.

Opportunity: To identify the barriers to high-quality care for patients with sickle cell disease in Los Angeles.

Translational Goal: To improve access to care by providing policy makers with information on how to reduce the barriers to care.

3) Health Problem: The relationship between air pollution and the prevalence of chronic diseases in urban communities.

Opportunity: To develop technology that assesses individual ozone exposure for use in studies of air pollution and chronic disease.

Translational Goal: A new research tool that measures individualized ozone exposure.

GRANT: CTSI aims to connect basic scientists to clinical researchers

Continued from page 1

to fulfill the critical need to train a new generation of clinical researchers. The CTSA program is led by the National Center for Research Resources, part of the NIH.

USC competed for the award against 38 other institutions, including three major academic institutions in Southern California. Only nine institutions received grant awards this year, and the NIH has stated that it plans to implement a maximum of 60 Clinical and Translational Science Awards overall.

"It's a very competitive process to get funding at this level. We're excited to have this opportunity at USC to bring different people, departments, schools and institutions together to make health care better," said Buchanan.

Michele Kipke

The Los Angeles Basin CTSI was established in 2006 to connect basic scientists to clinical and community researchers and practitioners with a goal of accelerating the translation of laboratory discoveries into practice.

"It can take 20 years for the knowledge of a new discovery to get into general practice," said Michele Kipke, associate CTSI director for community engagement and professor in the departments of Pediatrics and Preventive Medicine at the Keck School of Medicine.

"That's just too long if you think of how quickly science evolves. What was effective 20 years ago is antiquated now," added Kipke, who is also division chief of research on children, youth and families at Childrens Hospital Los Angeles.

While the Los Angeles Basin CTSI has already been successful at launching community research and interdisciplinary projects on a small scale, large-scale funding from the new NIH award will open the doors to development of a premier clinical and translational institute with the potential for a very large impact on health research and health care.

"We realized we needed a much larger, robust infrastructure and the right people on board to move important research forward," said Buchanan. "The Clinical and Translational Science Award provides the funding we need to expand to full capacity."

The Los Angeles Basin CTSI has four main goals for this award. The first is to create an integrated academic environment that promotes and supports clinical and translational research. The second is to develop new interdisciplinary teams and projects to address top research priorities and health issues of people living in urban environments. The third is to train a new generation of investigators for clinical and translational science. The fourth goal is to share research findings locally, through the CTSI partnership, and nationally, through the consortium of institutions with CTSAs, to foster better health.

The CTSI has secured participation of eight schools at USC, including Medicine, Cinematic Arts, Dentistry, Education, Engineering, Law, Pharmacy and Social Work.

"With the diverse talents of these USC schools and our institutional partners, we can study issues in a larger context and better understand the needs of the community that we serve," said Carlos Pato, associate CTSI director for research development and chair of the Department of Psychiatry and Behavioral Sciences at the Keck School.

Carlos Pato

Some interdisciplinary projects are currently under way. For example, leveraging talent from health sciences, engineering, cinema and informatics, faculty members recently developed an interactive computer game that helps autistic children better interact on an emotional level, one of the deficits of those with the disorder.

"We're not only developing innovative treatments, but also creating interactive ways (beyond what a health sciences enterprise would typically do) to achieve our goals," Pato said.

Resources will be applied to training new basic and clinical researchers in team science. The CTSI will develop Web-based educational materials that will be accessible to faculty, trainees, staff and community partners.

"We want to train people to work in an environment where scientists and clinicians form teams to address important health problems, informed by the needs of our communities," Buchanan said. "It is a paradigm shift that will require new skills to complement traditional scientific knowledge and training."

CTSI Partners

Academic Partners
Keck School of Medicine of USC
USC School of Cinematic Arts
Herman Ostrow School of Dentistry of USC
USC Rossier School of Education
USC Viterbi School of Engineering
USC Gould School of Law
USC School of Pharmacy
USC School of Social Work

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Los Angeles County (LAC) health system
Kaiser Permanente of Southern California
Childrens Hospital Los Angeles
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Community Partners
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Policy Makers
Elected Officials
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CTSI Internal Oversight Board

Marilyn Flynn, dean, USC School of Social Work
Jeffrey Guterman, director, Clinical Resource Management, LAC—Department of Health Services
Randolph W. Hall, vice provost, Research Advancement, USC
Miya Iwataki, director, Office of Diversity Programs, LAC Department of Public Health
Michael Kanter, director, Quality and Clinical Analysis, Kaiser Permanente Southern California
Susan Mandel, CEO, Pacific Clinics (Mental Health)
D. Brent Polk, vice president for Academic Affairs and chair of pediatrics, Childrens Hospital Los Angeles; chair of pediatrics and vice dean for clinical affairs, Keck School of Medicine
Carmen A. Puliafito, dean, Keck School of Medicine of USC
Gloria Rodriguez, president and CEO, Community Clinic Association of Los Angeles County
Avishai Sadan, dean, Herman Ostrow School of Dentistry of USC
Marvin Southard, director, LAC Department of Mental Health
R. Pete Vanderveen, dean, USC School of Pharmacy
Yannis Yortsos, dean, USC Viterbi School of Engineering

CTSI Leadership

Principal Investigator and CTSI Director: Thomas A. Buchanan, associate dean for clinical research, professor of Medicine and chief of the division of endocrinology & diabetes, professor of Obstetrics & Gynecology and Physiology & Biophysics, Keck School of Medicine of USC

Associate CTSI Directors:
Michele Kipke, professor of Pediatrics and Preventive Medicine, Keck School, and Childrens Hospital Los Angeles (CHLA)
Carlos Pato, Franz Alexander Professor and chair of Psychiatry, Keck School

Office of Community Engagement
Director - **Michele Kipke**, professor of Pediatrics and Preventive Medicine, Keck School, and CHLA

Office of Research Development
Director - **Carlos Pato**, Franz Alexander Professor and chair of Psychiatry, Keck School

Center for Scientific Translation
Director - **Roberta Diaz Brinton**, R. Pete Vanderveen Chair in Therapeutic Discovery and Development, Professor of Pharmacology and Pharmaceutical Sciences, Biomedical Engineering and Neurology, School of Pharmacy

Center for Human Studies
Director - **Fred Sattler**, professor of Medicine and Biokinesiology and chief of Infectious Diseases, Keck School

Center for Biomedical Information Sciences
Director - **Carl Kesselman**, professor of Industrial and Systems Engineering, USC Viterbi School of Engineering

Center for Education, Training and Career Development
Director - **Jonathan M. Samet**, professor and Flora L. Thornton Chair, Department of Preventive Medicine, Keck School

Regulatory Knowledge and Support Program
Director - **Frances Richmond**, professor of Clinical Pharmacy and Pharmaceutical Economics, School of Pharmacy, and director, Clinical and Regulatory Science, Alfred E. Mann Institute for Biomedical Engineering at USC

Research Ethics Program
Director - **Alexander Capron**, University Professor, Scott H. Bice Chair in Healthcare Law, Policy and Ethics, USC Gould School of Law and Keck School

Clinical trial examines stroke prevention options

A major study of people at risk for stroke, conducted in part at USC University Hospital, showed that two medical procedures designed to prevent future strokes are safe and effective overall. Physicians will now have more options in tailoring treatments for their patients at risk for stroke.

In the trial of 2,502 participants, carotid endarterectomy (CEA), a surgical procedure to clear blocked blood flow and considered the gold standard prevention treatment, was compared to carotid artery stenting (CAS), a newer and less invasive procedure that involves threading a stent and expanding a small protective device in the artery to widen the blocked area and capture any dislodged plaque. The study appears in the online edition of the *New England Journal of Medicine*.

One of the largest randomized stroke prevention trials ever, the Carotid Revascularization Endarterectomy vs. Stenting Trial (CREST) took place at USC along with 116 other centers in the United States and Canada, over a nine-year period. CREST compared the safety and effectiveness of CEA and CAS in patients with or without a previous stroke. The trial was funded by the National Institute of Neurological Disorders and Stroke, part of the National Institutes of Health, and led by investigators at Mayo Clinic, Jacksonville, Fla., and the University of Medicine and Dentistry of New Jersey in Newark.

"The results of this landmark trial provide important information on the relative safety and efficacy of carotid endarterectomy and carotid stenting to prevent stroke, which will be used for many years to come in patients with carotid stenosis," said Fred Weaver, chief of the division of vascular surgery at the Keck School of Medicine, and the principal investigator of the study at USC.

"The results of this landmark trial provide important information... which will be used for many years to come in patients with carotid stenosis."

—Fred Weaver, chief of the division of vascular surgery at the Keck School of Medicine

USC enrolled 18 patients in the study, which was conducted as a collaboration between the divisions of Vascular Surgery, Neurosurgery and Neurology. USC was also the leading center in minority enrollment.

The overall safety and efficacy of the two procedures was largely the same with equal benefits for both men and women, and for patients who had previously had a stroke and for those who had not. However, when the investigators looked at the numbers of heart attacks and strokes, they found differences. The investigators found that there were more heart attacks in the surgical group, 2.3 percent compared to 1.1 percent in the stenting group; and more strokes in the stenting group, 4.1 percent versus 2.3 percent for the surgical group in the weeks following the procedure.

The study also found that the age of the patient made a difference. At approximately age 69 and younger, stenting results were slightly better with a larger benefit for stenting the younger the age of the patient.

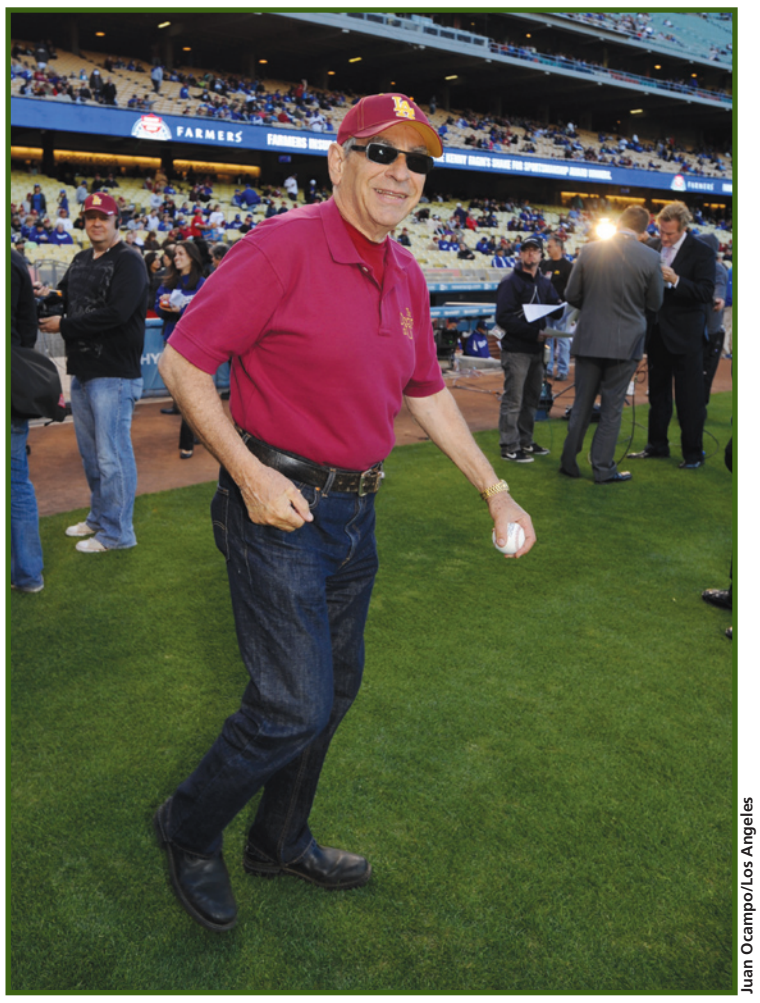
Conversely, for patients older than 70, surgical results were slightly superior to stenting with larger benefits for surgery the older the age of the patient.

Stroke, the third leading cause of death in the U.S., is caused by an interruption in blood flow to the brain by a clot or bleeding. The carotid arteries on each side of the neck are the major source of blood flow to the brain. The buildup of cholesterol in the wall of the carotid artery, called atherosclerotic plaque, is one cause of stroke. Because people with carotid atherosclerosis also usually have atherosclerosis in the coronary arteries that supply the heart, the CREST trial tracked the rate of heart attacks, in addition to stroke and death.

Partial funding for the study was supplied by Abbott, of Abbott Park, Ill., the maker of the stents.

Brott,TG et al., Stenting Compared to Endarterectomy for Treatment of Carotid Artery Stenosis, New England Journal of Medicine, *online first edition May 26, 2010*.

Juan Ocampo/Los Angeles



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HAVING A BALL—From top: Greg Elsasser, a transplant patient at USC University Hospital and an avid Los Angeles Dodgers fan, throws out the ceremonial first pitch at the June 7 game at Dodger Stadium; Keck School of Medicine Department of Medicine Chair Ed Crandall takes to the field to throw out a first pitch at the April 29 game. Their appearances were made possible by the partnership between the L.A. Dodgers and USC University Hospital.

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Calendar of Events

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

Tuesday, July 20

Noon. Cancer Center Grand Rounds. "New Partners to Crime in Endothelial Apoptosis," Anat Edreich-Epstein, USC. NRT Aresty Aud. Info: (323) 865-0801

Friday, July 23

11 a.m. Hematology Grand Rounds. "Evaluation of Disorders of Platelet Function," Casey O'Connell, USC. IPT C2J103. Info: (323) 865-3950

Friday, July 30

11 a.m. Hematology Grand Rounds. "Monoclonal Gammopathy," Ann Mohrbacher, USC. IPT C2J103. Info: (323) 865-3950

Thursday, September 23

8 a.m. – 4:30 p.m. 14th Annual Max R. Gaspar Vascular Symposium. "Vascular Emergencies and Complications," R. Patrick Clagett, Univ. of Texas Southwestern Medical Ctr. Millenium Biltmore Hotel. Info: (323) 442-2555

Saturday, September 25

8:30 a.m. 14th Annual Max R. Gaspar Grand Rounds Lecture. "Aortic Graft Infection: The Problem is Still with Us," R. Patrick Clagett, Univ. of Southwestern Medical Center. DOH 100. Info: (323) 442-6835

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 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.

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.