HUGO R. ROSEN NAMED CHAIR OF DEPARTMENT OF MEDICINE

Hugo R. Rosen, MD, has been recruited to serve as the chair of the Department of Medicine at the Keck School of Medicine of USC, effective May 1.

Rosen joins the Keck School from the University of Colorado, where he has been the head of the division of gastroenterology and hepatology since 2005, according to Interim Dean Laura Mosqueda, MD.

“He has been the architect of a remarkable growth of clinical, research and education missions with the recruitment of over 45 faculty members, establishment of new multidisciplinary programs and transformation into one of the highest-rated divisions in the country,” Mosqueda wrote in a memo announcing the recruitment.

An accomplished translational, clinical and basic science researcher and clinical program-builder, Rosen uses findings gleaned from his laboratory research to help his patients, who further inform his work in the lab. He said he believes that the combination of the Keck School, Keck Medical Center of USC and Los Angeles County + USC Medical Center will move the paradigm not only from bench to bedside, but onward to community and policy.

Asked his thoughts about this new venture, Rosen stated: “I am deeply honored and thrilled to embrace this once-in-a-generation opportunity and the sacred responsibility of leading the outstanding Department of Medicine at USC. I have been very impressed with the entire biomedical enterprise, the commitment to compassionate patient care and the institutional focus on innovation and convergence across multiple disciplines. We are indebted to the pioneering physicians, scientists and others who have contributed major discoveries and made USC a traditional powerhouse, but we cannot rest on their laurels. This is a pivotal juncture to promote the art and science of medicine in Los Angeles and internationally.”

HUGO R. ROSEN, MD
Keck Medicine of USC is significantly expanding its patient care services and health care facilities with the opening of the new Norris Healthcare Center (HC3), a seven-story, 116,000-square-foot state-of-the-art facility on the Health Sciences Campus. Representing the fourth outpatient facility built adjacent to Keck Hospital of USC and USC Norris Comprehensive Cancer Center, the new building incorporates integrated care delivery with a patient-centric design for multidisciplinary ambulatory care.

“Keck Medicine of USC is in a period of unprecedented growth, with significant increases in patient volume, and the new Norris Healthcare Center will help us meet the growing demand,” said Tom Jackiewicz, senior vice president and CEO of Keck Medicine of USC. “This beautiful, modern facility can accommodate more than 100,000 patient visits each year and offers expanded specialty services that have been tailored to the current and future needs of our patients.”

To help enhance the patient experience, the new building was designed to coordinate care across different services. All women’s specialty care services, including wellness care, gynecologic oncology, a breast center and breast imaging, have been grouped together on a single floor. Urology and urologic oncology also will see new patients together on the same floor in the new building, which will integrate care for patients who need coordinated treatment from both medical oncologists and oncology surgeons.

An infusion center is designed with the patient’s needs and comfort in mind, given the extended time required for treatments. Twenty-four etched glass bays offer privacy and serene views of the campus and San Gabriel Mountains. Patients also can pass the time in the social area or use the center’s iPads, which are equipped with both entertainment and interactive patient education.

The building offers an Outpatient Surgery Center with six large operating rooms, as well as 46 examination rooms, several procedure treatment rooms, a blood draw station, a pharmacy, an image enhancement center, a gift shop and a dining area with retail space.

NORRIS HEALTHCARE CENTER NOW OPEN FOR PATIENTS

Norris Healthcare Center (HC3) has opened to the public and is the first new outpatient clinical space on the Health Sciences Campus in more than a decade.

New large patient rooms are designed to be flexible and efficient.
MAKING CANCER A DISEASE OF THE PAST INSPIRES A LEGACY OF GIVING BY THE NORRIS FAMILY

Lisa Hansen stepped among the steel girders, watching proudly as the building around her slowly took shape.

Her family has been a leading force behind many of the facilities at the USC Health Sciences Campus, like the one she was walking through that day. But as a hardhat-wearing Hansen made her way through the dust and din, the hammering and drilling, she was not only proud, but also amazed — because everyone she met at the site was brimming with passion for their work.

“From the architect to the project manager to the workers installing windows or putting down carpet, they all had this incredible spirit,” she recalled. “They knew all the good this building will bring.”

Thousands of people seeking treatment for cancer and other diseases will benefit from the seven-story, 116,000-square-foot Norris Healthcare Center. It’s just the latest building to advance academic medicine at USC thanks to the Kenneth T. and Eileen L. Norris Foundation and its long history of philanthropic support that has dramatically shaped the university’s medical enterprise.

“We are so privileged to collaborate with USC on these wonderful facilities that will no doubt benefit humanity,” said Hansen, who has chaired the foundation since her mother, Harlyne Norris, stepped down in 2003. “Our family and USC have had such a productive, positive relationship based on our shared dedication to our community and its health.”

One of the most stalwart supporters of the university, the Norris family has given more than $75 million to USC through its foundation and individual gifts. Much of that funding has been earmarked toward a singular goal: making cancer a disease of the past.

That mantra has inspired decades of giving, leading to the construction of the USC Norris Comprehensive Cancer Center, USC Norris Cancer Hospital and the Harlyne J. Norris Cancer Research Tower.

“At USC, we feel such profound gratitude to the Norris family and foundation for their exceptionally generous support of our collective fight against society’s most complex diseases,” USC President C. L. Max Nikias said. “They have been a driving force behind our pioneering therapies and innovations, creating world-class facilities that enable us to provide world-class care to countless patients and their families. The new Norris Healthcare Center will stand at the fore of those efforts.”
USC AND OTHERS TEAM UP TO STREAMLINE ALZHEIMER’S RESEARCH

Three premier researchers from the Keck School of Medicine of USC, two Harvard-affiliated hospitals and Mayo Clinic have been awarded up to $70 million to build essential nationwide infrastructure that would remove a bottleneck in the development of techniques to treat Alzheimer's disease.

The new infrastructure will implement more efficient methods to recruit participants for clinical trials. It will provide centralized services, enabling Alzheimer’s researchers to run innovative clinical trials, manage and analyze huge amounts of data and recruit participants from diverse backgrounds. The group will also share data, software, instruments and biological samples such as blood, tissue and cerebrospinal fluid.

Combining brainpower to solve this intractable problem is necessary because everyone will be affected or will know someone affected by this disease in their lifetime, said Paul Aisen, MD, one of the principal investigators of the National Institutes of Health grant and the director of the USC Alzheimer’s Therapeutic Research Institute (ATRI) in San Diego.

“A new therapy for Alzheimer’s disease has not been approved in the past 14 years, and none of the approved therapies actually change the course of the disease,” Aisen said. “Scientists have made great strides in understanding Alzheimer’s disease, and technological advances have placed us on the verge of a breakthrough. This collaboration will remove some of the barriers that have hamstrung researchers from timely completion of clinical trials in Alzheimer’s disease and other dementias.”

Aisen from USC ATRI, Ronald Petersen, MD, PhD, from the Mayo Clinic in Rochester, Minnesota, and Reisa Sperling, MD, MMSc, from Brigham and Women’s Hospital and Massachusetts General Hospital — both Harvard-affiliated hospitals in Boston — comprise the leadership team that will collaborate with others to create the Alzheimer’s Clinical Trial Consortium (ACTC).

The consortium is expected to receive nearly $70 million over five years, pending the availability of funds, to build an initial network of 35 Alzheimer’s disease trial sites at top universities across the nation. More sites may be added later, the NIH said.

“This nationwide collaboration will move us closer toward techniques to prevent Alzheimer’s disease,” Aisen said. “Perhaps one day we’ll be able to do a blood draw to identify individuals in need of preventive measures to stave off dementia and Alzheimer’s disease. We’re not there yet, but we’ve had many promising studies that have provided bread crumbs on how to get there.”
A NEW PORTABLE GEL COULD SAVE AN INJURED EYE

When a soldier sustains a traumatic eye injury on the battlefield, any delay in treatment may lead to permanent vision loss. With medical facilities potentially far away and no existing tools to prevent deterioration, medics are in a high-stakes race against the clock.

A multidisciplinary team of scientists and engineers at USC are close to solving the problem. They have developed a reversible, temperature-sensitive temporary seal that changes from a fluid to a super-strong semi-solid when applied to the eye. When the patient is ready for surgery to permanently close the injury, doctors can remove the seal by adding cool water.

Results of the study were published on Dec. 6 in Science Translational Medicine.

“If you look at historical data over the last several decades, the rate of war-related ocular injuries has steadily increased from a fraction of a percent to as high as 10 to 15 percent. Some of that can be attributed to changes in warfare, especially with the use of improvised explosive devices,” said corresponding author John Whalen, PhD, assistant professor of research ophthalmology at the Keck School of Medicine of USC and member of the USC Institute for Biomedical Therapeutics.

The material the group was working with for retinal implants was a hydrogel called PNIPAM, poly(N-isopropylacrylamide), which has an unique attribute that makes it a natural fit for this application: When cooled, the hydrogel becomes a liquid for easy application, and when heated, it becomes a viscous semi-solid with strong adhesion. When an ophthalmologist is ready to repair the eye, the hydrogel can be extracted by applying cool water and converting it back to a less adhesive state.

Results showed that when applied to eyes with penetrating injuries, the hydrogel improved pressure within the eye, which may be critical for preventing retinal detachment that can ultimately lead to vision loss. There also was no evidence of inflammation or infection for up to four weeks of use.

The researchers hope to initiate clinical safety testing in humans in 2019.

Whalen envisions applications for the hydrogel that go beyond the battlefield.

“First responders at a mass casualty incident could deploy the hydrogel while patients wait for their injuries to be completely repaired by an ocular surgeon in appropriate microsurgical facilities,” he said. “It could also be useful in ERs in rural areas where there isn’t an eye center with such capabilities nearby. It may even have potential for temporarily treating gunshot wounds.”
A team of scientists at the Keck School of Medicine of USC is looking to some deep sea dwellers to create a better way to develop cancer-fighting therapies. Harnessing the power of the enzymes that give these marine animals the ability to glow, the team created a test that makes it easy for researchers to see whether a therapy is having its intended effect — killing cancer cells. The results of their study were published in Scientific Reports on Jan. 9.

“One of the most promising areas in cancer research is immunotherapy, including chimeric antigen receptor-T (CAR-T) cells. It is also one of the most difficult because the methods for testing immunotherapies are not ideal,” said corresponding author Preet M. Chaudhary, MD, PhD, professor of medicine at the Keck School, chief of the Jane Anne Nohl Division of Hematology and Center for the Study of Blood Diseases, and director for bone marrow transplant at USC Norris Comprehensive Cancer Center. “Radioactive chromium release assay is the gold standard for testing whether an immunotherapy kills cancer cells. This method is expensive, complicated and requires special disposal practices.”

The team set out to develop a simple, precise and inexpensive test based on marine animal luciferases, the enzymes responsible for bioluminescence. A group of small crustaceans and deep sea shrimp were selected for their bright bioluminescence, and their luciferases became the basis of the test, called the Matador assay. Engineered to get trapped inside cells, the luciferases leak out of cells when they die, causing a visible glow. The level of luminescence could then be measured with a luminometer.

The assay proved to be so sensitive that it could detect the death of a single cell, a level of sensitivity far exceeding existing assays. Chaudhary’s lab has since developed more than 75 cancer cell lines expressing the marine luciferases and used them successfully in the Matador assay to develop next-generation CAR-T cells.

“In our hands, the Matador assay can detect cell death in as little as 30 minutes, which can ultimately translate to more expedient treatments for patients getting cellular immunotherapies such as CAR-T cells,” Chaudhary said.

Students, faculty and residents inducted into honor society

A ceremony for the newly elected members of the Gold Humanism Honor Society (GHHS), a prestigious national student organization, was held recently on the Health Sciences Campus.

Twenty-three fourth-year medical students, three faculty members and five residents from the Keck School of Medicine of USC were recognized for their leadership, compassion and dedication to humanistic clinical care. Stephanie Zia, MD, clinical assistant professor of medicine (clinician educator) and assistant dean for career advising, and recipient of the 2017 Humanism in Medicine Award, gave the keynote address at the Nov. 29 event.

The GHHS is known for recognizing individuals who excel at providing patient care that is sensitive to the cultural background, values and preferences of all patients. The society’s goal is to encourage compassion, empathy and respect among medical students and doctors. The GHHS is in its second year at the Keck School.
Meet the Keck School:

HIGHLIGHTING THE FACULTY, INSTRUCTORS AND STUDENTS THAT MAKE THE SCHOOL EXCEPTIONAL

RON BEN-ARI, MD, FACP
Associate Dean, Curriculum
Associate Dean, Continuing Medical Education (CME)
Vice Chair, LAC+USC Affairs,
Department of Medicine
Associate Professor of Clinical Medicine

Dr. Ben-Ari joined the Keck School as a medical student in 1983 and was so enamored of the remarkable clinical training environment and the patients served that he sought to stay at USC for residency training in internal medicine – he did not expect at that time that he would never want to leave. Early recognition of his teaching by medical students helped him focus his academic pursuits on medical education and he went on to direct medical student and resident training in internal medicine, to serve the Department of Medicine as vice chair for educational affairs and, more recently, to serve the school as both associate dean for curriculum and associate dean for continuing medical education. His goal is to establish the Keck School as a nationally and internationally recognized innovator in medical education and a premier training environment from which our students go on to be outstanding physicians, health care leaders and scientists who revel in the joy of bettering the health of our patients and the communities in which they live.

MIKEL SNOW, PHD
Professor of Clinical Integrative Anatomical Sciences
Lt. Col. Earle and Patricia M. Smith Professorship in Neurogenetic Research

For over 35 years, it has been Dr. Snow’s pleasure to teach human anatomy to Keck School medical students. Being a dissection-based course, anatomy allows him to address individual student learning styles and needs, while also providing opportunities to mentor and support students struggling as they transition to and thru medical school. Dr. Snow’s educational efforts have been recognized both locally (USC Associates’ Teaching Award) and nationally (AAMC teaching award).

Dr. Snow’s loyalty to the Keck School stems from the high quality of students the School attract, plus the opportunity to work with very talented colleagues. He believes that his efforts to provide students with the best possible educational experience contribute to their school pride, which in turn could influence their willingness to give back in the future. His next project, which was just initiated, is to take advantage of his teaching and dissection skills to develop a narrated series of HD-video recordings of each of the 32 dissections in the course. These videos will be a part of a digital curriculum that is being developed for use in the renovated anatomy lab scheduled to be finished by next August.

NAVID POUR-GHASEMI, MD, MS
Lecturer, Global Medicine

After completing the MS in Global Medicine at the Keck School of Medicine in 2011, Dr. Pour-Ghasemi matriculated into the MD program and graduated in 2015, when he was recognized by the Association of Professors and Scholars of Iranian Heritage as an outstanding MD graduate. In 2015, he joined the faculty within the Masters of Science in Global Medicine program and started his internal medicine residency at USC where he was honored with an Excellence in Primary Care award. Transitioning from student to faculty at the Keck School has been one of his most rewarding experiences. The Keck School community is an ideal environment for the fostering of new ideas, such as interprofessional education. Dr. Pour-Ghasemi designed and teaches an interprofessional education curriculum within the Masters of Science of Global Medicine. He is interested in the intersection between interprofessional care and infection prevention. He is staying at USC to complete a fellowship in infectious disease and will continue to teach.
ANDREA BANUELOS MOTA  
(MD Student, Class of 2020)

Andrea came to the Keck School knowing that her passion lay in serving undeserved patients. She feels that it is the support that she received and continues to receive at the Keck School that allows her to hold several leadership positions from being an academic coach, to being one of the co-founders for the Primary Care Progress Chapter and being selected to participate in a leadership development program through the American Academy of Family Physicians (AAFP).

While there were many things that drew Andrea to the Keck School, the main aspect that drew her was the faculty. She hopes that her achievements can become a representation of what students can accomplish thanks to the support and encouragement of the people that the Keck School.

Additionally, it is Andrea’s hope to become a physician in an underserved community and to remind her future patients that their lives are worth fighting for. She aspires to make a genuine impact in their lives, and her hope is that the experiences that she has gained at the Keck School will provide her with the tools to do so.

TOM MAXIM  
(MD Student, Class of 2019)

Tom Maxim was drawn to the Keck School by the near endless opportunities here — to lead, to learn, to grow and give back — and he has tried to make the most of his time as a Keck School medical student. Beyond founding the Keck Art Club, which gave medical students the opportunity to make artwork with USC patients, Tom has also served in leadership roles for the Otolaryngology Student Interest Group, the Student Surgical Interest Group and Salerni Collegium. With his passion for scientific discovery, Tom got involved in research early on. In addition to publishing and presenting studies in trauma surgery, he pursued a dedicated research year and now works as a Dean’s Research Scholar under the guidance of Carolina Abdala in the USC Caruso Department of Otolaryngology—Head and Neck Surgery.

Tom feels indebted to the Keck School for the mentorship and support he has received and hopes this will propel him into a career as an academic leader and physician-scientist in otolaryngology. Excited for what lies ahead, Tom will always be grateful for the Keck School education that led him there.

RAQUEL RIBEIRO  
(MS in Global Medicine – Management Track Student, Class of 2018)

The Global Medicine Masters program at Keck School is a place of opportunity only fully realized by those who take advantage of them. Since starting the management track last fall, Raquel, an entrepreneur and innovator at heart, has been working on a catheter-related paper and biomedical device which she hopes to publish and patent soon. She recently traveled to Uganda to learn how to partner with local communities to develop positive, sustainable change. She will be going to New York this spring break to learn from UN and UNICEF members how to allocate and negotiate limited recourses in high-stake situations. Raquel hopes to do a DK fellowship in the same community she visited in Uganda, working to develop an economy around rabbit farming to empower poor communities. Her ultimate goal is to develop a culturally-competent, community-based medical system with sustainable sources of income in underserved communities, globally, as well as a biomedical engineering consulting firm. The Keck School has been her biggest launching pad yet, and she hopes to give back someday by funding scholarships for those who cannot afford to further their education.