Neuroscientists claim rare pair of research grants, totaling $23 million

By Carl Marziali and Alison Trinidad

In a rare distinction for one university, neuromaging world leaders and USC professors Arthur Toga, PhD, and Paul Thompson, PhD, will receive two major research center awards to advance their exploration of the human brain.

Toga and Thompson each will establish a Center of Excellence under a National Institutes of Health initiative to mine discoveries from the vast and exponentially growing amounts of data created by imaging science, genetic sequencing and many other biomedical fields.

The awards total $12 million and $11 million for Toga and Thompson, respectively, over four years. NIH is funding several Centers of Excellence, including the two at USC, under its Big Data to Knowledge initiative.

The two researchers’ teams have gathered what they believe to be the world’s largest collection of brain scans. The collection is housed at the USC Institute of Neuroimaging and Informatics and continues to double in size every two years. The two center grants will allow the researchers to move from data collection to large-scale analyses that could point to new treatments for autism, Alzheimer’s disease and many other neurological diseases and disorders.

Toga and Thompson came to USC a year ago as leaders of a massive neuromaging cluster of 110 faculty, researchers and multidisciplinary staff. Their recruitment was a signature moment in the university’s drive to attract scholars with the potential to transform their fields.

When the recruitment was announced, USC President C. L. Max Nikias said: “This cluster hire will help us move one step closer to understanding the structure and function of the human brain.”

The NIH initiative signals the agency’s commitment to invest in the same goal. The university’s Digital USC initiative, established last year by Provost Elizabeth Garrett, JD, supports neuromaging research as part of a commitment of $1 billion over 10 years toward gathering, interpreting and applying digital data on a massive scale.

“In receiving substantial grants supporting one of the NIH’s priority initiatives, the two researchers’ time and cost savings for both doctors and their patients if they need to adjust their medication, and a smart phone application that allows patients to receive non-emergency health care confidentially via phone.

These were a few of the innovations that were discussed at the 8th annual Body Computing Conference organized by the USC Center for Body Computing (USC CBC) held on Oct. 3. The annual gathering brings together leaders in the digital health revolution including physicians, engineers, designers, investors and entrepreneurs.

“Historically, medical apps have been under-represented, but new apps and innovations, like those we are unveiling today, equip patients to take control over their personal health,” said Leslie A. Saxon, MD, a Keck Medicine of USC cardiologist and founder/director of USC CBC.

It is not only patients who benefit from the new technology, but also can share that information with their physician. Saxon noted that more physicians are testing such apps and innovations, like those we are unveiling today.

“We want to be the largest, academically most elite health system in Southern California with a global presence in medicine, biological sciences, translational research, biotechnology and patient care,” Nikias said.

By Hope Hamashige

The early part of the 21st century has seen seismic shifts that, for most universities, have posed serious challenges. But, while so many have wrestled with difficult financial decisions since the recession, USC was making investments that set it on course to become a major force in academic medicine, President C. L. Max Nikias, PhD, said, before a standing-room-only crowd in Mayer Auditorium on Oct. 9.

“For us, uncertainty was the beginning of a great adventure,” said Nikias.

Nikias was referring to USC’s purchase in 2009 of Keck Hospital of USC and the USC Norris Hospital, the bold move that initiated five years of sweeping change for Keck Medicine of USC.

Since then, Keck Medicine of USC has fanned out from its home on the Health Sciences Campus, opening and acquiring clinics and a hospital across Southern California. It has also successfully recruited new world-class faculty from schools such as Harvard University and Stanford University, a sign of Keck Medicine of USC’s growing prominence in academic medicine. It has also launched major research initiatives such as two new research centers funded by $23 million in awards from the National Institutes of Health devoted to brain research (see story above).

These investments gave USC a competitive advantage moving into the future, said Nikias, because health sciences are going to become increasingly more important.

One-third of the university’s current fundraising campaign, which set a goal of $6 billion, is dedicated to fund biological sciences and health care, said Nikias. And so, while so much change has already taken place, he said much more change is in its way for Keck Medicine of USC.

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Keck School tapped as the National Center on Elder Abuse

By Sherri Smelking

Keck School of Medicine of USC has been named the sole grant recipient to become the National Center on Elder Abuse (NCEA). NCEA is a vital clearinghouse created by the Administration on Aging, part of the Administration on Community Living in the U.S. Department of Health and Human Services.

The $2.2 million three-year grant funds NCEA’s programs, which include technical assistance and training to states and community-based organizations to develop effective prevention, intervention and response efforts addressing elder abuse. The NCEA will also conduct research and advocate for policy changes on behalf of older adults.

“One in 10 Americans over age 60 suffer some form of elder abuse — that is 5 million seniors each year,” said Laura Mosqueda, MD, chair of the department of Family Medicine and Geriatrics at the Keck School of Medicine of USC and director for the National Center on Elder Abuse. “We see elder abuse, neglect and exploitation as one of the most pressing civil rights issues facing our aging society, and we’re proud to be named the National Center on Elder Abuse to help educate, inform and address the injustices inflicted on our nation’s seniors.”

Elder abuse is a growing problem as Americans are living longer. In fact, 10,000 baby boomers turn 65 every day and people over the age of 85 represent the fastest growing segment of our society. As the senior population grows and the number of people who will care for our frail elders declines, the problem of elder abuse will only grow. Elder abuse is manifest in many forms: physical abuse, emotional abuse, sexual abuse, exploitation, neglect and abandonment. Perpetrators can be family members or spouses, health-care workers and others preying upon the vulnerabilities of older people.

The National Center on Elder Abuse will be spearheaded by Mosqueda and the team at the Keck School of Medicine of USC, in collaboration with the USC School of Gerontology, the American Bar Association and other organizations dedicated to supporting an aging America. The NCEA will be dedicated to increasing identification and reporting of elder abuse; improving the aging community’s ability to detect, intervene and prevent elder abuse; and stimulating sustainable and innovative systems.

“This prestigious designation underscores Keck Medicine of USC’s commitment to the health, safety and wellness of our growing population of older Americans,” said Tom Jackiewicz, senior vice president and CEO of USC Health which oversees Keck Medicine of USC, the university-based medical system. “As a health system dedicated to education, research and clinical care, we are perfectly matched to administer the National Center on Elder Abuse.”

“With the leadership of Mosqueda, the National Center on Elder Abuse at Keck School of Medicine of USC becomes a beacon to all of us as we face the potential darker issues of getting older,” said Carmen A. Puliafito, MD, MBA, dean of the Keck School of Medicine of USC. “We will be the entity others look to when they need information and we will be the leaders that push the field forward through education, research, advocacy and other programs to end elder abuse.”

A top-ranked medical system in several specialty areas, Keck Medicine of USC was ranked No. 33 in this year’s U.S. News and World Report “Best Hospitals” issue.

USC Norris researchers awarded $3.5 million grant from NCI

A team of scientists from the USC Norris Comprehensive Cancer Center was recently awarded a $3.5 million grant from the National Cancer Institute to conduct a five-year research project to study how prostate cancer patients respond to hormone therapy.

The project is co-led by three researchers: Amir Goldkorn, MD, assistant professor of medicine at USC Norris, part of Keck School of Medicine of USC; Jacek Pinski, MD, associate professor of medicine and co-director of the prostate cancer research program, and Sat Ingle, PhD, associate professor of preventive medicine at the Keck School of Medicine of USC.

The three long-time collaborators said they were excited the NCI awarded them a grant because they believe the results of their research will ultimately help doctors make better treatment decisions for their patients with advanced metastatic prostate cancer.

“Our purpose is to provide a mechanism to predict who will respond to hormone therapy and who won’t and to identify specific biomarkers to do that,” said Goldkorn.

Because prostate cancer grows when exposed to testosterone and related hormones, standard therapy involves hormone treatment to suppress production of testosterone. What puzzles physicians is that some patients respond well to hormone therapy while others fail after just a few months. Giving physicians tools to predict how patients will respond will help them make better treatment decisions.

The researchers plan to get samples from 1,500 prostate cancer patients who are participating in a nation-wide phase 3 clinical trial. Using white blood cells, primary tumor tissues and circulating tumor cells, researchers will analyze the genes of the androgen pathway, which plays a role in prostate carcinogenesis. They hope to identify which ones drive either the resistance or sensitivity to hormonal therapy.

Flu season nears, vaccines urged

By Talar Shahinian

As flu season approaches, Keck Medicine of USC staff, faculty and visitors are encouraged to get a flu vaccine.

If you are a faculty physician or a staff member of Keck Medicine of USC, you can receive your vaccine through Employee Health Services in USC Healthcare Center 1, or the Evaluation and Treatment Center on the first floor of Keck Hospital of USC. Staff and faculty are reminded that once again this year in light of the Los Angeles County Department of Public Health mandate — all Keck Medicine of USC personnel are required to either receive a flu vaccination or wear a facemask if within three feet of a patient.

This includes physicians, researchers, admitting representatives, volunteers, direct patient-care givers, support services personnel and all other staff.

All employees can also receive a free flu vaccine at the USC Healthcare Center 1.

Staff and faculty who receive their vaccines will be given a special sticker to place on their badge.

Proof of vaccination from other locations will be accepted.

Students may receive flu vaccines at the Eric Cohen Student Health Center. Vaccines are free if the student has USC’s student health insurance or $15 without.

Patients and visitors are advised to check with their physicians before receiving a flu vaccine, but can visit the HSC Pharmacy for vaccinations. Cost depends on insurance coverage, or is $28 without insurance.
Keck Medicine of USC expands urology services to Bakersfield

By Meg Aldrich

Keck Medicine of USC announced that the highly respected urologic practice of Bruce J. Joseph, M.D., is now part of the Trojan family. The practice now provides comprehensive, world-class urologic care to Kern County and the greater San Joaquin Valley area as part of the USC Institute of Urology.

Joseph has joined Keck Medicine of USC, and the practice, which remains in its current medical office location, is known as USC Urology Associates - Bakersfield. “I want the best for my patients,” Joseph said. “People here in Bakersfield and Kern County will have access to a range of sub-specialty expertise and treatments that only a top-flight urology team at a major institution can bring,” Joseph said. “I am pleased to join some of the nation’s best urologists that make up the talented team of physicians and surgeons at USC Institute of Urology.” Kern County patients now have enhanced access to world-class services and treatments by the renowned specialists of the USC Institute of Urology for comprehensive, urologic conditions and advanced, complex care. Working hand-in-hand with Joseph, USC urologists are treating patients in Bakersfield as much as possible, thus allowing patients to stay close to home while receiving the highest quality specialty urologic care.

Inderbir S. Gill, MD, the chairman, professor and founding executive director of USC Institute of Urology and a world-renowned advanced robotic cancer surgeon, is personally seeing and treating patients at this Bakersfield site, along with Joseph and by USC urology faculty physicians from Keck Medicine of USC. “We are committed to closing the gap and continuing to work along with local Bakersfield urologists and physicians to bring our innovative urologic treatments to patients in Kern County,” Gill said. “The USC Institute of Urology team is known globally for its innovative therapies, break-through research and robotic and open surgical expertise.”

The growth of Keck Medicine of USC in Southern California and Central California falls under the leadership of Tom Jackiewicz, senior vice president and CEO of USC Health and Amar A. Desai, MD, MPH, and CEO of USC Care & Ambulatory Services, part of Keck Medicine of USC. “We aspire to the best of USC to more people, including our extensive expertise in complex care, by extending our reach into more communities. We are thrilled to come together with practices such as Joseph’s that are committed to the highest quality of care,” said Desai. “Keck Medicine of USC is becoming the practice of choice for physicians in Southern and Central California because we partner with the community in a distinctly collaborative way.”

Matthews named chief of cardiovascular medicine

By Talar Shahinian

Ray V. Matthews, MD, a highly respected leader in interventional cardiology, has been named chief of the division of cardiovascular medicine at the Department of Medicine of the Keck School of Medicine of USC. As chief, Matthews will also be professor of clinical medicine and director of interventional cardiology, will oversee the division’s academic and clinical operations, as well as its fellowship programs. Edward Candall, MD, PhD, chair of the Department of Medicine, praised Matthews as energetic, thoughtful and visionary.

“Matthews is a natural and collegial leader who will help take cardiac medicine at USC to the next level of clinical, teaching and research excellence,” Candall said. “My expectation is that major progress will be made through partnerships with cardiovascular surgery and colleagues in other specialties that will help Keck Medicine of USC become a premier destination for cardiac care and research. Matthews is the just the person to lead us toward those goals.”

Matthews, who received a bachelor’s degree in biochemistry from University of Wyoming and a medical degree from Creighton University, completed his internal medicine residency at the Mayo Clinic. He later completed a general cardiology fellowship at Harbor-UCLA Medical Center and an Interventional cardiology fellowship at Good Samaritan Hospital in Los Angeles.

Widely known as a leader in interventional cardiology, Matthews has served as principal investigator for more than 50 clinical trials researching new devices. He is also a pioneer in many interventional procedures that are now commonplace in the catheterization lab. Vaughn Starnes, MD, chair of the Department of Surgery and executive director of the CardioVascular Thoracic Institute (CVTI), called Matthews a key partner in developing cutting-edge technologies in cardiac care, adding, “We are delighted that he has taken on this leadership role in cardiovascular medicine. We are looking forward to further growth of the CardioVascular Thoracic Institute at USC working together with Matthews.”

Since joining Keck Medicine of USC in 2007, Matthews has played a crucial role in increasing the procedural volume in his catheterization lab. He has helped attract new patients by creating programs for assisted high-risk coronary intervention cases — directing the percutaneous aortic valve program — one of the busiest programs of its kind in Southern California.

Matthews praised division faculty as effective academicians and clinicians, and said he hoped to grow the division further, boosting the number of faculty to increase clinical volume and expand clinical research opportunities. He added, “In this challenging time of health care reform and realignment, we want the division of cardiovascular medicine to lead the charge as the USC health campus seeks to become a broader health system. This will require forging stronger working relationships — both within and outside the USC campus.”

NIH: Grants help expand USC’s lead in neuroscience

By Wynn Yip

NIH launched the BD2K initiative in 2013 to support research, implementation and training in data science that would enable biomedical scientists to maximize the value of large datasets in their studies. Toga is a Provost Professor in the departments of ophthalmology, neurology, psychiatry and the behavioral sciences, and radiology at the Keck School of Medicine of USC, with a joint appointment at the USC Viterbi School of Engineering.

In addition to directing the Institute of Neuroimaging and Informatics, he leads the Laboratory of Neuro Imaging, also at USC. Thompson is associate dean for research and professor of neurology, psychiatry and the behavioral sciences, and radiology at the Keck School of Medicine of USC, with a joint appointment at USC Viterbi.

In addition to directing the USC Imaging Genetics Center, he serves as the faculty of the Institute for Neuroimaging and Informatics and the Laboratory of Neuro Imaging.
Calendar of Events

Monday, Oct 20
11 a.m. – 2 p.m. Farmers Market. “For Sale: Berries, Jams, Herbs, Snacks and Produce bags.” Keck Hospital of USC Cafeteria.

Noon. KSMO Research Seminar. “A Multi-Pronged Approach for Developing Novel Therapeutic Agents for Alcohol Use Disorders,” Daryl L. Davies, USC. Arsey Auditorium. Info: Mary Jane Chua, (323) 442-7732, maryjane.chua@med.usc.edu

Tuesday, Oct. 21
1 – 3 p.m. GTM Workshop. “Increase the Reach and Impact of Your Research,” Karja Reuter, USC. Harkness Auditorium. Info: Francis Ukpolo, (323) 442-1996, francis.ukpolo@med.usc.edu and tinyurl.com/4m43w

5:30 p.m. Ophthalmology Grand Rounds. H14 Conference Room. Third Floor. Info: Tya Christopher, (213) 409-5233, tyaich@usc.edu

Wednesday, Oct. 22
8:30 a.m. Division of Pulmonary, Critical Care and Sleep Medicine Lecture. “HRCT,” Alison Wilcox, USC. BID 732/34. Info: Elva Rubio, (323) 226-7923, elvarubi@usc.edu


5:30 p.m. Edmundson Faculty Center Open House. “Come Experience the Newly Remodeled Edmundson Faculty Center.” Edmundson Faculty Center Info and RSVP: tinyurl.com/ncv2ke

Thursday, Oct. 23
1 – 3 p.m. Massry Prize Lecture. Steven A. Rosenberg, National Cancer Institute; Zelig Eshhar, Weizmann Institute of Science; James P. Allison, MD Anderson Cancer Center. Mayer Auditorium. Info and RSVP: http://esvp.usc.edu, code: Massry2014

Friday, Oct. 24
8 a.m. Dept. of Pathology Grand Rounds. “Establishing a Cervical Cancer Prevention Program in Low & Middle Income Countries: The Salvadoran Experience,” Juan C. Felix, USC. “Hoffman Bldg, Room 202. Info: Leslie Winnie, (323) 442-1180, bwanke@med.usc.edu

8:30 a.m. USC Center for Lung Biology Research Seminar. “Syndecan-1: A Central Regulator of Lung Repair and Inflammation,” Peter Chen, Cedars-Sinai Medical Center. IRD 732/34. Info: Elva Rubio, (323) 226-7923, elvarubi@usc.edu


Monday, Oct. 27
Noon. KSMO Research Seminar. “Viperin, Ilumin Cyanotumogalvoirus, Mitochondria, Metabolism, and Membranes,” Peter Crasswell, Yale University School of Medicine. Arsey Auditorium. Info: Mary June Chua, (323) 442-7732, maryjane.chua@med.usc.edu

Tuesday, Oct. 28
Noon. Dept. of Medical Education Lecture. “ Faculty Development: Clinical Teaching on the Fly,” Tatum Korin and Stephanie Zia, USC. Norris Medical Library, East Conference Room. Info and RSVP: Crin Argenson, (323) 442-2746, mededu@med.usc.edu

5:30 p.m. Ophthalmology Grand Rounds. H14 Conference Room. Third Floor. Info: Ty Christopher, (213) 409-5233, tyaich@usc.edu

Notice: Calendar submissions must be received at least 10 days before an issue’s publication date to be considered. Please note that timely submission does not guarantee an item will be printed. Entries must include day, date, title of talk, first and last name of speaker, affiliation of speaker, location and a phone number or email address for information.

Submit calendar items at tinyurl.com/calendar-hsc.

Keck School faculty triathlete races to help raise money for CHLA

Sarah Ingersoll, clinical assistant professor of neurology at the Keck School, competed in the 2014 Nautica Malibu Triathlon on Sept. 14 in Malibu, Calif., a 72-year-old Pasadero resident, finished first in her age group, but noted that she was also the only one in it. The triathlon benefited Children’s Hospital Los Angeles and raised more than $1.35 million. Above, Ingersoll emerges from the surf upon completing the swim portion of the 2014 Nautica Malibu Triathlon.

CONFERENCE: Wearable tech poised to improve health

Continued from page 1

patients from such technology could be extraordinary. As the industry matures, however, those involved are beginning to realize that there are limitations and potential pitfalls from overloading people with too much information.

Speaker Todd Richmond, PhD, director of advanced prototypes at the USC Institute of Creative Technologies, warned that there is a breaking point for humans, in terms of information overload and we don’t know where it is. “We know we can create great technology, but we have to make it with the users in mind.” Likewise, doctors don’t need more information, but actionable information. One of the companies, AliveCor, discussed how it is improving on the information collected by its device, an electrocardiogram attached to a cell phone case. Using an app to run an algorithm, it can detect patterns consistent with atrial fibrillation, alert the user and send the ECG to a cardiologist.

In case of an emergency...

Call the Emergency Information Phone: (213) 740-3532 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 emergency. Backup Web servers on the East Coast will function if the USC servers are incapacitated.