Renowned eye expert named Dept. of Ophthalmology chair

‘Keck Medicine of USC is known for its pioneering efforts in vision research and innovative solutions to managing eye disease and I am dedicated to continuing this legacy of excellence.’

—Rohit Varma, chair of the Keck School of Medicine Department of Ophthalmology

Helen Hislop, influential former chair of physical therapy, dies at 84

By Hope Hamsbligo

Helen Hislop, PhD, a pioneering former chair of Biokinesiology and Physical Therapy, a division at the Ostrow School of Dentistry of USC, died on Nov. 15 in North Carolina at the age of 84. Hislop spent 30 years at USC, heading the division from 1975 to 1998.

In a message to colleagues at USC, James Gordon, EdD, current chair of the division, wrote, “More than anyone, she was responsible for the growth of our research programs, the formation of our clinical programs, and the excellence of our education programs. She was a true visionary, and she is recognized as a giant in the physical therapy profession. Every physical therapist, not just those of us at USC, benefits from her legacy.”

At USC, Hislop developed the first PhD program in physical therapy in the United States and one of the first Doctor of Physical Therapy programs.

She also embraced evidence-based learning, integrating the practice of physical therapy with top-level scientific research, which has since become the standard at the division and for all physical therapy programs in the United States.

Another of her innovations was the creation of clinical specializations within the division curriculum. She also developed the clinical internship programs, which transformed into physical therapy residencies while she was at USC. Hislop studied physical therapy at the University of Iowa in the early 1950s, where she first worked with polio patients. She went on to work at Yale University Hospital and later finished a master’s degree in physiology at the University of Iowa. After teaching for several years, she completed her PhD in physiology at the University of Iowa.

Early in her career, Hislop conducted research on the state of physical therapy education that would serve as the foundation of the reforms she later instituted at USC. That study, published in the Journal of the American Physical Therapy Association (APTA), looked at the level of physical therapists’ preparation in the sciences and clinical work and the types of positions they held.

She was later asked to edit the journal, a position she held for much of the 1960s, which gave her a voice in shaping the direction of the profession.

In 1984, Hislop came to USC while working as director of the Rehabilitation Research and Training Center at Rancho Los Amigos Hospital, which had an affiliation with several departments at USC, including physical therapy.

Hislop redesigned the clinical education for division students, offering a one-year internship for significant contributions to the field. Varma has been a funded researcher for the past 20 years by the National Eye Institute, part of the National Institutes of Health (NIH).

He is the principal investigator of the Los Angeles Latino Eye Study (LALES), Multi-Ethnic Pediatric Eye Diseases Study (ME- PEDIS), African-American Eye Disease Study and the Chinese-American Eye Study in addition to his studies on blindness and vision impairment for the World Health Organization.

Varma’s experience with national and international organizations will aid in his additional role as associate dean for strategic planning and community network development with the Keck School of Medicine of USC to expand the eye care network.

“Dr. Varma is an internationally recognized clinician-scientist, translational researcher and educator,” said Carmen A. Puliafito, MD, MBA, dean of the Keck School of Medicine.

“His vital work protecting and promoting vision health for all Americans and his primary epidemiological research, which has focused on two of our most vulnerable populations: minority children and seniors, go beyond exceptional medicine. We’re proud to have him return to Keck Medical.

See VARMA, page 3
Viral microRNAs responsible for causing AIDS-related cancer

By Alison Trinidad

For the first time, scientists and engineers have identified a critical cancer-causing component in the virus that causes Kaposi’s sarcoma, the most common cancer among HIV-infected people. This discovery lays the foundation for developing drugs that prevent Kaposi’s sarcoma and other related cancers.

“The mechanism behind Kaposi’s sarcoma-associated herpesvirus (KSHV) that causes healthy cells to become malignant is not well understood despite two decades of intensive studies,” said S. J. Gao, PhD, professor of molecular microbiology and immunology at the Keck School of Medicine of USC and principal investigator of the study. “This is the first time that a viral factor has been shown to be required for KSHV-induced malignant transformation. We have identified a mechanism by which these tiny viral molecules cause the cells to become malignant.”

Distinguished by dark lesions on the skin, Kaposi’s sarcoma most commonly develops in people who are infected with KSHV and also have compromised immune systems. Although many people infected with KSHV never show any symptoms, Kaposi's sarcoma is a persistent problem in areas where HIV infection is high and access to HIV therapy is limited. More than 90 percent of the population in some areas of Africa shows signs of KSHV infections, according to the American Cancer Society.

Gao and colleagues from the University of Texas at San Antonio (UTSA) and University of Texas Health Science Center at San Antonio studied KSHV using a rat stem cell model they developed in 2012. Until then, researchers had been unable to study the virus because most healthy cells, once infected with KSHV, died before turning into cancer cells. In this study, which appeared in the Dec. 26 edition of the peer-reviewed journal PLOS Pathogens, the team identified a cluster of viral microRNA molecules that are necessary to transform healthy cells into cancerous ones. When this macro RNA cluster was suppressed, the cells died after they were infected with KSHV. Flipping the switch and turning the cluster back "on," however, allowed the cells to stay alive and become malignant when infected with the virus. Using advanced genomic methods, the researchers also found that microRNAs target the IκBκ protein and the NF-κB cellular pathway, both of which are associated with cancer development.

“Our results suggest that this cluster of KSHV microRNAs and their regulated NF-κB pathway may be potential targets for new therapeutics of KSHV-related cancers,” said Gao, who is also a member of the USC Norris Comprehensive Cancer Center. “Several of the microRNAs appear to have redundant functions, so targeting their common pathways might be a more feasible approach. It would be interesting to test them in the KSHV-induced Kaposi’s sarcoma model.”

Yufei Huang, PhD, professor of electrical and computer engineering at UTSA, is the study’s co-corresponding author. Other USC authors include researchers Ying Zhu, PhD, and Tiffany Jones, PhD. Their work was supported by the National Institutes of Health (grants CA096512, CA124332, and CA177337).

By Paul Karan

A public education program that trained and fielded a cadre of health mentors in California significantly boosted Latino residents’ knowledge of everything from cholesterol and diabetes to the importance of nutrition and exercise, a USC study showed.

The study, by the Southern California Clinical and Translational Science Institute (SC CTSI), showed that specially trained “promotoras” – community members who act as health-oriented helpers and liaisons to their neighbors and communities — were effective at communicating key health information. Lourdes Baezconde-Garbanati, PhD, professor of preventive medicine at the Keck School of Medicine at USC, served as principal investigator on the study. Collaborators included Visión y Compromiso, an advocacy organization devoted to improving knowledge and access to health for California’s native-born and immigrant Latino communities. During the SC CTSI project, the study team trained 25 promotoras in a heart-health curriculum called “Su Corazón, Su Vida.” The evidence-based curriculum was developed by the NIH’s National Heart, Lung, and Blood Institute (NHLBI) to address health disparities in underserved and minority communities.

Promotoras were trained to provide culturally and linguistically relevant health information and help to people within their communities. As members of the communities themselves, promotoras were able to leverage personal contacts, trust and respect to address sensitive topics, counter misinformation and advocate for quality care, according to advocates.

The promotoras then organized 11-week heart-health courses based on the curriculum, involving Latinos who lived in their communities in urban Los Angeles County and rural Kern County. The study was designed to explore the value of the promotoras model in reducing the disproportionately high rates of heart disease and other health concerns among Latinos in those communities.

By the time the study was complete, the promotoras had engaged a total of 730 residents in the courses in 49 workshops between the two counties studied.

Michelle Kipke, PhD, co-director of SC CTSI and director of SC CTSI’s Community Engagement, said, “Promotoras bring unique expertise and skill sets that help researchers to create tailored, targeted interventions. This is a great example of an innovative strategy that brings researchers and the community together to improve the health of our diverse community.”

Based on data gathered through questionnaires administered at the start and completion of the courses, investigators found that residents who took the workshops improved in several areas of lifestyle and health knowledge, such as causes and effects of diabetes, as well as cooking habits and frequency of exercise.

HSC News

Next Issue: Feb. 21

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Associate Vice President, Health Sciences Public Relations and Marketing: Deborah S. Fullerton
Executive Director of Creative Services: Tom DeSanto
Assistant Director of Publications: Sara Reeve
Editor: Jon Nalick
Contributors: Amy E. Hamaker, Hope Hamashige, Paul Karon, Carol Matthieu, Leslie Ridgeway and Alison Trinidad

Vice President, Public Relations and Marketing: Brenda Maceo

Phone: (323) 442-8820 Fax: (323) 442-8832
Email: hscweekly@usc.edu Web: theweekly.usc.edu

HISLOP: USC leader shaped a profession

Continued from page 1 select students.

During that year, students did three rotations at three local institutions, including Rancho Los Amigos and Los Angeles County Hospital, now called LAC+USC Medical Center.

By 1978, the program at USC accepted its first PhD students and awarded its first PhD in 1984. In 1993, Hislop introduced the concept of bioethics, which studies the interactions between molecular and cell biology of muscles, bones and joints and how that influences the mechanical and behavioral aspects of movement. Bioethics was integrated into the division’s curriculum during that time and also became part of the division’s formal name.

It took another decade to plan, but she also successfully launched USC’s DPT program, which graduated its first class in 1998, the year Hislop retired and moved to Durham, North Carolina.

Donations in Hislop’s honor may be made to the Helen Hislop Endowed Scholarship Fund, which supports USC Doctor of Physical Therapy students at USC, at http://usc.edu/17u.

FEBRUARY 7 • 2014

USC partners with advocacy organization to improve heart health among Latinos

By Lourdes Baezconde-Garbanati

The study team trained 25 promotoras in a heart-health curriculum called “Su Corazón, Su Vida.” The evidence-based curriculum was developed by the NIH’s National Heart, Lung, and Blood Institute (NHLBI) to address health disparities in underserved and minority communities. Promotoras were trained to provide culturally and linguistically relevant health information and help to people within their communities. As members of the communities themselves, promotoras were able to leverage personal contacts, trust and respect to address sensitive topics, counter misinformation and advocate for quality care, according to advocates.

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VARMA: Hails USC’s ‘pioneering efforts in vision research,’ eye disease treatment

Continued from Page 1

School of USC and name him as chair of our ophthalmology department to continue our leadership in vision training, research and clinical practices.”

In his remarks at the time at USC, the Department of Ophthalmology was a pioneer in population-based studies that have provided substantial data on the frequency and impact of major eye diseases, as well as possible preventive and therapeutic strategies necessary to eliminate them. Varma also has established an international reputation in new imaging techniques for detecting and treating glaucoma.

“Dr. Varma is a perfect example of the world-class talent we attract at Keck Medicine of USC,” said Thomas Jackiewicz, senior vice president and CEO for USC Health. “By fostering the best in academic medicine where we bring together education and training, research and patient care, Dr. Varma will help us lead the way during a time of significant health care transformation.”

More than 4.1 million Americans over age 40 suffer from some vision impairment including more severe eye diseases such as glaucoma (2.7 million) and almost 1.3 million with complete blindness. Focusing on changes in the optic nerve in glaucoma, Varma has helped pioneer the development of imaging techniques that aid in the early diagnosis of glaucomatous optic nerve damage. He also was involved in developing unique implantable intracranial pressure (IOP) sensors and drainage devices that hold the promise for curing or at least controlling glaucoma.

“I am deeply honored to have been selected as the chair of the Department of Ophthalmology and director of the USC Eye Institute at Keck Medical School of USC,” said Varma. “Keck Medicine of USC is known for its pioneering efforts in vision research and innovative solutions to managing eye disease and I am dedicated to continuing this legacy of excellence and helping guide the department to new heights.”

Varma has more than 290 publications in peer-reviewed ophthalmic journals and has co-written two ophthalmic books, Essentials of Ophthalmic Care: The John Hopkins Wilmer Handbook and The Optic Nerve in Glaucoma. His numerous awards include Research to Prevent Blindness Career Development Award, Sybil H. Barrington Scholar, American Academy of Ophthalmology Senior Achievement Award, Glaucoma Research Foundation President’s Award and Best Doctor Award. He also has served as editor of prestigious ophthalmological journals.

He serves on the Institute of Medicine Roundtable on Health Disparities, chairs the American Academy of Ophthalmology Public Health Committee and served on the Scientific Counselor of the National Eye Institute. Having earned his medical degree at the University of Delhi, India, Varma completed his residency at Johns Hopkins University. He completed two glaucoma fellowships, one at the Wilmer Eye Hospital in Philadelphia and the other at the University of Southern California.

Mark S. Humayun, MD, PhD, who has served as interim chair of the Department of Ophthalmology and director of the USC Eye Institute, will continue as co-director for USC Eye Institute and as director of the Institute for Biomedical Therapeutics, director of sensory sciences initiatives, the Cornelius J. Pings Chair in Biomedical Sciences, a tenured University Professor in three departments: ophthalmology, biomedical engineering, and cell and neurobiology. Humayun will continue to lead the ophthalmology department into an interim role until Varma assumes his role as chair this summer.

“We are especially grateful to Dr. Humayun for providing interim leadership and are pleased to support his goals of returning more of his focus to his ground-breaking research programs,” Puliafito said.

Through his work in advanced engineering, Dr. Humayun will continue to ensure Keck Medical School of USC’s critical contributions to vision research and disease treatment.

Humayun is internationally known for his work on the Argus II, an artificial retina implant designed to restore sight to those blinded by macular degeneration.

Calling all Keck School faculty: Cast your vote for USC

U.S. News & World Report ranks many of our excellent clinical departments among the top programs in the country. These rankings are an important marker that communicates the high quality of our patient care and medical research to the public. Each program’s reputation among physicians is a vital component of scoring. In previous years, U.S. News sent its survey to a small group of board-certified specialists across the country. This year, U.S. News has announced it will expand the survey to reach 50,000 board-certified physicians using an online voting process through Doximity, a new online physician network. To vote online, physicians need to register for a free account or update their profile with Doximity. Physicians may already have a profile because Doximity pulls information from physician databases. By visiting www.doximity.com, physicians can establish or activate their accounts quickly. By entering their names and clicking on “Find My Profile.”

After registration, physicians may receive an invitation to participate in the U.S. News survey to rank programs. Please note that USC hospitals are currently listed as “USC Keck Hospital” and “USC Norris Cancer Hospital.” For ophthalmology, physicians may be asked to choose “USC Eye Institute” or type in their vote. Faculty member votes are important. “If you are invited, please vote,” said Carmen A. Pulsafito, MD, MBA, dean, Keck School of Medicine of USC. “I urge you to participate in the survey, which is so important to recognizing the top hospitals and clinical programs in the country.”

Time is of the essence. The U.S. News survey is underway and will continue through Feb. 10.

HSC NEWSMAKERS

The January 2014 edition of Physician Magazine featured a story about Keck Medicine of USC opening a new downtown outpatient clinic. The clinic opening also was covered by Los Angeles Downtown News.


A Jan. 9 story on Economy.com noted that angel investors Rock Health named Leslie Saxon, MD, professor of clinical medicine at the Keck School, among its “top 50 in Digital Health,” individuals “who led the pack in making the largest impact on digital health in 2013.”

A Jan. 9 broadcast on The Wall Street Journal featured a Short Guide to a Long Life by David Agus, MD, director of the USC Westside Norris Cancer Center and director of the USC Center for Applied Molecular Medicine at the Keck School and Viterbi School of Engineering. Agus discussed the practical value to corporations taking care of their employees’ health. CBS News “This Morning” also highlighted the book, in which Agus makes recommendations for patients to manage their own health. “Health is going to change from the ground up, not the top down,” Agus said. “I wrote a book with all the tenets and the rules so you can go in empowered.”

A Jan. 8 broadcast on CBS News Los Angeles affiliate KGET-TV quoted Daniel Stram, MPH, PhD, professor of preventive medicine at the Keck School, about the risks associated with eating seafood.

A Jan. 8 story in The Ladera Valley Sun featured a story about the first baby delivered at USC Verdugo Hills Hospital in 2014. “It’s kind of like you share the holiday (with them),” said Missy Stehlin, RN, interim director of the Keck Hospital” and “USC Keck Hospital” and “USC Norris Cancer Hospital.” For ophthalmology, physicians may be asked to choose “USC Eye Institute” or type in their vote. Faculty member votes are important. “If you are invited, please vote,” said Carmen A. Pulsafito, MD, MBA, dean, Keck School of Medicine of USC. “I urge you to participate in the survey, which is so important to recognizing the top hospitals and clinical programs in the country.”

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Calendar of Events


3 p.m. – 5 p.m. Southern California Clinical and Translational Science Institute. “How to Write a Manuscript,” Jon Samset. USC, Harkness Auditorium. RSCP: ucscd@usc.ets.org.

Tuesday, Feb. 11 7:30 a.m. – 9:30 a.m. President’s Annual Address to HSC Faculty. USC, President C. L. Max Nikias. President’s Annual Address. Info: (323) 740-1744.


Friday, Feb. 14 8 a.m. Saban Research Institute Seminar. “Youth Violence: The Ultimate Health Disparity,” Edward M. Barkdale, Jr., Case Western Reserve School of Medicine. Saban Research Building, First Floor Auditorium, CHLA. Info: cmillman@chla.usc.edu.

3 p.m. – 5 p.m. Keck School of Medicine. Workshop on 3D Neuroimaging: “Structural and Diffusion Brain Imaging for Medical Image Analysis in 3D Slicer,” various speakers, USC, NSB. Room 105. Info: irmias@usc.edu.


Tuesday, Feb. 18 10 a.m. Keck Hospital of USC. Guild Health Speaker Series and Luncheon. “Restoring Feeling to Fingers,” Milan Stavrevski, USC. 10 a.m. coffee, 10:30–speaker, luncheon at noon (825). Doheny Eye Institute, Third Floor Auditorium. Info: (213) 254-0000, mstavrevski.net.


Friday, Feb. 21 9 a.m. – 6 p.m. Saban Research Institute Annual Symposium. “Regenerative Medicine and Cellular Therapies: Inventing the Future for Children,” various speakers, USC, Saban Research Building, First Floor Auditorium, CHLA. Info: irwinb@chla.usc.edu, chla.org/admissions or (323) 361-8715.

By Leslie Ridgeway

With a goal of helping young researchers launch their careers, the Meira and Shaul G. Massry Foundation has provided a $175,000 gift to the Keck School of Medicine of USC Dean’s Fifth-Year Research Scholars program.

With this gift, seven fourth-year medical students have the opportunity to focus on research projects for one year after graduation from medical school. Fifth-year scholars receive a stipend of $25,000 each to continue their research. The $175,000 gift is $75,000 more than last year’s gift, giving three more opportunities for support.

“I believe that a student who has finished four years of medical school and is ready to postpone his or her career is motivated to be a scientist, and that’s critical,” said Shaul G. Massry, MD, professor emeritus of medicine, physiology and biophysics at the Keck School and president of the Massry Foundation. “The Foundation is best known for the prize in medicine — it offers to noted scientists — 10 of the 31 Massry Prize winners have gone on to win Nobel Prizes. Massry served as chief of the division of nephrology at the Keck School from 1974 to 2000, and has received honorary doctorates from 14 European universities.

He has published more than 600 scientific papers and 111 book chapters and has edited 32 books. He created the Massry Foundation in 1995.

According to Massry, encouraging new scientists is vital to the future of medicine. “Clinical medicine is critical,” he said. “It’s very important to take care of disease and what causes it. You need investors to search for the causes of disease.”

Keck School Dean Car- men A. Pullaito, MD, MBA, agrees. “I created the Dean’s Fifth-Year Program to give students the opportu- nity to spend a full year working on focused research projects to prepare them for further research after graduation and encourage them in the development of their academic medical careers,” he said. “We thank Dr. Massry for his founda- tion’s generous contribution to help our students meet those goals.”

Etcetera

Paul Macklin, assistant professor of research, will speak at the American Association for the Advancement of Science annual meeting, to be held Feb. 13-17 in Chicago. As part of a discus- sion on “big data” — data sets so large and complex that they become difficult to process using traditional applications — Macklin will present his talk, “Integrating Next-Generation Computa- tional Models of Cancer Progression and Outcome.”

The U.S. Food and Drug Administration (FDA) is offering mid-career profes- sionals the opportunity to spend a year in the Center for Tobacco Products. FDA Tobacco Regulatory Science Scholarships help de- velop science-based public health strategies and serve as the lead for defined projects, and meet with policy lead- ers. Fellows are awarded up to $95,000. The application is open through March 3.

To find out more, visit www.tobaccoregulatorysciencefellowship.org/app.

Massry Foundation’s $175,000 grant supports seven KSMO research scholars

Shaul G. Massry (left) presents Keck School of Medicine Dean Carmen A. Pullaito with a check to support the Fifth-Year Research Scholars program.

Notice: Deadline for calendar submission is a 4 p.m. Monday to be considered for that week’s issue — although three weeks’ advance notice of events is recommended. Please note that timely submission does not guarantee an item will be printed. Send calendar items to HSC News, KM 400 or fax to (323) 442-3872, or email to nalicke@usc.edu. Entries must include date, day, 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: (312) 740-3323 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 emergen- cy. Backup Web servers on the East Coast will function if the USC servers are incapacitated.

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Amy Hamaker

Amy Hamaker