

## Partnership to boost Alzheimer's research



Gus Ruelas

Paul Aisen is one of three principal investigators that will be collaborating on Alzheimer's research with a \$70 million grant from the National Institutes of Health.

By Zen Vuong

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 biologic 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

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## Heart transplant gives patient years of joy

By Lex Davis

Raymond Hall was told he had three months to live. That was more than 17 years ago.

Hall is a Vietnam-era Marine veteran. After he developed heart problems related to his service, he underwent years of treatments with the U.S. Department of Veterans Affairs (VA).

"They tried everything," Hall said. "They did consultations with Stanford and so many other hospitals." The VA enrolled Hall in experimental programs, one of which made him sicker than when he'd started. By February of 2000, Hall had become so ill that the VA entered him into palliative care. He was told

he was in end-stage heart failure and would not get any treatment beyond managing his pain.

But on a Sunday morning in late March of 2000, Hall was feeling so sick that he drove to a nearby medical center in Inglewood seeking help. Fortunately, a cardiologist told Hall about Keck Medicine of USC's team. Keck School of Medicine of USC faculty members Vaughn A. Starnes, MD, Distinguished Professor and Chair, H. Russell Smith Foundation and Chair of the Department of Surgery, and Mark L. Barr, MD, associate professor of cardiac surgery, took on Hall's case.

"We can't know what the future

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Ricardo Carrasco III

From left, Luanda Grazette, Raymond Hall, Vaughn Starnes and Mark Barr gather Dec. 6 on the Health Sciences Campus. Nearly 18 years ago, Starnes and Barr performed a heart transplant on Hall; he continues to do well today under the care of Grazette.



Ricardo Carrasco III

**HAPPY HOLIDAYS:** Keck School of Medicine of USC faculty and staff gathered Dec. 8 at Pappas Quad to celebrate the season during the Holiday Breakfast. Interim Dean Laura Mosqueda, MD, greeted revelers, who enjoyed a variety of breakfast foods and pastries.

## Farewell to print: New format set for HSC News

As 2017 comes to a close, *HSC News* is making changes to better serve the Health Sciences Campus community. Beginning in January, *HSC News* will cease print publication and will be distributed as a weekly email newsletter to faculty, staff and students at the Keck School of Medicine of USC, USC School of Pharmacy, USC Chan Division of Occupational Science and Occupational Therapy, and USC Division of Biokinesiology and Physical Therapy, as well as Keck Medicine of USC employees. If you are not affiliated with one of these entities but would like to keep up-to-date with all of the news from this campus, go to the website, [hscnews.usc.edu](http://hscnews.usc.edu), or send an email to [hscnews@usc.edu](mailto:hscnews@usc.edu).

Thank you for reading and have a happy holiday season.

## Scientists engineer new portable gel that could save injured eyes

By Erica Rheinschild

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

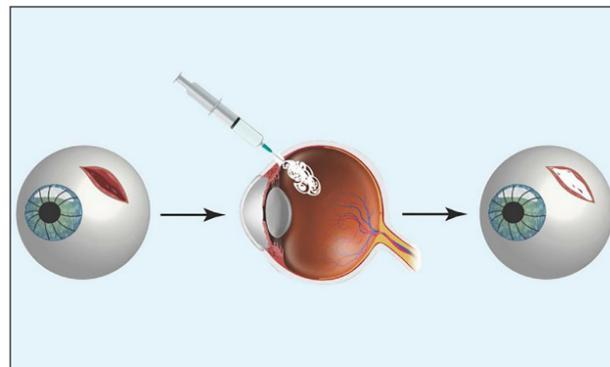
seal that changes from a fluid to a super-strong semi-solid when applied to the eye. When the patient is ready for surgery to permanently close the injury, doctors can remove the seal by adding cool water.

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. "When the Department of Defense asked the scientific community to develop novel approaches to treating

See **EYE**, page 2



A new hydrogel developed by researchers can treat patients in the field before they have access to hospital facilities

Illustration/Niki Bayat et al., Science Translational Medicine

# App monitors heart failures and perhaps saves lives

By Zen Vuong

Your smartphone could be the key to a healthy heart.

At least that's what Niema Pahlevan, PhD, believes. The 39-year-old engineer has been developing an app that could allow people to use their iPhone camera to measure heart health. The high-tech, low-cost tool would address America's No. 1 cause of death: heart disease.

"This app doesn't exist in the market yet, so people don't know they need it," said Pahlevan, assistant professor of aerospace and mechanical engineering at the USC Viterbi School of Engineering. "Nearly 50 percent of heart attacks are silent — the heart is damaged, but people aren't aware they just had a heart attack. So they don't seek treatment to prevent future heart attacks. We are working to help doctors and our future app users identify silent heart attacks and, really, any heart failure before they happen."

The algorithms and app Pahlevan and his colleagues have been working on are a form of preventive medicine. This biotech solution can also keep an eye on heart failure patients. People can spend as little as a couple of seconds to get a complete reading via this diagnostic tool, Pahlevan said.

All the user needs to do is place an iPhone camera or, eventually, any



Niema Pahlevan demonstrates his iPhone app, which uses the iPhone's camera, and can be used to measure heart health.

smartphone camera against their carotid artery pulse on the left or right side of their neck. These major arteries provide blood to the brain, neck and face. The camera records the vibration of the blood vessel and provides a wave curve that contains information about how much blood the heart is pumping out per contraction, called the ejection fraction.

Pahlevan led a study published in the journal *Critical Care Medicine* this

summer that found the iPhone diagnostic app his team created was slightly more accurate than an echocardiogram, the most common technique employed in clinical practice to identify heart failure.

Now that Pahlevan has a proof of concept, his iPhone app has piqued the interest of many researchers and even the biotech industry. He is working with Keck Medicine of USC to test a more advanced algorithm that uses

information received from an iPhone camera and electrodes attached to the chest.

The electrocardiogram cannot measure "left ventricular end diastolic pressure" (LVEDP), the most robust biomarker of whether a person's heart is pumping normally. He is collaborating with Ray Matthews, MD, professor of clinical medicine at the Keck School of Medicine of USC and director of USC Interventional Cardiology and Catheterization Laboratories, and his team at Keck Medicine to demonstrate the proof of concept of a new theory that allows measuring LVEDP using an iPhone.

Once the tool is fully tested, people will be able to place a smartphone against their neck pulse and attach two electrodes to the skin of their chest to get an accurate reading of their heart health. All the information will be input into their smartphone app and sent to their physician or cardiologist. This can be done from the comfort of their home, without disrupting their day.

"The initial tool we created for ejection fraction is like a bicycle, and this new tool we're working on is like a Ferrari," Pahlevan said. "You can get there much sooner, much faster."

## Calendar of Events

### Friday, Dec. 15

**7:30 a.m.-4:45 p.m.** Office of Continuing Medical Education. "2nd Annual Southern California Kidney Symposium: The Kidney at the Crossroads of Whole-Body Health and Disease." Eli and Edythe Broad CIRM Center Auditorium, Seminar Room 101 (1st Floor). Info: Mayra Angulo, (323) 442-2555, [uscme@usc.edu](mailto:uscme@usc.edu)

**8:30 a.m.** Hastings Center for Pulmonary Research Seminar. "Positive Feedback Loops Potentiating Pulmonary Fibrosis," Richard H. Gomer, PhD, Texas A&M University. IRD 734. Info: Fereshta Saraj, (323) 409-7184, [saraj@usc.edu](mailto:saraj@usc.edu)

**Noon.** TCORS Seminar. "E-cigarettes: Nicotine Exposure and Effects," Gideon St. Helen, PhD, University of California, San Francisco. Soto Street Building, SSB 301. Info: Sydney Zarate, (323) 442-7222, [szarate@usc.edu](mailto:szarate@usc.edu)

**4 p.m.** USC Alcazar Child Development Center. "First Anniversary Celebration." Currie Hall. Info: Cecile Keatley, (323) 405-6400, [cecile.allainkeatley@BrightHorizons.com](mailto:cecile.allainkeatley@BrightHorizons.com)

### Saturday, Dec. 16

**7:15 a.m.-4:15 p.m.** Office of Continuing Medical Education. "3rd Annual USC Contemporary Topics in Internal Medicine." Mayer Auditorium. Info: Mayra Angulo, (323) 442-2555, [uscme@usc.edu](mailto:uscme@usc.edu), <https://cmetracker.net/KECKUSC/Catalog>

### Tuesday, Dec. 19

**11 a.m.** USC Stem Cell Seminar. Alex Schier, PhD, Harvard University. Eli and Edythe Broad CIRM Center Auditorium. Info: Cristy Lytal, [lytal@med.usc.edu](mailto:lytal@med.usc.edu), <http://stemcell.usc.edu/events>. Live webcast at [keckmedia.usc.edu/stem-cell-seminar](http://keckmedia.usc.edu/stem-cell-seminar).

### Tuesday, Jan. 9, 2018

**11 a.m.** USC Stem Cell Seminar. Nidhi Bhutani, PhD, Stanford University. Eli and Edythe Broad CIRM Center Auditorium. Info: Cristy Lytal, [lytal@med.usc.edu](mailto:lytal@med.usc.edu), <http://stemcell.usc.edu/events>. Live webcast at [keckmedia.usc.edu/stem-cell-seminar](http://keckmedia.usc.edu/stem-cell-seminar).

### Thursday, Jan. 11

**Noon.** Department of Medicine Gehr Family Center for Health Systems Science Talk. "Gehr Guest Speaker Series: The Future of Health and Healthcare," Nirav R. Shah, MD, MPH, Stanford University. Herklotz Seminar Room, ZNI 112. Info: Rachel Lim, (323) 409-3823, [rachel.lim@med.usc.edu](mailto:rachel.lim@med.usc.edu)

**Notice:** See more calendar entries at [hscnews.usc.edu/calendar-of-events](http://hscnews.usc.edu/calendar-of-events). Submit items at [tinyurl.com/calendar-hsc](http://tinyurl.com/calendar-hsc). Include day, date, time, title of talk, first and last name of speaker, affiliation of speaker, location and a phone number/email address.

## EYE: Study is collaboration between engineers, scientists

Continued from page 1

ocular injuries, we immediately thought of an advanced material we had previously worked with as a possible adhesive for a retinal implant."

The study represents the latest development from the USC Institute for Biomedical Therapeutics, which fosters collaborations between scientists at the Keck School, chemists at the USC Dornsife College of Letters, Arts and Sciences and engineers at the USC Viterbi School of Engineering. USC has made research in convergent bioscience and biotechnology a priority to address health issues across the life span through the development of new diagnostic tools, treatments and biomedical devices.

### A custom fit

The material the group was working with for retinal implants was a hydrogel called PNIPAM, poly(N-isopropylacrylamide), which had a unique attribute that made it a natural fit for this application: When cooled, the hydrogel became a liquid for easy application, and when heated, it became a viscous semi-solid with strong adhesion. All that was needed was some tailoring.

"Since the initial hydrogel's transition temperature was very close to the temperature of the human eye, we had to modify its properties to ensure that it would form a solid seal as soon as the gel was applied to the eye by a soldier or medic," said lead author Niki Bayat, a doctoral candidate in the Mork Family Department of Chemical Engineering and Materials Science at USC Viterbi. "Providing a perfect, yet reversible seal, the smart hydrogel shows promise for the next generation of tissue adhesives."

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.

### Special delivery

The research team also developed a special syringe for the hydrogel that would be easy to use on the front lines and capable of quickly cooling the hydrogel before application. The syringe has a cooling chamber filled with calcium ammonium nitrate crystals — the type used in instant ice cold packs. By adding water to the chamber, the crystals activate and cool the hydrogel to operating temperatures within 30 seconds.



John Whalen

The customized seal and delivery device will also reduce the amount of time it takes to close penetrating eye injuries overall.

"This temporary intervention could decrease repair time from 30 minutes or longer to less than five minutes, freeing up valuable time for first responders and trauma units," said principal investigator Mark Humayun, MD, PhD, University Professor of Ophthalmology and co-director of the USC Roski Eye Institute, director of the USC Institute for Biomedical Therapeutics and a professor of biomedical engineering at USC Viterbi.

## ALZHEIMER'S: Group to build network of clinical trial sites

Continued from page 1

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.

"When we announced the funding opportunity for a new publicly supported clinical trials network, we envisioned a next-

generation consortium, where shared expertise could enhance the ideas and approaches of individual investigators proposing and conducting trials," said Laurie Ryan, PhD, chief of the Dementias of Aging Branch in the National Institute on Aging's Division of Neuroscience, which leads NIH research on Alzheimer's. "I think we will have that now. I am particularly interested in how we can better engage diverse communities into research, so that trials can more effectively include and benefit everyone who is affected by Alzheimer's."

Specific clinical trials would be funded separately. The consortium expects to have the capacity to

manage five to seven trials over the five years of the award.

"We must overhaul our current recruitment strategies for clinical trials, particularly to improve the diversity of our study participants and to reach people who do not yet have symptoms of Alzheimer's disease for inclusion in future prevention trials," said Sperling, who leads the Center for Alzheimer Research and Treatment at Brigham and Women's Hospital and Harvard Medical School. "The new ACTC presents a terrific opportunity to innovate in recruitment, cognitive assessments and neuroimaging for the next generation of Alzheimer's trials."

# Researchers: Subtle cues can dictate fate of stem cells

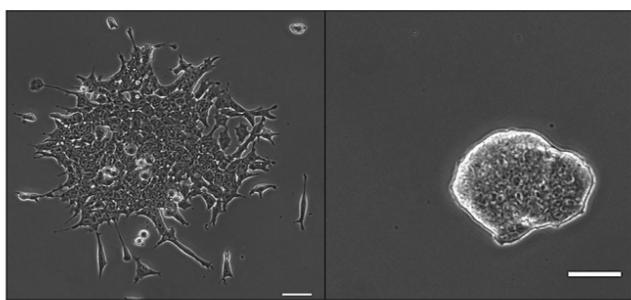
By Cristy Lytal

If you've seen one GSK3 molecule, do not assume that you have seen them all. A new study in *Developmental Cell* reveals important differences in two similar forms of GSK3, which, in excess, is implicated in diabetes, cancer, Alzheimer's disease and ALS.

In the study, first author Xi Chen, a PhD student in the USC Stem Cell laboratory of Qi-Long Ying, PhD, describes how the two similar forms — known as GSK3-beta and GSK3-alpha — can produce very different reactions in embryonic stem cells. Inhibiting GSK3-beta can promote stem cell self-renewal, while inhibiting GSK3-alpha can trigger differentiation into neural cells.

"The key message is that selective inhibition of GSK3-alpha and GSK3-beta has very distinct effects on embryonic stem cell fates," said Ying, professor of stem cell biology and regenerative medicine at the Keck School of Medicine of USC. "This is likely also true for other cell types."

In order to selectively inhibit these two very similar forms of GSK3,



In the left panel, embryonic stem cells (ESCs) are differentiating without inhibition of GSK3; right panel, nice self-renewing ESCs when GSK3 is inhibited.

the Ying Lab called upon the expertise of colleagues in the Department of Chemistry at the USC Dornsife College of Letters, Arts, and Sciences.

"This is an elegant study resulting from collaborative efforts between two labs of complementary expertise. We employed an innovative chemical approach to tackle a biological problem that would be difficult to study using conventional methods," said Chao Zhang, PhD, assistant professor of chemistry at USC Dornsife.

These findings carry implications for developing drugs that target overactive GSK3 in certain patients with diabetes, cancer, Alzheimer's disease and ALS. A drug that targets GSK3 in general could have unintended side effects. However, no drug can target

one form of GSK3 without the other, because of their highly similar structures — highlighting the need for more refined approaches to treatment.

Inhibiting only GSK3-beta could also provide a useful tool for producing stem cells that are not merely "pluripotent" but able to contribute to the formation of embryos. These so-called naïve pluripotent stem cells can become any cell type in the body. Currently, scientists have derived naïve pluripotent stem cells from mice and rats, but they have not yet succeeded in obtaining naïve pluripotent stem cells from other species, including humans. Pluripotent human stem cells are the basic building blocks for regenerating any tissue or organ in the body.

# Career adviser lauded

By Hope Hamashige

Caitlin Mahaffey, associate director of career advising at the Keck School of Medicine of USC, recently received an award from the Association of American Medical Colleges for the outstanding work she performs as an adviser to the students at the Keck School of Medicine of USC.

The award, dubbed the 2017 Careers in Medicine Excellence in Medical Student Career Advising Support Staff Award, recognizes one outstanding support staff member for excellence in implementing effective career advising services.

"Through her diligence in compiling current and pertinent information and her sincere interest in supporting students along their medical school journey, Caitlin's contributions have played an integral role in the success of Keck's career advising program," said Stephanie Zia, MD, MACM, clinical assistant professor of medicine (clinician educator) and assistant dean for career advising at the Keck School's Office of Student Affairs.

Mahaffey is responsible for helping keep Keck School students on track with their coursework and acts as a liaison between students and faculty at key points in their medical education. She provides both individual and group advice to medical students, helping to prepare them for some of the biggest milestones of their

medical careers: choosing specialties and applying to residency programs.

Just as residency programs in medicine have become increasingly competitive in the U.S., career counseling has had to adapt to help students better navigate the competitive landscape. Mahaffey noted that getting into residency programs, particularly for the most competitive specialties, has become more arduous in recent years.

"As things have gotten more competitive, medical school has become more stressful for students," Mahaffey said. "Because of that, staff support has become more important to get them through."

Zia noted that Mahaffey revolutionized the Keck School's advising process by creating a database of information that staff and faculty advisers can use to monitor each student's progress toward meeting certain goals. For example, the database helps staff and faculty understand which students are getting numerous interviews for residency programs and which students are not getting as many.

That information helps staff and faculty identify the students that may need additional help to achieve their goals.

"Her nine years of experience and dedication to Keck School students is exemplary, and we are truly fortunate to have Caitlin here," Zia said.

# In memoriam: Thomas V. Berne, 81

By Lex Davis

Professor Emeritus Thomas V. Berne, MD, a respected and beloved member of the Keck Medicine of USC family who had multigenerational ties to the campus, died Oct. 27. He was 81.

Berne was a lifelong member of the USC community. His father, Clarence J. Berne, MD, was chair of the Department of Surgery for 28 years. Thomas Berne graduated from the Keck School of Medicine of USC in 1960 and completed his general surgery residency at Los Angeles County + USC Medical Center in 1965. After a fellowship in renal transplantation at Guy's Hospital in London, he returned



Thomas V. Berne

Courtesy Mitzi Clendenning

to USC to join the faculty. In an interesting parallel, Clarence Berne performed the first surgical procedure at the old L.A. County hospital in 1932; Thomas Berne performed the first surgery in the new LAC+USC facility in 2008, said Thomas Berne's wife, Cynthia Berne.

Berne became an internationally renowned expert in trauma surgery and surgical critical care, but his primary passion was for teaching. He enjoyed it so much that he continued to do so on a volunteer basis as a Professor Emeritus well into this year.

A memorial service for Berne will be held Jan. 6 at Mayer Auditorium on the Health Sciences Campus. In lieu of flowers, his family has requested that donations be made to The Berne Professorship Fund. Checks can be mailed to USC Department of Surgery Development, 1975 Zonal Ave., KAM-B37, Los Angeles, CA 90033.



Andrew Hung has developed a custom recording tool to track surgeons' movements during robotic surgery.

Ricardo Carrasco III

# 'Black box' recorder tracks surgeons' moves

By Erica Rheinschild

You may know that your surgeon is using the latest minimally invasive technology for your surgery, but how do you know if they've mastered it? To help answer that question, researchers at Keck Medicine of USC looked to a custom recording tool similar in concept to a flight recorder on an airplane.

When attached to a robotic surgery system during radical prostatectomy procedures, the most common treatment for prostate cancer, the "black box" recorder captured data that could be used to discern the difference between novice and expert surgeons. The results of the study will appear in the January 2018 edition of *The Journal of Urology*.

"Robotic surgery has been widely adopted by urologic surgeons, but methods of assessing proficiency vary widely between institutions," said lead author Andrew Hung, MD, assistant professor of clinical urology at the Keck School of Medicine of USC. "In order to

be credentialed by institutions to use the robotic system, surgeons must be evaluated by their peers for a handful of procedures, but the evaluations are not ongoing, and sometimes evaluators don't agree on what constitutes proficiency."

Creating a sustainable, objective method for evaluating surgeon proficiency and standardizing credentialing is a way to help ensure patient safety, Hung explained.

The recorder used in the study, called the dVLogger, captures both anonymized video and movement data. Developed by Intuitive Surgical, the research tool can attach to the company's da Vinci Surgical System, a robotic surgical platform approved by the U.S. Food and Drug Administration for general laparoscopic surgery.

Hung said that future studies will explore how the recorded performance data compares to clinical outcomes. "We now have an opportunity to put surgeon proficiency under the microscope and see what role it plays in patient outcomes," he said.

# TRANSPLANT: Doctors, nurses were 'amazing'

Continued from page 1

will be, but at least you'll have a chance," Starnes told him.

Hall was admitted to USC on April 4, 2000. "The miracle started there," he said. "It was the most amazing experience. They made me feel like I wasn't dying. I had been to doctors who would walk into the room and not even talk to me. Dr. Barr always asked, 'Mr. Hall, how are you feeling?' first thing. Dr. Starnes was the most respectful doctor you could ever want to meet."

"The nurses were phenomenal. One brought me an In-N-Out burger because she knew I love them. And once they moved me to a new room just to change my view. Who cares about you so much that they want to change the scenery for you?"

Hall received his heart transplant on June 6, and walked out of the hospital just 10 days later. Hall continues to come in to Keck Medicine's CardioVascular Thoracic

Institute for check-ups, happily under the care of cardiologist Luanda Grazette, MD, associate professor of clinical medicine. And he has been making the most of his new chance.

Hall's experience led him to work with veterans and seniors, with an emphasis on making a difference through community service. Today he is an L.A. County commissioner for older adults and an assemblyman in the California Senior Legislature. He is most proud of starting A Senior Salute, an organization that recognizes veterans who have gone on to do community work. The first ceremony was held in 2002 at what Hall describes as "the poorest senior center in L.A. County." The 2015 ceremony was standing room only at the Dorothy Chandler Pavilion.

"It's all because of USC," Hall said. "I can't tell you what this hospital means to me."

## 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:



Mary Falkner

Employees in the Department of Radiology at Keck Hospital of USC donated more than 100 boxes for the Box of Love program.

## Employees share holiday spirit with Box of Love donations

EACH YEAR, KECK MEDICINE OF USC partners with nonprofit organization Canning Hunger for the Box of Love drive to donate boxes filled with food items to needy families in the east Los Angeles community. This year, Keck Medicine donated a total of 528 boxes and collected more than \$5,100 in monetary donations, which is equivalent to an additional 613 boxes. Each box is filled with all of the trimmings for a complete Thanksgiving meal for a family of six to eight people. The Department of Radiology at Keck Hospital of USC filled more than 100 boxes, as they have done for the past four years. — **L. Alexis Young**



Ricardo Carrasco III

Keck Medicine of USC employees plant fruits and vegetables with students in a new Teaching Garden at Hollenbeck Middle School.

## Keck Medicine sponsors new Teaching Garden at local school

ON NOV. 28, KECK MEDICINE OF USC volunteers and Hollenbeck Middle School students dug in and got their hands dirty planting fruits and vegetables in a brand-new teaching garden, designed to educate students about the importance of healthy eating, all while having fun. The garden, donated by Keck Medicine of USC, is part of the American Heart Association's Teaching Gardens program.



Ricardo Carrasco III

Newly elected members of the Gold Humanism Honor Society were recognized during a Nov. 29 event on the Health Sciences Campus.

## 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), 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 in its second year at the Keck School. — **Amanda Busick**



Ricardo Carrasco III

**ROSES FOR DONORS:** Keck Medicine of USC and OneLegacy, an organization that saves lives through organ, tissue and eye donations, held a special rose dedication ceremony on Dec. 7 at Keck Medical Center of USC. The ceremony honored organ donors and their families for their generous gift of life. Donors received a rose and the gratitude of their recipients. — **Virginia Baca**

## New clinical building to highlight patient comfort, privacy needs

By Virginia Baca

The first new outpatient clinical space on the USC Health Sciences Campus in more than a decade is slated to open in January.

Norris Healthcare Center (HC3) will house the following departments and services: urology, an infusion center, women's specialty care, breast imaging, transplant and an outpatient surgery center.

HC3 is a seven-story, 116,000-square-foot building, designed with patient privacy and comfort as its top priorities.

Patient care floors are equipped with the latest diagnostic and treatment technologies and will feature welcome centers and waiting areas.

Large, floor-to-ceiling windows on many floors will offer views of the San Gabriel Mountains and foothills, downtown Los Angeles and Dodger Stadium, and let plenty of natural light into the building.

"The building puts the needs of our patients and their families first, further elevating the high caliber of our care," said Rod Hanners, COO of Keck Medicine of USC and CEO of Keck Medical Center of USC.

An additional valet parking station will be added in front of the Willametta Keck Day Healthcare Center (HC2) building to accommodate patients for both HC2 and HC3. Self-parking for HC3 patients will be available in the Keck Hospital Parking Structure adjacent to HC3.

On Dec. 11, floors two through five of the building were licensed by the California Department of Public Health, clearing one of the final hurdles for the opening of HC3.

The Norris Healthcare Center is located at 1516 San Pablo St. in Los Angeles, two doors down from Keck Hospital.



Ricardo Carrasco III

Floors two through five of the new Norris Healthcare Center have been licensed by the California Department of Public Health.

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