



Courtesy CenHealth

Jorge Motta, center, former director of the Gorgas Memorial Institute in Panama and National Secretary of Science, Technology and Innovation of Panama, receives the inaugural Health Equity Hero Award while Lourdes Baezconde-Garbanati, left, looks on. The award was given as part of a summit organized by the Keck School of Medicine of USC.

Panama summit stokes vision of health equity in the Americas

By Larissa Puro

From the northern tip of Alaska to the southern coast of Chile, the Americas host some of the most diverse — and disparate — populations in the world. However, despite progress in medicine and economic development, health inequalities prevail, leading to avoidable premature illness and death among millions of disadvantaged people.

With a goal of reducing disparities, researchers, policymakers and civil society members spanning 13 countries gathered in Panama Oct. 7-8 for a landmark meeting. The objective: to form partnerships and promote future research and training collaborations to further health equity — people's attainment of their highest levels of health, regardless of who they

are and whatever their circumstances may be.

"We live in a time of transformation in the Americas," said Lourdes Baezconde-Garbanati, PhD, MPH, director of the new Center for Health Equity in the Americas (CenHealth) and professor of preventive medicine at the Keck School of Medicine of USC, which organized the conference. "Coming together to share our vision ensures that we unify efforts on behalf of health equity in some of the most vulnerable populations in the Western hemisphere."

According to a World Health Organization report on cancer in Central and South America, poorer countries such as Bolivia and Peru see more infection-related cancers — like stomach and cervical cancers —

whereas more affluent nations, such as Argentina and Brazil, experience higher incidences of so-called "lifestyle" cancers — like prostate and breast cancer.

The summit, "Promoting Health Equity and Transnational Partnerships in Cancer Prevention and Control in the America," presented a unique opportunity to strengthen the bonds among partners and expand reach across 13 nations in Latin America, Canada and the United States, Baezconde-Garbanati said.

"USC is uniquely positioned, both culturally and geographically, to lead this initiative," said Rohit Varma, MD, MPH, interim dean of the Keck School and director of the USC Gayle and Edward Roski Eye Institute.

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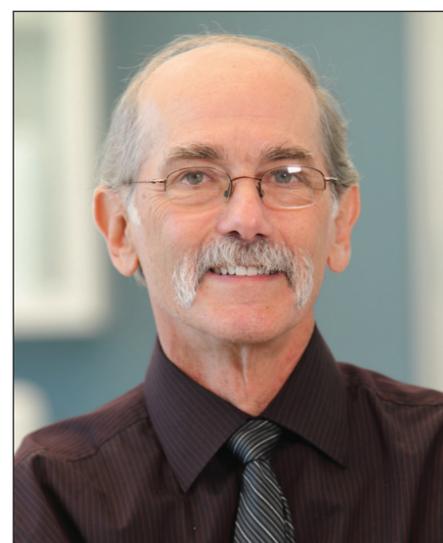
\$21.7 million NIH grant to fund study of epilepsy

By Zen Vuong

The USC Laboratory of Neuro Imaging of the USC Mark and Mary Stevens Neuroimaging and Informatics Institute has received a \$21.7 million National Institutes of Health grant to study epilepsy, a condition that currently is incurable.

Arthur Toga, PhD, Provost Professor of Ophthalmology and director of the USC Mark and Mary Stevens Neuroimaging and Informatics Institute, is the study's contact principal investigator. The grant will support a project titled the Epilepsy Bioinformatics Study for Antiepileptogenic Therapy and a team of international researchers working toward both a cure for epilepsy and treatments to prevent it from developing. Researchers will identify biomarkers associated with the development of epilepsy and possibly discover therapies to prevent epilepsy

See **GRANT**, page 3



Phil Channing

Arthur Toga

Keck Medical Center is cleaning house

By Virginia Baca

From Nov. 4-8, Keck Medical Center will conduct Klean Keck, a five-day fall cleaning event.

During this period, hospital leadership and staff will work side-by-side to get rid of clutter and expired items in the hospital and clinics. This will further enable Keck Medical Center to continue delivery of quality, safe and patient-centric care, while engaging staff and improving teamwork and collaboration. This also will be an opportunity to do a deep clean of the house and take care of facilities issues.

While keeping the work place in great shape is a daily priority, Klean Keck will maximize the effectiveness of

these efforts. Facilities and environmental services will increase their support to address immediate repair and cleaning needs in a timely manner. A central location will be set up to collect extra inventory items to be used by other departments or donated. The five days of Klean Keck also will include prizes to celebrate the most engaged teams.

"Our environment of care is a key contributor to our reputation and is perceived by many as a reflection of our quality," said Rod Hanners, COO of Keck Medicine of USC and CEO of Keck Medical Center. "Our goal for Klean Keck is to create a safer and more welcoming environment for our patients and their families."

Deadline nears for receiving mandatory flu vaccine

By Douglas Morino

With flu season approaching, Keck Medicine of USC physicians, nurses and staff are being reminded that flu vaccinations are an important step toward protecting patients.

All Keck Medicine health care workers are required to receive a flu vaccine before Nov. 1.

The flu is a contagious respiratory illness that, in serious cases, can result in hospitalization or death.

An annual flu vaccination is the best way to prevent the flu. The Centers for Disease Control and Prevention estimates that as many as 3,300 die each year from the flu.

Transmission of the flu virus can occur even before the illness is evident, said Stephanie Hall, MD, chief medical officer, Keck Medicine of USC.

"Protecting our patients against exposure is an important part of care delivery," Hall said. "One way to do this is to get vaccinated to reduce the risk of unintended exposure and

Flu vaccine available

Flu vaccines will be available to all faculty, nurses and Keck Medicine of USC staff at Employee Health Services, Monday through Friday from 7:45 a.m. to 4 p.m. and the Evaluation & Treatment Clinic, Monday through Friday from 4 p.m. to 7:45 a.m., weekends and holidays.

Preservative-free and egg-free vaccines are available on request. Flu season stretches to March 31.

transmission of the flu virus."

A flu vaccination is not only a requirement of Keck Medicine: the Los Angeles County Department of Public Health mandates that health care personnel in acute care hospitals, long-term care facilities and intermediate care facilities in Los Angeles County be vaccinated against influenza or wear a protective mask.

See **VACCINE**, page 3

Open enrollment is coming

Open enrollment starts Monday, Nov. 7 and will end Sunday, Nov. 20.

Benefits fairs will be held the following days and locations:

Oct. 26 USC Verdugo Hills Hospital

Nov. 9 Health Sciences Campus

Nov. 10 University Park Campus

For more information, visit the employee gateway at <https://employees.usc.edu>.

Young cancer patients get new virtual reality program

By Mary Dacuma

The USC Norris Comprehensive Cancer Center has teamed with a nonprofit on a virtual reality (VR) initiative for patients in the Adolescent and Young Adult Cancer program at USC (AYA@USC).

The initiative aims to provide a library of curated cinematic and interactive VR experiences using the most advanced media technology available to lessen a patient's discomfort and anxiety with quality entertainment.

"The AYA@USC program aims to heal the whole person, not just the cancer," said David Freyer, DO, MS, professor of clinical pediatrics at the Keck School of Medicine of USC and co-director of AYA@USC. "The Virtual Reality Patient Initiative will provide an important emotional benefit to our patients that cannot be achieved through medicine alone."

The pilot program will begin this fall for a three-month period for both ambulatory outpatients and non-ambulatory inpatients. The nonprofit Springbok Cares will provide the VR equipment, content library and program staff at no cost to USC Norris or the patients. The cancer center's clinical staff will approve and supervise the use of the equipment to ensure patient safety. Through Springbok Cares' partnerships with a variety of content providers and sponsors, the program will be financially self-sustaining with an ever-growing curated library.



James Hu watches a USC Norris Comprehensive Cancer Center patient experience a new virtual reality treatment.

"In addition to an enriched patient experience, the Virtual Reality Patient Initiative may provide tangible clinical benefits to our young cancer patients," said James Hu, MD, assistant professor of clinical medicine and co-director of AYA@USC.

Research has demonstrated the benefit of VR technology for a variety of medical, psychological and educational challenges, including reducing side effects and fatigue in cancer patients undergoing chemotherapy treatments. Cancer patients with access to VR experiences had improved emotional well-being and fewer negative psychological symptoms.

"As a parent of a cancer survivor, I am extremely excited to be partnering with USC Norris Comprehensive Cancer Center and Keck School of Medicine on this

groundbreaking program," said Steven-Charles Jaffe, chief operations officer of Springbok Entertainment. "Having lived with my daughter at a hospital during her battle with cancer, I personally know there is a void in healthy escapist entertainment for patients that this program will fulfill. VR technology's ability to virtually transport a patient out of the confinement of a hospital bed or chemotherapy session is not only beneficial, but critical for a positive patient experience."

AYA cancers represent all cancer types in individuals who are between 15 and 39 years old. In the United States, cancer is the leading disease-related cause of death for AYA patients. More than 70,000 people in this age group are diagnosed with cancer each year, including more than 4,000 in the Los Angeles area.

Grant to fund virtual walking therapy study

By John Hobbs

A trip to the physical therapist could soon feel a bit more like a trip to the arcade, thanks to a new multidisciplinary study being conducted at USC.

James Finley, PhD, and Beth Fisher, PhD, MS, of the USC Division of Biokinesiology and Physical Therapy and Marientina Gotsis, MFA, of the USC School of Cinematic Arts recently received a two-year, \$450,000 grant from the National Institutes of Health to develop and test a virtual reality-based program for walking rehabilitation in patients with Parkinson's disease.

Symptoms such as stiffness, shaking and balance problems can cause people with the degenerative brain disorder to have difficulty walking. While traditional physical therapies have centered around strength training, stretching and movement practice, it was discovered recently that these strategies may not lead

to long-term motor learning by themselves.

"From a motor learning perspective, we now know that learning and long-term retention are optimized when the patients have a focus on the movement's effect on the environment such as 'step over the obstacle' rather than on performing the movement itself — 'flex your hip,'" Fisher explained.

The proposed VR-based system would get individuals with Parkinson's disease back on their feet, practicing the actual walking skills necessary to navigate their communities — with seemingly real-world feedback — under the watchful eye of a physical therapist.

"We will be designing a system that will allow patients to experience and practice challenging tasks like negotiating obstacles, walking through crowds, doing turns and walking over thresholds to represent the challenges they would experience in the physical world," Finley said.



From left, James Finley, Marientina Gotsis and Beth Fisher.

Calendar of Events

Friday, Oct. 21

11:45 a.m.-1:30 p.m. Office of Research Workshop. "Developing NIH Grant Applications," Steve Moldin, PhD, executive director, Washington, D.C., Office of Research Advancement. Saban Research Building, First Floor Auditorium, Children's Hospital Los Angeles. Info and RSVP: (213) 740-6709, usccer@usc.edu, <https://research.usc.edu/developing-nih-grant-applications/>

Tuesday, Oct. 25

5:30 p.m. Department of Ophthalmology Grand Rounds. Debarshi Mustafi, MD, PhD. HC4 Conference Room, 6th Floor. Info: Lina Poyzner, (323) 442-6383, Lina.Poyzner@med.usc.edu, <http://eye.keckmedicine.org>

Wednesday, Oct. 26

11 a.m. USC/Amgen Seminar. Sasha Kamb, PhD, senior vice president of discovery research, Amgen. Eli and Edythe Broad CIRM Center Auditorium. Info: Cristy Lytal, (323) 442-2172, lytal@med.usc.edu, <http://stemcell.usc.edu/events>

11:45 a.m. USC Visions & Voices Talk. "Homelessness: Stories from the Shadows," James O'Connell, MD, Boston Health Care for the Homeless Program. McKibben Lecture Hall Room 256. Info: Michael Cousineau, (323) 442-8249, cousin@med.usc.edu. Lunch will be provided.

Noon. Zilkha Neurogenetic Institute Seminar. "Structure Biology Center for USC Labs: A Cheap, Fast and Efficient Way to Extend Your Research into Structure Biology," Fariborz Nasertorabi, PhD. Herklotz Seminar Room,

ZNI 112. Info: Emily Chu, (323) 442-3219, Emily.Chu@med.usc.edu, <http://www.usc.edu/zni>

Noon-2 p.m. Office of Research Workshop. "Obtaining Funding from Foundations and the USC Process," Kavita Munjal, executive director of foundation relations, Keck School of Medicine of USC. USC Norris Medical Library East Conference Room. Info and RSVP: (213) 740-6709, usccer@usc.edu, <https://research.usc.edu/obtaining-foundation-funding/>

Thursday, Oct. 27

10:30 a.m.-Noon. Amgen and the Eli and Edythe Broad Center for Regenerative Medicine and Stem Cell Research at USC. "R&D Insights from Lab Bench to Patient Bedside." Zilkha Neurogenetic Institute Herklotz Seminar Room. Info: qliumich@usc.edu, karenw03@amgen.com. RSVP: www.usc.edu/esvp, Code: amgenlecture

1 p.m.-3 p.m. USC Institute of Integrative Health, USC Center for Health System Innovation Symposium. "The Role of Guided Imagery in Health and Healing," Belleruth Naparstek, Health Journeys. Eli and Edythe Broad CIRM Center Auditorium. Info: Veronica Pagán, (323) 442-9259, veronica.pagan@med.usc.edu, <http://chsi.usc.edu>, RSVP: Quintilia Avila, qavila@usc.edu

Friday, Oct. 28

8:30 a.m. Hastings Center for Pulmonary Research Seminar. "Normal & Gone Awry.

What is the Role for Host Defense?" Gloria S. Pryhuber, MD, University of Rochester. IRD 734. Info: Elva Rubio, (323) 409-7184, elvarubi@usc.edu

11:45 a.m.-1 p.m. Office of Research Workshop. "USC Awards to Fund Your Research," Silvia da Costa, PhD, director of faculty research relations, Office of Research. Saban Research Building, First Floor Auditorium, Children's Hospital Los Angeles. Info and RSVP: (213) 740-6709, usccer@usc.edu, <https://research.usc.edu/internal-awards-to-fund-your-research/>

Noon. USC School of Pharmacy Talk. "APSA/LKS Rock the Pink Breast Cancer Awareness Event," Reyna Raya, PharmD. PSC 112. Info: Kara Guan, (559) 960-5864, usclshf@gmail.com

Friday-Saturday, Oct. 28-29

7 a.m. USC Institute of Urology. "Nightmares in Robotic & Laparoscopic Urologic Surgery: Prevention and Management of Complications," Rene Sotelo, MD; Aron Monish, MD; Inderbir Gill, MD. Las Vegas, Nevada. Info and RSVP: Regina Rezex, (323) 865-3594, rezex@usc.edu, <http://urology.keckmedicine.org>. Physician/Surgeon: \$295; Resident/Fellow: \$150

Wednesday, Nov. 2

Noon-2 p.m. Office of Research Workshop. "Securing Corporate Funding for Your Research," Lawrence Lau, MBA, associate director, corporate collaborations, USC Stevens Center for Innovation. USC Norris Medical Library West Conference Room. Info and

RSVP: (213) 740-6709, usccer@usc.edu, <http://research.usc.edu/pathways-to-corporate-research-funding/>

Thursday, Nov. 3

10:30 a.m.-Noon. Amgen and the Eli and Edythe Broad Center for Regenerative Medicine and Stem Cell Research at USC. "R&D Insights from Lab Bench to Patient Bedside." Broad CIRM Center First Floor Conference Room. Info: qliumich@usc.edu, karenw03@amgen.com. RSVP: www.usc.edu/esvp, Code: amgenlecture

4-6 p.m. Office of Research Workshop. "Writing Winning Proposals," Bonnie Lund, professional grant writer. CUB 329, University Park Campus. Info and RSVP: (213) 740-6709, usccer@usc.edu, <http://research.usc.edu/for-investigators/training/persuasiveproposals/>

5:30 p.m.-7 p.m. USC Institute for Global Health, Program on Global Health & Human Rights and Center for Feminist Research. "Can the United Nations Empower Queer Rights?" Dennis Altman. USC Gould School of Law (LAW) 101. Info and RSVP: Larissa Puro, (323) 442-7233, puro@usc.edu, <https://globalhealth.usc.edu/empower-queer-rights/>

Thursday-Friday, Nov. 3-4

6 a.m. USC Institute of Urology. "National Urology Residents Preceptorship in Robotics and Laparoscopic Surgery," Andrew J. Hung, MD; Matthew Dunn, MD; Inderbir Gill, MD. University of Southern California. Info and RSVP: Regina Rezex, (323) 865-3594, rezex@usc.edu, <http://urology.keckmedicine.org>.

Notice: Calendar items are due at least 10 days before publication date. Timely submission does not guarantee publication in print. See more calendar entries at hscnews.usc.edu/calendar-of-events. Submit items at 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.

SUMMIT: Gathering a chance to improve care

Continued from page 1

“The increasing globalization of our society brings both challenges and opportunities for health care worldwide. By bringing together visionary leaders for this summit and future endeavors, CenHealth is making important progress toward worldwide access to lifesaving treatments, medications and preventive care.”

Attendees included more than 60 representatives from 38 organizations, such as ministries of health, Centers for Disease Control, National Alliance for Hispanic Health, Healthy Americas Foundation, CenHealth, University of South Florida Foundation, and the Pan

American Health Organization at the World Health Organization, among others.

From USC, 11 faculty represented the Department of Preventive Medicine and the USC Norris Comprehensive Cancer Center, which supports the efforts of CenHealth.

Funded by the Keck School of Medicine Dean's Office, CenHealth began in 2015 and operates out of USC's Institute for Health Promotion and Disease Prevention Research, in the Department of Preventive Medicine. The center fosters and facilitates research, training and partnerships to advance health equity in the Americas.



Members of the planning committee and U.S. and Latin America agency representatives smile during the recent summit in Panama.

Courtesy CenHealth

Together We Can Beat the Flu

6 Tips to Stay Healthy this Flu Season

Avoid touching eyes, nose, mouth



Cover your sneeze/cough



Wash your hands



Stay home if you're sick



Get the Flu Vaccine

The flu vaccine is the first step in protecting yourself



Avoid contact with sick people



Illustration by Julie Matzaganian and Nathan Cowen

VACCINE

Continued from page 1

The goal of the order is to lower the rates of transmission of influenza among health care personnel and the vulnerable populations that they serve.

To accommodate Keck Medicine physicians, nurses and staff who have a documented allergy to the flu vaccine, history of Guillain-Barre Syndrome, or who may have religious beliefs that precludes them from accepting the vaccine, wearing a mask will be permitted during the flu season whenever inside a Keck Medicine building or within the vicinity of a patient. Employees must sign the Employee Health Declination form, that provides reasons and support for the declination.

Protecting our patients against exposure is an important part of care delivery.

— Stephanie Hall, MD, chief medical officer, Keck Medicine of USC

This year, preservative-free and egg-free vaccines are available on request.

Free flu vaccines are available through Employee Health Departments at Keck Hospital of USC, USC Norris and USC-Verdugo Hills Hospital.

GRANT: Epilepsy, seizure disorders affect 5.1 million people in the U.S., are unpredictable

Continued from page 1

from starting after a traumatic brain injury.

“Arthur Toga is one of the foremost leaders in neuroimaging and brain mapping, and his research has been crucial to our understanding of many neurological disorders,” said Rohit Varma, MD, MPH, interim dean of the Keck School of Medicine of USC and director of the USC Gayle and Edward Roski Eye Institute. “This NIH grant will help Art and his team gain greater insight into how we can prevent and eventually cure epilepsy. Our involvement in this large-scale collaborative study furthers our commitment to excellence in the neurosciences.”

Epilepsy causes seizures in the brain due to a disruption of electrical communication between neurons. At least 5.1 million people in the United States have been diagnosed with epilepsy or a seizure disorder, according to the Centers for Disease Control and Prevention.

Toga answers questions about why scientists need to find a cure for epilepsy.

Q: Why is the study important?

AT: Epilepsy is a disabling disorder of the brain affecting millions worldwide, so the global burden of epilepsy is tremendous. Seizures happen at unpredictable times and can vary greatly in severity. While some treatments exist, there are none that can reliably prevent or cure epilepsy.

Most epilepsy is acquired — it develops as a result of a traumatic brain injury, a stroke, a brain tumor or a central nervous system infection. Understanding the changes that these nervous system insults bring

about in the brain is key to preventing the disorder and to reversing their effects to cure epilepsy.

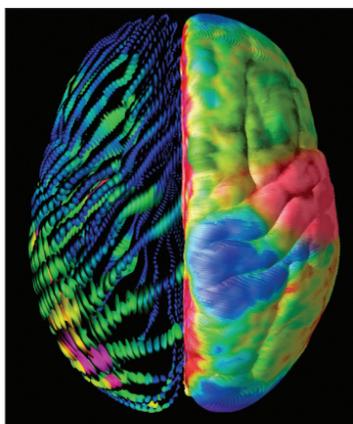
Q: Why did your team decide to focus on epilepsy that develops because of traumatic brain injury?

AT: Unlike other possible causes of epilepsy, traumatic brain injuries can be reproduced in animal models, which allows us to gather comprehensive data about the disorder — a requirement to developing effective interventions.

The current understanding of epilepsy indicates that the condition — and therefore its treatment and cure — has consistencies across individuals regardless of the reason for its development. Treatments and interventions that will prevent epilepsy from occurring after traumatic brain injury will likely have wide applicability to the other causes of the disorder. A cure for post-traumatic epilepsy should lead to a cure to all epilepsy.

Q: What is noteworthy about this study?

AT: This study calls on interdisciplinary experts



Arthur W. Toga, USC Laboratory of Neuro Imaging

around the world to work together to attack a problem of paramount importance. Epilepsy, like Alzheimer's disease, Parkinson's disease, multiple sclerosis and autism, is a disorder affecting the human brain. Understanding the brain in all its complexity is impossible for any group to accomplish in isolation. Large-scale collaborative efforts like the one we're undertaking are the only hope we have for unlocking the secrets of brain function and eventually curing diseases of the brain.

Q: How else will the grant funds be used?

AT: This grant will also bridge the gap between the epilepsy community and centers for traumatic brain injuries. Resources will be created to educate patients and their families about the importance of research on how the brain develops epilepsy. Scientists will have the opportunity to learn about the most pressing research needs and concerns patients and their families have. An important goal is to encourage individuals to participate in clinical studies on this topic.

Q: What role does technology play in the effort to cure diseases of the brain?

AT: Advances in technology are expanding the scope of what we can measure, how precisely we can take those measurements, and how quickly and easily we can analyze and disseminate that information. We at the USC Laboratory of Neuro Imaging and the USC Mark and Mary Stevens Neuroimaging and Informatics Institute are excited to be both at the forefront of this new era of possibility and a hub for such an important collective endeavor.



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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:



Ricardo Carrasco III

Stephen Gruber, left, and John Carpten are seen before the USC Norris Ambassadors Friends and Family Luncheon, held Sept. 29 at the Aresty Auditorium.

USC Norris celebrates friends and family at luncheon

STEPHEN B. GRUBER, MD, PhD, MPH, director of the USC Norris Comprehensive Cancer Center, and **John D. Carpten, PhD**, chair and visiting professor of translational genomics and director of the USC Institute for Translational Genomics, addressed guests at the USC Norris Friends and Family Luncheon on Sept. 29. Carpten's presentation educated the group on the life-saving cancer treatment plans that can be achieved through genetic testing. Through personalized gene sequencing, doctors at USC Norris are able to tailor therapy regimens to each specific individual, providing the most beneficial options and outcomes for our patients. Donors, volunteers and friends of the USC Norris Comprehensive Cancer Center attended the luncheon.



Maury Phillips/ Steve Cohn Photography

From left, Tom Jackiewicz, Steven Siegel and Rohit Varma are seen at Siegel's welcome reception, held Sept. 14 on the Health Sciences Campus.

Psychiatry chair welcomed to campus at reception

LEADERS FROM KECK MEDICINE OF USC and the Keck School of Medicine of USC were on hand Sept. 14 to formally welcome Steven Siegel, MD, PhD, as chair of the Department of Psychiatry and the Behavioral Sciences. At a reception held in the Eli and Edythe Broad CIRM Center Auditorium, Tom Jackiewicz, MPH, senior vice president and CEO of Keck Medicine of USC, and Rohit Varma, MD, MPH, interim dean of the Keck School of Medicine of USC and director of the USC Gayle and Edward Roski Eye Institute, praised Siegel and predicted that he would be a transformative leader for the department in the years to come. Siegel thanked leaders throughout the school and the health system, and acknowledged the engaged and dedicated faculty in the department. — **Sara Reeve**

Study takes first step to understand electric treatment

RATHER THAN TAKING MEDICATION, a growing number of people who suffer from chronic pain, epilepsy and drug cravings are zapping their skulls in the hopes that a weak electric current will jolt them back to health — “transcranial direct current stimulation” (tDCS) — a non-U.S. Food and Drug Administration approved treatment. Danny JJ Wang, PhD, MSCE, a professor of neurology at the USC Mark and Mary Stevens Neuroimaging and Informatics Institute, said his team is the first to develop an MRI method whereby the magnetic fields induced by tDCS currents can be visualized in living humans. Their results were published Oct. 4 in *Scientific Reports*, a Nature Publishing Group journal. “Although this therapy is taking off at the grassroots level and in academia (with an exponential increase in publications), evidence that tDCS does what is being promised is not conclusive,” said Wang, the study's senior author. “Scientists don't yet understand the mechanisms at work, which prevents the FDA from regulating the therapy. Our study is the first step to experimentally map the tDCS currents in the brain and to provide solid data so researchers can develop science-based treatment.” — **Zen Vuong**

New training course offered for aspiring ophthalmic technicians

By **L. Alexis Young**

The USC Gayle and Edward Roski Eye Institute has established the Ophthalmic Technician Education Program (OTEP) to prepare highly skilled allied health care professionals to serve the eye care needs of individuals of all ages. The 21-month program, one of only 14 programs nationally, is the only one in California that prepares individuals to become Certified Ophthalmic Technicians (COT).

OTEP is a non-degree, certificate education/training program that integrates core academic knowledge with clinical and occupational skill mastery. Course content ranges from the basics of history taking, medical ethics, eye and visual system anatomy, physiology, and pathology and patient relations to specialty areas including lensometry, refractometry, optical coherence tomography, ophthalmic imaging and surgical assisting.

OTEP students practice professional and technical skills through weekly clinical rotations at the USC Roski Eye Institute, LAC+USC Medical Center and Children's Hospital Los Angeles.



Chris Shinn

Joseph Coccozza, second from left, is leading the establishment of an ophthalmic technician training program at the USC Gayle and Edward Roski Eye Institute. Pictured with him are Ray Yamamoto, left; Ryan Imagiire, second from right; and Liz Capati, right.

This supervised real-world experience prepares graduates to assist ophthalmologists in the prevention, detection, and treatment of vision impairments in a variety of settings including private practice offices, hospitals and community based clinics.

A career as an ophthalmic technician offers the opportunity for professional advancement. Ophthalmic technicians may seek additional certification in subspecialty areas including Ophthalmic Surgical Assisting Certification (OSA), Ophthalmic Scribe Certification (OSC), Registered Ophthalmic Ultrasound Biometrist (ROUB), Certified Diagnostic

Ophthalmic Sonographer (CDOS) and Corporate Certified Ophthalmic Assistant (CCOA).

Classes for OTEP begin Jan. 9, 2017, and applications to the program are accepted on a rolling basis. Potential candidates for the program range from recent high school graduates to veterans interested in an allied health career. Financial aid through federal and private institutions is available to qualified students. More information about OTEP, including application materials, can be found at <http://eye.keckmedicine.org/otep/>. Interested individuals also may email questions to reiotep@uscye.org.

USC to be part of new Moonshot project

By **Zen Vuong**

Vice President Joe Biden has announced that USC will participate in a new Cancer Moonshot project to create the world's first global liquid biopsy database on cancer. The undertaking is designed to accelerate the development and approval of simple, accurate and reliable blood tests for biologically based precision treatment and disease monitoring.

USC and 19 representatives from government, academic, pharmaceutical and diagnostic companies are launching the new partnership to share protocols, data and results to create the Blood Profiling Atlas Pilot. Some of the collaborators include the U.S. Food and Drug Administration, Novartis, Pfizer and the College of American Pathologists.

The Kuhn Laboratory at USC will contribute data from the High-Definition Single-Cell Assay (HD-SCA), an analysis framework that characterizes cancer from a simple blood draw, analyzing the cells, proteins and genes shed from tumors.

“I'm excited to say this is the third USC partnership with Vice President Biden's Cancer Moonshot initiative to understand the time-space continuum of cancer,” said Peter Kuhn, PhD, principal investigator of HD-SCA and a founding faculty of the USC Michelson Center for Convergent Bioscience. “For the Blood Profiling Atlas, our focus is to characterize cancer by identifying the proteins and genes in single cells found in simple blood draws taken from cancer patients. We are contributing data and methods to start and

will work with the partners in the Atlas to design and execute future pilot projects in support of the Atlas.”

Kuhn is a dean's professor of biological sciences and a professor of medicine, biomedical engineering, and aerospace and mechanical engineering at USC.

The Blood Profiling Atlas

will use standardized methods that would allow the FDA to recognize it as a source of valid scientific evidence. The open but secure database will help accelerate cancer therapeutic research and development, will improve a doctor's ability to track cancer progression and will improve disease treatment decisions.

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