

Star-studded USC Norris gala raises more than \$2 million

By Sherri Snelling

USC Norris Comprehensive Cancer Center raised more than \$2 million at its 2015 star-studded black tie gala fundraiser held Oct. 10 at the Beverly Wilshire Hotel.

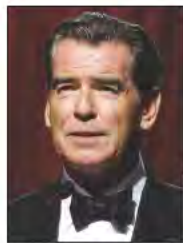
The event honored philanthropists Dana and David Dornsife with the Visionary Award and physician-scientist Parkash Gill, MD, who was recognized with the Research Innovation Award for his groundbreaking cancer research as one of USC's elite team of scientific researchers. Funds raised support the innovative cancer research at the 43-year-old USC Norris Comprehensive Cancer Center, which offers about 250 clinical cancer trials each year.

The honorary event hosts included C. L. Max Nikias, PhD, president of USC; Carmen A. Puliafito, MD, MBA, dean of the Keck School of Medicine of USC; and Stephen B. Gruber, MD, PhD, MPH, director of the USC Norris Comprehensive Cancer Center. Raymond A. and Shauna Mirra of RAM Capital were the evening's presenting sponsor and honorary chairs.

Puliafito welcomed the more than 400 guests before introducing the evening's emcee, Emmy Award-winning actor, comedian and Saturday Night Live alum Dana Carvey.

Gruber then took the stage to thank the evening's supporters, which included Ray and Shauna Mirra and Tom and Holly Gores of Platinum Equity, the platinum sponsor for the event.

Gruber also spoke of the excep-



Steve Cohn

Actor Pierce Brosnan spoke about cancer's impact in his own life.

Visionary Award to Dana and David Dornsife. The Dornsifes, recognized as international philanthropic leaders, were honored for their advocacy and funding for cancer research and their help with patient treatment, especially cancer patients who have a clinical trial as their best option for treatment.

Dana Dornsife is president and founder of Lazarex Cancer Foundation, whose mission is to help late-stage cancer patients navigate their clinical trial options and to provide financial support. She founded the organization after losing a brother at age 48 to pancreatic cancer. The Lazarex Cancer Foundation is dedicated to bringing scientific and medical institutions together with government to fund research and find faster cures and treatments for cancer. USC Trustee David Dornsife serves as vice president of the Hedco Foundation, whose mission is health and education improvement.

Both David and Dana Dornsife are alumni of USC. David is a graduate of

See GALA, page 2

tional research being done by the more than 200 world-class faculty scientists at the USC Norris Comprehensive Cancer Center.

A highlight of the evening was the presentation of the Norris



Alex J. Berliner/ABimages

Dana Carvey hosts the USC Norris Comprehensive Cancer Center gala.



Les Dunseith

Keck School Dean Carmen A. Puliafito joins David and Dana Dornsife on the red carpet with USC President C. L. Max Nikias and USC Norris Director Stephen B. Gruber.

As open enrollment nears, USC Primary Care continues to expand

By Douglas Morino

With offices dotted across Los Angeles County, Keck Medicine of USC's primary care network is growing. This fact is especially important now, with open enrollment for Keck Medicine of USC employees set to begin Monday, Nov. 2, and continue until Nov. 15.

The open enrollment period is the only time each year when employees can change most of their benefits, including medical, vision and dental plans. Among the choices is Keck Medicine's primary care network, which offers patients – from the young to the elderly – a broad range of high-quality health services.

Primary care physicians and nurses from Keck Medicine provide patients with a comprehensive, holistic approach to health care and offer a broad range of services to address health issues, promote preventative health and link patients to specialty care.

It's a formula for success. Keck Medicine's primary care practice has grown over the past two years to an average of 162 patients being seen each day at its six

Open enrollment

Begins: Monday, Nov. 2

Ends: Sunday, Nov. 15

Details: employees.usc.edu/2016-benefits-open-enrollment-news/

offices across the region.

"We have exceptional physicians and hospitals," said David Goldstein, MD, director of primary care for Keck Medical Center of USC, adding that patient growth has come despite limited business development or marketing. "Further increases in patient volume will occur as awareness grows and access to our offices is enhanced."

A significant growth spurt in primary care was spurred after Keck Hospital kicked off a primary care initiative in January 2014. The growth of primary care includes the activity of physicians in the departments of family and internal medicine.

The practice sites include Healthcare Center II at Keck Medical Center of USC and sites in Downtown Los Angeles, La Cañada, Pasadena, Beverly Hills

See OPEN ENROLLMENT, page 4



Les Dunseith

OKTOBERFEST: The HSC community gathered Oct. 15 for beer and German food in an annual tradition that also helps draw attention to the Good Neighbors Campaign. One of the programs that benefits directly from the donations by USC staff and faculty is Med-COR, which helps minority students at area high schools.



Les Dunseith

Med-COR students are celebrated at Oktoberfest

By Hope Hamashige

On many Saturdays, students from several high schools in Los Angeles who are participants in Med-COR meet for tutoring in math, science and English, and for SAT preparation. They also meet physicians and other medical professionals who talk to them about their career experiences.

These Saturday sessions give the participants in Med-COR — which stands for medical counseling, organizing and recruiting — academic enrichment and strive to inspire them to pursue a career in the health professions. Launched in 1970, Med-COR is one of the signature programs that receives funding from the Good Neighbors Campaign, and some of the students were on hand recently during the Oktoberfest event at HSC that helps draw attention to Good Neighbors.

Originally created as a partnership between the Keck School of Medicine of USC and Los Angeles Unified School District, Med-COR

See Med-COR, page 5

GALA: Dana Carvey, Don Henley are featured performers at fundraiser for USC Norris

Continued from page 1

the USC Marshall School of Business and Dana, a member of the USC Phi Kappa Phi Honor Society. Their longtime transformative support of the mission of USC includes being named donors of the USC David and Dana Dornsife College of Letters Arts and Sciences where David serves as chairman of the board and Dana is a board member of the USC Brain and Creativity Institute at the Dornsife College.

“Our honorees, David and Dana Dornsife, are not only accomplished figures in their respective professional fields, but each is personally dedicated to supporting the efforts to conquer cancer and provide compassionate care to patients,” Gruber said. “We are honored to celebrate the Dornsifes for their continued generosity to USC and to their commitment to our mission.”

Honorary Chair Raymond Mirra joined Gruber on stage to present the Research Innovation Award to Gill, professor of medicine and pathology at the Keck School of Medicine of USC. Gill’s laboratory at USC Norris Comprehensive Cancer Center has an active translational program to develop cancer therapeutics based on basic or classic bench research.

“Dr. Gill’s extraordinary research is supporting our mission to make cancer a disease of the past,” said Gruber. “It is the dedication of Dr. Gill and our entire university-based research team that continue to make USC Norris recognized as one of the top cancer research centers in the nation.”

Dana Carvey’s comedic monologue led into the introduction of special guest Pierce Brosnan. The actor who played James Bond, among other roles, was on hand to introduce multi-Grammy Award winner Don Henley.

Currently touring for his new album, Cass County, the founding member of the Eagles brought the crowd to its feet with performances of classic favorites such as *Dirty Laundry*, *New York Minute* and *All She Wants to Do is Dance*.



Left: Among the celebrities to walk the red carpet at the gala was actress Fran Drescher. Above: Dean Carmen A. Puliafito of the Keck School of Medicine of USC poses with comedian Joe Piscopo as the crowd begins to gather for the night’s events.



Above: Award winner Parkash Gill got laughs despite professing not to be funny. Left: Comedian David Spade.



Above: Indirbir Gill smiles with USC President C. L. Max Nikias and County Supervisor Mark Ridley-Thomas. Right: Medical expert Lawrence Piro talks to USC Provost Michael Quick and Keck Medicine CEO Tom Jackiewicz.

Calendar of Events

Sunday, Oct. 25
4 p.m. USC Norris Comprehensive Cancer Center Talk. “2nd Annual Event Benefiting Breakthrough Research in Breast Cancer,” Julie Lang, MD, USC. 488 N. Allen Ave., Pasadena. Info: Russ Meek, (626) 827-5011, bestwinela@gmail.com

Tuesday, Oct. 27
11 a.m. USC Stem Cell Seminar. Viviana Gradinaru, California Institute of Technology. Eli and Edythe Broad CIRM Center Auditorium. Info: Cristy Lytal, (323) 442-2172, lytal@med.usc.edu

Noon. USC Institute for Global Health, Globe Med at USC, Global Health and Human Rights program and Occidental College Seminar, “Sexuality, Health and

Human Rights: Fulfilling the Promise of Health and Human Rights for All,” Sofia Gruskin, JD, USC. Franklin Room, Suite TCC 350, Ronald Tutor Campus Center, University Park Campus. Info: Nivvy Hundal, (323) 865-0419, nhundal@usc.edu

Wednesday, Oct. 28
1 p.m. Diabetes and Obesity Research Institute Seminar. “Develop Evidence-Based U.S. Dietary Guidelines: Process, Policies and Politics,” Frank Hu, MD, PhD, Harvard Medical School. Light lunch provided at 12:30 p.m. McKibben Annex 149. Info: Christina Ayala, (323) 442-2500, trujillo@usc.edu

Thursday, Oct. 29
6 p.m. Department of Orthopaedic Surgery Grand Rounds. “SOGOS lecture,” Anthony

A. Romeo, MD, Rush University Medical Center. Arestry Auditorium.

1:30 p.m. USC Institute for Genetic Medicine Lecture. “Massry Prize Laureate Lecture,” Mayer Auditorium. Info and RSVP: <http://esvp.usc.edu>

Friday, Oct. 30
6:30 a.m. Department of Anesthesiology Grand Rounds. “Point-of-Care Transthoracic Echocardiography: The Next Big Thing?” Stephen Haskins, MD, Hospital for Special Surgery, New York. McKibben Hall, Room 256. Info: Renee Meadows, (323) 409-6856, rmeadows@usc.edu

8:30 a.m. Medicine/Pulmonary, Critical Care Seminar. “Hasting Center for

Pulmonary Research Seminar: Dissecting the Mechanism of Hypoxemia During Acute Lung Injury,” Heather Jones, MD, IRD 734. Info: Elva Rubio, (323) 226-7923, elvarubi@usc.edu

Noon. Research Center for Liver Diseases Seminar. “TAK1: A Critical Regulator for Liver Homeostasis and Carcinogenesis,” Ekihiro Seki, MD, PhD, Cedars-Sinai Medical Center. Hastings Auditorium. Info: Dolores Mendoza, (323) 442-1283, dmmendoz@usc.edu

Tuesday, Nov. 3
10 a.m. Keck Medical Center of USC Employee Safety Fair. Hospital ID required. NIT Parking Lot. Info: Robert Vance III, (323) 442-9915, robert.vance@med.usc.edu

Stem cell scientist receives Hearst Fellowship

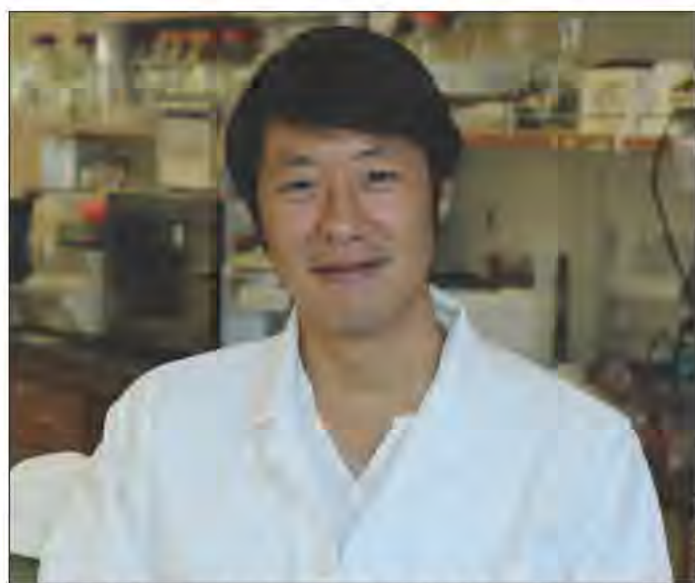
By Cristy Lytal

How do you turn stem cells into nephrons, the functional unit of the kidney? Albert D. Kim, PhD, a postdoctoral fellow in the laboratory of Andy McMahon, PhD, is exploring this question with support from a Hearst Fellowship, an award recognizing an exceptional junior postdoctoral fellow pursuing stem cell research at USC.

As a Hearst Fellow, Kim will launch his early scientific career with a generous startup package, including salary and benefits for a full year. He will enjoy access to world-class facilities and equipment at the Eli and Edythe Broad Center for Regenerative Medicine and Stem Cell Research at USC — including the William Randolph Hearst Foundation Imaging Laboratory, supported by a previous \$100,000 gift from the Hearst Foundations. He will also connect with faculty and colleagues across the university through USC Stem Cell, a collaborative and multidisciplinary effort bringing together more than 100 researchers working to translate discoveries into cures.

The fellowship would have come as no surprise to Kim's grandfather, who predicted that his five-year-old grandson would grow up to become the family's first scientist.

"My grandfather noticed my curiosity about nature and animals, and he was a good judge of character," said Kim, whose parents both work in non-science-related fields: a florist,



Albert D. Kim is a postdoctoral fellow in the lab of Andy McMahon.

and a graphic designer / landscape architect.

Kim spent his formative years in Los Angeles' Koreatown before heading to UC San Diego, where he earned his bachelor's, master's and PhD degrees. While he was earning these degrees, he worked in the laboratory of David Traver, PhD, and studied the early formation of blood stem cells in zebrafish embryos.

When McMahon gave a guest lecture in San Diego, his clarity of scientific thought made a strong impression on Kim. In 2015, Kim became a postdoctoral research associate in McMahon's laboratory at the Keck School of Medicine of USC, where he is applying his expertise to the challenge of kidney regeneration.

"My longstanding scientific interest has been aimed at understanding how the microenvironment of immature cellular precursors is important for properly instructing specific cell fates," he said.

As a Hearst Fellow, he aims to isolate and generate a large number of kidney progenitor cells with the ultimate goal of repairing damaged adult kidneys.

Although researchers have recently used stem cells to form primitive kidney organoids, mystery shrouds the process and requirements of

kidney formation in humans. By comparing kidney cells from human and mouse embryos with kidney cells produced in the laboratory, Kim will determine the optimal conditions and genetic profile for kidney formation.

To produce an appropriate matrix scaffold upon which to grow these cells, Kim is collaborating with the laboratory of Megan McCain, PhD, at the USC Viterbi School of Engineering.

"From the multiple interactions I have had with Albert, I get the sense that he really wants to push the field in new directions and pursue innovative and creative projects, which is refreshing," McCain said. "He is an excellent candidate for this fellowship, and I look forward to continuing to collaborate with him."

McMahon, Kim's mentor and director of the Eli and Edythe Broad Center for Regenerative Medicine and Stem Cell Research at USC, added, "Dr. Kim is just the sort of talented young scientist we seek to encourage and acknowledge as a Hearst Fellow. His proposal is ambitious, as it should be for a scientist of his caliber. The potential is enormous, the time opportune and Dr. Kim has the credentials to make his mark in this important new area."

Student helps peers decide their medical specialties

By Hope Hamashige

One of the most important decisions medical students have to make — and one that is on their minds from just about the first day of medical school — is choosing a specialty.

Melody Rasouli, president of the student chapter of Salerno Collegium, the Keck School of Medicine of USC alumni organization, is planning an event designed to help medical students make that critical decision.

The weeklong event, called Keck School of Medicine Alumni Shadow Week, gives students at the Keck School of Medicine of USC a chance to spend part of a day at work with Keck School alumni who practice in the area.

Rasouli points out that, while Keck School students typically get more clinical experience than most other medical students, but that experience is in a hospital setting. She hopes Shadow Week will give students the opportunity to peek behind the scenes, not only at different specialties, but also in different practice locations.

"They will be able to see what life is like in an outpatient setting, which

is something we don't see here," said Rasouli, a second year student at the Keck School. "Dermatology, for example, is going to be practiced differently in private practice than it is in a hospital."

Participating in Shadow Week is an opportunity to

get quick insights, but Rasouli admits she hopes it will also foster long-lasting connections between some of the students and alumni.

As an undergraduate at USC, Rasouli learned that one of the benefits of a degree from USC

is the fact that Trojans look out for one another well past graduation. She said she often heard of USC graduates providing advice, mentorship and even job opportunities to younger generations of Trojans.

"I really came to understand what it is to be part of the Trojan family," she said. "I hope that some people might find mentors who will help them even after they are done with school."

Keck School of Medicine Alumni Shadow Week is tentatively scheduled for the week of Feb. 29 to March 4, 2016.



Melody Rasouli

Robert Lurye



*University Kidney Research Organization
heartily congratulates*

Janos Peti-Peterdi, M.D., Ph.D.

*Professor of Physiology & Biophysics,
Keck School of Medicine of USC
Professor, Zilkha Neurogenetic Institute
Principal Investigator, USC Stem Cell*

as he receives the

**2015 ASN-AHA
Young Investigator Award**

*A well-deserved honor for a
pioneering researcher
and great friend of UKRO!
We are all in awe of the
inspiring work you do
to combat kidney disease.*

**Please visit ukrocharity.org to learn about
the USC/UKRO Kidney Research Center and
our mission to cure kidney disease.**

\$8 million grant to fund adolescent brain study

By Debra Kain

As part of landmark research into the effects of adolescent substance use on the developing brain, Children's Hospital Los Angeles has been awarded a five-year grant totaling almost \$8 million from the National Institutes of Health.

The Adolescent Brain Cognitive Development (ABCD) study is a national longitudinal investigation of the short-term and long-term impact of substance use on brain development. The project will recruit 10,000 youths before they begin using alcohol, marijuana, tobacco and other drugs, then follow them for 10 years into early adulthood.

Principal investigator Elizabeth Sowell, PhD, director of the Developmental Cognitive Neuroimaging Laboratory in the Institute for the Developing Mind

at CHLA, said that her research will place special emphasis on questions of socioeconomic status, the impact of prenatal exposures to alcohol and other drugs of abuse. The impact of pubertal hormones on brain development will also be part of the study, to be conducted in collaboration with scientists at UCLA.

Sowell, who is also a professor of pediatrics at the Keck School of Medicine of USC, added that the NIH funding provides the opportunity to further address research on how socioeconomic disparity impacts brain and cognitive development, and how this disparity influences drug use and mental health.

"There is a real opportunity here to better understand how to help kids reach their full potential," she said.

The NIH awarded 13

grants to institutions around the country in order to follow children beginning at age 9 or 10, before drug use is initiated, and through the period of highest risk for substance use and mental health disorders. Scientists will track exposure to substances that include nicotine, alcohol and marijuana, focusing on their impact on academic achievement, cognitive skills and mental health, as well as brain structure and function.

The study seeks to address questions related to substance use, including possible links to the risk for mental illness and the impact on physical health, plus psychological development, learning and memory.

Since 1932, CHLA has been affiliated with the Keck School of Medicine of USC, where physicians also hold faculty positions.

Professionalism Week focuses on conduct in the workplace

By Douglas Morino

A physician-led initiative to create a code of professional standards for Keck Medicine of USC will take center stage during a weeklong celebration to end October. Professionalism Week from Oct. 26–30 will engage staff across Keck Medicine to develop a set of professional standards. Events will be held at Keck Hospital of USC, USC Norris Comprehensive Cancer Center and USC-Verdugo Hills Hospital. The project grew out of discussions among Keck Medicine physicians and administrators regarding the costs of incivility in the workplace and

the benefits of establishing a defined professional culture across the organization. “We have a renewed institutional commitment to promoting professionalism,” said Kiran Dhanireddy, MD, assistant professor of clinical surgery and director of transplant quality. “It’s important that leaders become role models and engage the whole community to develop a collective sense of professionalism — to create something that’s meaningful to every person who works at Keck Medicine of USC.” The new standards will be created based on input of staff members across the organization, resting on the

pillars of excellence, judgment and civility, Dhanireddy added. “Professionalism Week is a conversation with the goal of bringing staff and physicians together and encouraging them to share their ideas of what professionalism looks like to them,” Dhanireddy said. A mobile art installation known as an Art Wall will be a campus centerpiece, serving as a canvas for staff members to share opinions about professionalism in the workplace. Beginning Oct. 26, the Art Wall will be on display for three days in the main lobby of Keck Hospital of USC main lobby. On Thursday, it will move

to the clinics lobby of USC Norris Cancer Hospital. On Friday, it will be in the 4th floor lobby at USC Verdugo Hills Hospital. Ideas generated during Professionalism Week will be used to develop themes that the Committee of Champions — an interdisciplinary team of physicians, staff and administrators — will turn into a credo to be adopted by the medical system. The process to develop this statement will be collaborative and transparent. “This credo will influence nearly all aspects of our professional lives, defining who we are and how we behave,” Dhanireddy said.

USC will help study effects of air pollution in Eastern Africa

By Larissa Puro and Zen Vuong

A long-running and widely cited A USC study on the health effects of pollution on children is exporting its methods to Eastern Africa. USC and Addis Ababa University in Ethiopia have been awarded a \$3 million joint grant to develop a regional Global Environmental and Occupational Health (GEOHealth) Hub in Eastern Africa — one of only seven in the world. This will be the first time scientists continuously record air pollution data to investigate its health effects on children in Ethiopia, Kenya, Rwanda and Uganda, said Kiros Berhane, PhD, a USC professor of biostatistics and co-principal investigator of the newly funded international partnership. This type of study is such a novel idea in Eastern Africa, researchers will need to install air monitoring stations. USC and Addis Ababa University scientists will study health problems stemming from air pollution, Berhane said. The primary objective is to see if air pollution negatively influences health. If so, the team will collaborate with policymakers to address problems.

“When it comes to air pollution, huge emissions from big polluters like China and India are likely to have effects on public health everywhere and on our global climate,” said Berhane, who was born in Ethiopia. “These problems are global, so studying things only in the U.S. may not make sense and may not give us a full picture.” While scientists won’t be able to make direct comparisons between the USC Children’s Health Study and the Eastern Africa Children’s Health Study, the findings could still add to their understanding of how high air pollution may affect health. “The levels of air pollution in the Eastern Africa setting are going to be very high compared to even

the dirtiest possible community in Southern California,” Berhane said. “So qualitatively what the Eastern African studies could give us is actually a much higher end of pollution compared to anything we have seen in the Southern California study.” USC researchers hypothesize that the percentage of children who are below the healthy lung function threshold will be much higher in Eastern Africa. “In a way, you could extend the pollution branch,” Berhane said. “We still should be able to at least say — if it materializes — that as we go way beyond the levels that we see in Southern California, there is increased risk of children’s respiratory health being compromised.” Despite recent advances, hazards associated with air pollution, pesticides, mining, workplace risks and other factors continue in many low- and middle-income countries. Regional GEOHealth Hubs will examine how these risks are linked to illness and how to control them. U.S. scientists will train Ethiopian, Kenyan, Rwandan and Ugandan researchers in partner GEOHealth Hub universities for five years. Trainees will investigate occupational risk factors and the health impacts of air pollution and climate change. The study started last month and is set to conclude in August 2020. In the first year, experts at USC, the South Coast Air Quality Management District and the University of Wisconsin-Madison will train an inaugural Eastern Africa cohort of lead scientists how to conduct research, including setting up air quality monitoring stations and collecting respiratory data. Scientists in Eastern Africa will also learn how to translate findings into policies. The Eastern Africa Children’s Health Study, which will begin in the second year, will look at the impact of air pollution on the respiratory health



Addis Ababa University co-investigator Worku Tefera trains with USC and South Coast Air Quality Management District researchers at an air monitoring station at USC in April 2013.

of 9- to 10-year-old students in Ethiopia, Kenya, Rwanda and Uganda — 4,000 in all. This approach resembles that of the initial USC Children’s Health Study, which began as a one-off query and concluded as a longitudinal study lasting 21 years. By the hub’s final year, a dozen lead scientists will be trained to continue their work as new leaders in GEOHealth research. The goal is for the Eastern African hubs to be self-sustainable and extend into other countries in the region. “We recognize that governments are hamstrung by a lack of resources,” said Jonathan Samet, MD, chair of the Department of Preventive Medicine, director of the Institute for Global Health and a co-principal

investigator of the GEOHealth Hub. “We hope to develop clear evidence that will motivate policymakers to take action to protect their populations.” Other international hubs in India, Bangladesh, Southeast Asia, the Caribbean, South America and West Africa will address GEOHealth topics focused on the most pressing challenges in each region. In Eastern Africa, air pollution is one of the biggest concerns, according to the GEOHealth Hub’s initial assessment. The five-year, \$3 million grant was awarded Sept. 28 to a team comprising the USC Institute for Global Health, the USC Department of Preventive Medicine and the Addis Ababa University School of Public Health.

OPEN ENROLLMENT

Continued from page 1 and at the USC Engemann Student Health Center on the University Park Campus. The history of primary care at USC began about 30 years ago when the doors for private practice were first opened. Patients soon learned that they could obtain excellent academic-level medical care without having to travel hours back and forth to other parts of Los Angeles. Patients who had experienced specialized care at Keck Hospital expressed interest in obtaining

their general care through USC. “Physicians are now available to build long-term relationships with patients,” Goldstein said. “Patients span the spectrum from requiring preventative care to the management of chronic illnesses such as diabetes and heart failure.” The network of primary care is expected to grow further. Keck Medicine leadership is considering the development of relationships with other primary care physicians in communities that might seek quaternary care on a USC campus. Additional practice opportunities for full-time faculty might develop in areas

where many USC employees live. “Our goals include establishing conversations between local businesses and organizations to acquaint them with our primary care physicians and the various programs that we have to offer, including care to well patients, executive health examinations, pediatric and geriatric care,” Goldstein said. “Our primary care physicians are here not only to provide excellent care to our patients, but to serve as an open door to the outstanding specialty care that Keck has to offer. Our physicians will provide an avenue to assist our patients as they weave through the

complicated nature that is modern health care. The opportunities are limitless if we have the vision and resources to make it happen.” A coordinated primary care initiative for patients with chronic illness is also being considered. “Our goal is to have one doctor take care of each patient on the ambulatory side and on the in-patient side,” Goldstein said. “We have the skill set to take care of patients from the beginning of life to the end of life in a sophisticated academic environment.” Such an approach can also benefit the financial health of the medical organization, Goldstein said.



Med-COR Director Joyce Richey, back row center, introduced students from the program during the annual Oktoberfest event presented by the Keck School of Medicine of USC.

MED-COR: Program benefits medical magnet high schools

Continued from page 1

was designed to address the fact that minority students, and especially those from neighboring high schools, are traditionally underrepresented among the student body at the medical school and in other health-related programs.

In the early days, the program assisted more than 1,000 students from 34 high schools and 43 middle schools in the Los Angeles area. As a result of budget cuts, the program has been reduced to four medical magnet high schools, including Francisco Bravo Medical Magnet High School and Orthopaedic Hospital Medical Magnet High School.

More recently, programs have been added to enhance the experience for the students. Selected students can now spend six weeks in the summer doing a work study internship at L.A. County+USC Medical Center or Keck Hospital of USC. The students also spend time volunteering in

the community at local health fairs, including the Feria hosted by the American Diabetes Association.

Over time, Med-COR has seen success in sending its graduates on to major universities, where most of them major in biomedical sciences. Many go on to medical, dental, pharmacy and nursing schools across the country.

“Med-COR supports, motivates and prepares disadvantaged and underrepresented students to be competitively eligible for admission to college and ultimately a career in the health professions,” said Joyce Richey, PhD, assistant dean and chief diversity officer for student affairs at the Keck School and program director for Med-COR.

Richey added that 100 percent of Med-COR’s students graduate from high school and attend college. Their average SAT scores are far above the national and LAUSD student averages. “We are certainly making an impact.”

Grant to fund tissue regeneration center

By John Hobbs

Tissue regeneration is getting a boost from a \$2 million grant divided among 10 research centers and universities, including the Herman Ostrow School of Dentistry of USC.

The National Institute for Dental and Craniofacial Research has directed the research community to devise interdisciplinary groups to help bring to market safe and effective clinical strategies for dental, oral and craniofacial tissue regeneration.

“This is really about engineering a product,” said Yang Chai, DDS, PhD, associate dean of research at the Herman Ostrow School of Dentistry of USC. “It’s not only about being able to understand what stem cells can do, but also how you deliver the stem cells for patient care.”

Chai will serve as the principal investigator of USC’s interdisciplinary consortium — called the Center for Dental, Oral and Craniofacial Tissue and Organ Regeneration (C-DOCTOR) — which has enlisted nearly 30 individuals from USC Viterbi School of Engineering, Keck School of Medicine of USC, Children’s Hospital Los Angeles and USC School of Pharmacy.

The first task will be to identify areas in which tissue regeneration could improve patient outcomes and have immediate impact. For this endeavor, Chai has enlisted representatives from endodontics, oral surgery,

periodontics and prosthodontics to make product suggestions based on their own clinical practices.

An example is developing an effective strategy to use a 3-D printed, dissolvable scaffold to help organize stem cells for repair of damaged jaw bone.

“Bone deficiency is a very common problem that patients face when they need an implant or when they have periodontal disease, traumatic injury or birth defect,” Chai said. “Instead of stealing bone from other parts of the body, we’re going to be able to use stem cells to regenerate their own bone.”

In addition to the clinical team, the interdisciplinary group will feature a pre-clinical team whose role is to develop experimental protocols and sound statistical methods to test potential therapies as well as a regulatory team that will interface with the Food and Drug Administration and provide guidance regarding intellectual property protection.

The grant money will be awarded in phases, with Phase One awards lasting a year and supporting the development of an overall vision, road map, organizational structure and operational procedure.

Each of the 10 grantees will then have to compete for a Phase Two award, which will provide additional funding for three to four years.

Stem cell researcher Min Yu earns NIH Innovator Award

By Cristy Lytal

As a winner of an NIH Director’s New Innovator Award, USC Stem Cell principal investigator Min Yu, MD, PhD, will strive to develop individualized medicine targeting rare and deadly breast cancer stem cells. The five-year, \$2.475 million award is part of the High-Risk, High-Reward Research program supported by the NIH Common Fund.

This year’s New Innovator Awards support 41 unusually creative early-career investigators. The New Innovator Awards are unique in deemphasizing preliminary data and instead focusing on the creativity of the investigators, the innovation of the research approaches and the potential of the projects to have significant impact on important health problems.

“This program has consistently produced research that revolutionized scientific fields by giving investigators the freedom to take risks and explore potentially groundbreaking concepts,” said NIH Director Francis S. Collins, MD, PhD. “We look forward to the remarkable advances in biomedical research that the 2015 awardees will make.”

Yu’s New Innovator project tackles one of the biggest challenges for treating breast cancer: targeting rare metastatic cancer stem cells (CSCs) in a constantly evolving tumor unique to each patient.

CSCs are thought to be a highly metastatic subset of the broader population of tumor cells that enter a patient’s blood circulation. Therefore, Yu will first obtain these circulating tumor cells from patient blood samples, expand the number of these cells in the laboratory and pinpoint the most metastatic of these cells — the dangerous and deadly CSCs — by evaluating their ability to form tumors in mice.

She’ll perform studies to reveal the CSCs’ unique molecular properties and biomarkers, which are expected to vary among samples obtained from different patients. She will then test if CSCs with certain properties or biomarkers respond best to certain drugs — which could eventually inform clinicians about individualized treatment regimens for targeting CSCs in breast cancer patients.

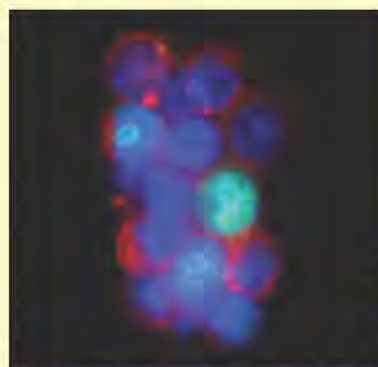
“Breast cancer occurs in one in eight women in the United States and leads to 40,000 deaths annually,” Yu said. “I believe that we can help these patients by targeting CSCs, the most important cells for sustaining tumor growth.”

Yu has devoted herself to advancing patient care for more than 15 years. Born and raised in the city of Qingdao in northeast China, Yu earned her MD at Shandong Medical University and completed a master’s degree in neurology at Peking University Health Science Center.

After working with patients with incurable neurological diseases, Yu recognized the need to find new treatments through medical research. She joined the PhD program in genetics at SUNY Stony Brook University and Cold Spring Harbor Laboratory, where she developed her interest in



Min Yu



A CTC cluster stained for keratin (red) and proliferation marker (green).

breast cancer in the laboratory of Senthil Muthuswamy. She pursued postdoctoral training in the laboratory of Daniel A. Haber at Massachusetts General Hospital, Harvard Medical School, where she characterized circulating tumor cells isolated from the blood of cancer patients.

In 2014, Yu became an assistant professor in the Department of Stem Cell Biology and Regenerative Medicine and a member of the USC Norris Comprehensive Cancer Center, where her laboratory is located in close proximity to the patients and clinicians who play a key role in advancing the translational aspects of her research.

USC Norris Director Stephen B. Gruber, MD, PhD, MPH, who enabled this synergy, called Yu “a bright, innovative researcher with an exceptional track record, intriguing and clinically relevant research program, and strong drive to succeed.”

He added, “Her proposal bridges innovative basic research and translational oncology to address critical questions about cancer stem cells, and it could have a huge impact on the treatment of cancer patients worldwide.”

In addition to the NIH Director’s New Innovator Award, Yu has received the NCI Transition Career Development Award (K22), the STOP CANCER Research Career Development Award, the Pew-Stewart Scholar for Cancer Research award, and the Donald E. and Delia B. Baxter Foundation faculty fellowship.

“The New Innovator Award recognizes Min’s exceptional creativity in pursuing individualized stem cell-targeted treatments for breast cancer patients,” said Andy McMahon, PhD, FRS, chair of the Department of Stem Cell Biology and Regenerative Medicine. “Since her arrival at USC, Min has amply demonstrated this creativity — along with every other quality required to succeed in the challenging and critically important field of cancer research.”

HSC Newsmakers

A roundup of news items related to Keck Medicine of USC, which may include philanthropic donations, research grants, publication in academic journals and mentions in the news media:



Les Dunseith

Artist Erna Braun poses with granddaughters Lauren, Sophia and Jasmine in front of a painting from Braun's Hope Rose Collection.

Art opening continues series that features work by cancer survivors

ARTIST AND CANCER SURVIVOR ERNA BRAUN spoke Oct. 14 to mark the opening of an exhibit of her paintings in the Jennifer Diamond Cancer Resource Library at USC Norris Comprehensive Cancer Center. Braun's show is the sixth in a rotating exhibit titled *The Survivor Art Series*. Braun credited her "wonderful, supportive family" in helping her deal with a 1993 cancer diagnosis, and she noted that the experience helped rekindle her interest in art. Braun spoke in front of one in a series of artworks focusing on pink roses that she calls the Hope Rose Collection, from which a portion of sales go to breast cancer research. "Painting is my escape, therapy and passion," Braun said at the show's opening. "I know that I am one of the blessed, the fortunate ones — a cancer survivor." The exhibit will continue through early January in the resource library, which also hosts a *Survivor Author Series* that will feature 29-year-old writer Eric Glynn at 2 p.m. on Nov. 11. Glynn wrote *#KickingCancer, My Battle Told Through Social Media*.

Gruber is elected to AACI board

STEPHEN B. GRUBER, director of the USC Norris Comprehensive Cancer Center, has been elected to the board of directors for the Association of American Cancer Institutes. Gruber, MD, PhD, MPH, will begin a three-year term on the board starting Oct. 25 during the group's annual meeting in Washington, D.C.

Gift from dentistry professors endows clinic for special patients

THE HERMAN OSTROW SCHOOL OF DENTISTRY has received a financial boost — and a new name for its Special Patients Clinic — thanks to a donation from Roseann Mulligan and Glenn Clark. The official announcement was made on Oct. 13 to a crowd of Ostrow faculty, staff and alumni celebrating the clinic's 30th anniversary at an elegant reception in Downtown Los Angeles. The gift provides the clinic with an endowment that will fund the operation for years to come. The new name — the Dr. Roseann Mulligan Special Patients Clinic — pays tribute to Mulligan (known as Nan). Her vision and leadership not only helped start the program, which is one of the first school-based dental clinics for patients with special needs, but also has kept it running for three decades. "I've always been interested in caring for the oral health needs of those patients who couldn't get treatment elsewhere," said Mulligan, who is Ostrow's associate dean of community health programs and hospital affairs. She and her husband, Ostrow Professor Glenn Clark, decided to make a large gift that could make a real impact on the clinic's permanence at the Herman Ostrow School of Dentistry. "What we wanted most," Clark said, "was for the patients treated by that clinic to get continuous care—this year, next year, 10 years, 15 years down the road, if possible."



The endowment from Glenn Clark and Roseann Mulligan will ensure funding for years.

Vo receives dissertation award

USC's ANNE VO has received a prestigious award that was established to recognize a rising scholar-scientist's significant intellectual contribution to evaluation theory, methodology and practice. The nationally recognized Michael Scriven Outstanding Dissertation Award is presented annually by Western Michigan University. Vo, PhD, is an assistant professor of clinical medical education at the Keck School of Medicine of USC and associate director of evaluation and assessment within the Department of Medical Education.



Robert Gallagher

Attendees got a chance to experience virtual reality through hand-held devices at the conference.

New virtual care clinic is among highlights of annual USC Body Computing Conference

By Douglas Morino

Virtual reality, wearable technology, artificial intelligence — the dawn of the technological revolution in health care is here.

Some of the latest medical innovations were highlighted Friday at the 9th USC Body Computing Conference, a daylong summit focusing on the bridges between medicine and technology. The conference featured physicians, tech leaders and university officials discussing the latest technological advances and how they can be used to better treat patients.

A centerpiece of the conference was the announcement of a new virtual care clinic, a facility that will use technology to help physicians provide better, more personalized health care to their patients.

"In the last nine years there has been a revolutionary change in the way culture and society use technology," said Leslie A. Saxon, MD, a cardiologist and founder/executive director of the USC Center for Body Computing. "It's about to happen in medicine."

The USC Virtual Care Clinic is in Playa Vista, near the Silicon Beach area that is home to some of the firms leading the way in technological breakthroughs, including YouTube, Facebook and Google.

A collaboration of several technology partners and the USC Institute for Creative Technologies, the USC Virtual Care Clinic is a first-of-its-kind virtual hospital with health data being fed via wearable and injectable technology. Through the use of virtual reality and artificial intelligence, physicians will be able greatly increase the number of patients they see daily and increase personalized health care solutions, Saxon said.

"Technology has dramatically changed the way we communicate with each other," Saxon said. "Technology will make us more human and better connected to our patients."

Her advice? "Be prepared for hologram house calls."

To open the conference, Saxon showed the audience a demonstration of her interacting virtually with a patient in the form of a hologram. In Saxon's example, the patient was in Dubai. Because Saxon was unable to physically meet with the patient, she stood in front of a video camera and had her image beamed in real time as



Robert Gallagher

Keck Medicine of USC physicians Leslie Saxon and Inderbir S. Gill talk about the future of medicine during a session at the CBC conference.



Robert Gallagher

Thai Phan of the USC Institute of Creative Technologies shows a tool that uses a smartphone as a virtual reality device to simulate the effects of progressive blindness caused by diabetes.

a hologram to the patient to discuss health care options.

"This will be a clinic where patients can see the future — a clinic where the best doctor is always in," Saxon added.

Through its partnership with the Institute for Creative Technologies, initially the USC Virtual Care Clinic will focus on serving chronically ill

patients, veterans returning from war, elite athletes and patients who want to be more engaged with their own health care. The clinic will help veterans combat PTSD through technology called Virtual Reality Exposure Therapy, and it will develop games for physician rehabilitation and create virtual "humans" with the ability to interview patients.

Other themes discussed at the Body Computing Conference included wearable technology and mobile health, as well as digital performance technology for elite athletes. The role of digital training and health tools to optimize training and support for the health of members of the military throughout the cycle of training, deployment and post-deployment was also discussed.

USC Health Sciences
Public Relations and Marketing
2011 N Soto Street - SST-2830
Los Angeles, CA 90032

Non-Profit Organization
U.S. POSTAGE PAID
Industry CA
Permit 4029

HSC News

HSC News is published for the faculty, staff, students, volunteers and visitors in the University of Southern California's Health Sciences Campus community. It is produced by the Health Sciences Public Relations and Marketing staff. Permission to reprint articles is available upon request. No artwork may be reproduced without the creator's consent.



Editor: Les Dunseith

Director, Internal Communications: Virginia Baca

Contributors: Andrea Aldana, Meg Aldrich, Amanda Busick, Louise Cobb, Cristy Lytal, Hope Hamashige, Melissa Masatani, Carol Matthieu, Douglas Morino, Sara Reeve, Leslie Ridgeway, Sherri Snelling and Carol Sussman

Phone: (323) 442-2830
Fax: (323) 442-2832
Email: hscnews@usc.edu
Web: hscnews.usc.edu | kecknet.usc.edu

Next Issue:
Nov. 6