President Nikias names Jae Jung Distinguished Professor

USC President C. L. Max Nikias has appointed three new faculty members as Distinguished Professors, including Jae Jung, who holds the Fletcher Jones Foundation Distinguished Chair in Molecular Biology and Immunology at the Keck School of Medicine of USC. Jung also holds a joint appointment in pharmacology and pharmaceutical sciences at the USC School of Pharmacy. A faculty member at USC since 2007, Jung is chair of the Department of Molecular Biology and Immunology and director of the USC Institute for Emerging Pathogens and Immune Diseases. He received the 2012 Ho-Am Prize for Medicine and is a fellow of the American Association for the Advancement of Science. An expert in the molecular biology of gamma-herpes viruses, Jung has identified and characterized the proteins produced by herpes viruses that cause cancers in immune cells or are able to alter the ability of normal immune cells to multiply. He has also identified the mechanisms by which herpes viruses and influenza viruses harness interferons for their own purpose at the expense of the host. Jung also named as distinguished professors Tony Maxworthy, holder of the Smith International Professorship in Mechanical Engineering at the USC Viterbi School of Engineering, and M. Hashem Pesaran, holder of the John E. Elliott Distinguished Chair in Economics and economics professor at the USC Dornsife College of Letters, Arts and Sciences.

Surgery plus radiation therapy may increase survival rates for some

By Sara Neve

Epidemiology and radiation therapy may increase survival rates for some older breast cancer patients, according to a recent study from researchers at the Keck School of Medicine of USC and the USC Norris Comprehensive Cancer Center. The study, led by Mariam P. Korah, clinical assistant professor in the Department of Radiation Oncology, found that older women with early-stage, low-risk breast cancer who were treated with radiation therapy after surgery showed higher survival rates than those who did not undergo radiation.

“Our research shows that older breast cancer patients who undergo radiation therapy after breast-conserving surgery have a higher cause-specific survival rate than those who do not,” said Korah.

In practice, however, we also found that the use of breast radiation has declined by six percent since the National Comprehensive Cancer Network treatment guidelines were revised in 2005,” she added.

The study suggested that treatment guidelines, which allow for omission of radiation therapy, may need to be re-examined.

The study evaluated the patient records of 27,559 women from the Surveillance, Epidemiology, and End Results (SEER) database from 2000 to 2008 who were over the age of 70, had early-stage, estrogen receptor positive, node negative breast cancer, and who had completed breast-conserving surgery with a minimum follow-up of three months.

Patients who received radiation had a higher overall survival rate than those who did not—accounting for 87 percent and 73 percent at the five- and eight-year follow-up point, and 69 percent and 49 percent for those who only underwent breast-conserving surgery. Radiation was also shown to improve cause-specific survival rates, which were 97 percent and 95 percent for patients who received radiation at the five- and eight-year follow-up point, compared to 95 percent and 91 percent for those who did not.

A total of 4,573 deaths were recorded, 17 percent (790) of which were attributed to breast cancer.

“The large number of patients and breast cancer-specific events in this study highlighted clinically meaningful survival advantages among patients who received radiation in conjunction with breast-conserving surgery as compared to those who received breast-conserving surgery alone, which may not have been detected in earlier studies,” said Korah. “In advancing the care of our patients, treatment recommendations should be guided by a synthesis of the best available aggregate evidence.”

The purpose of the study was to assess changes in patterns of care and to determine cause-specific and overall survival outcomes with and without radiation therapy after breast-conserving surgery in a large, population-based group of older women.

Within the study group, 70 percent of patients received radiation therapy after breast-conserving surgery.

From 2000 to 2004, 72 percent of patients received radiation therapy, which decreased to 66 percent from 2005 to 2008. The study found that patients were statistically more likely to undergo radiation therapy if they were younger than 80 years old, received a diagnosis from 2000 to 2004 or if a re-excision of the biopsy site was required for residual disease.
Smoking intensity and cancer markers predict seriousness of bladder cancer

By Alison Trinidad

Smoking not only causes bladder cancer—it also affects its course, in that people who smoke more have greater likelihood of developing more aggressive and deadly disease. That is one of the conclusions of a new study published online in Cancer, a peer-reviewed journal of the American Cancer Society.

The study also found that a panel of bladder cancer markers can predict which particular cases are at the highest risk for a fatal outcome.

Researchers have known that smoking is one of the most common causes of bladder cancer, but they’ve wondered whether it also affects how the disease progresses.

To investigate, Richard J. Cote, formerly of the University of Southern California (USC) and now with the University of Miami (UM) Miller School of Medicine, and Anirban P. Mitra, of the Keck School of Medicine of USC, led a team that analyzed bladder tumors and smoking history in 212 multi-ethnic patients recruited through the Los Angeles County Cancer Surveillance Program between 1997 and 1996.

The researchers found that the bladder cancers that developed in individuals who smoked intensely were more likely to be deadly than bladder cancers that developed in those who never smoked or who smoked less. The study also revealed that changes in particular proteins are often present in bladder cancers that have become deadly.

We have identified a panel of nine molecular markers that can robustly and reproducibly predict bladder cancer prognosis independent of standard clinical criteria and smoking history,” said Mitra.

Patients with alterations in six to nine markers had a very poor outcome, raising the hypothesis that these individuals could have benefited from more aggressive treatments. Because the number of changes in these proteins was directly proportional to patients’ health outcomes in a progressive fashion, the findings confirm the theory that an accumulation of changes is more important than individual changes in determining the characteristics of a given cancer.

The link between smoking intensity and prognosis found in this study points to the incrementally harmful effects of smoking.

“The study’s findings are extremely clinically relevant as bladder cancer is one of the most expensive malignancies to treat,” said Cote, who is director of the Genitourinary Malignancies Program at UM’s Sylvester Comprehensive Cancer Center.

“Personalized patient management is urgently needed for this disease as current clinical stratification cannot predict outcomes of individual patients.”

$250,000 Avon Foundation gift aims to help younger women with breast and ovarian cancer

By Amy E. Hamaker

Breast and ovarian cancers can affect everything in a woman’s life, but they’re typically diseases that most 25-year-old women don’t have to face. Some women that age with a genetic predisposition to these cancers, however, are not so lucky.

These women are among the patients that the Avon Familial Breast and Ovarian Cancer Prevention Program at the Los Angeles County+USC Medical Center helps to aid. Thanks to a renewed grant of $250,000 from the Avon Foundation for Women, the program will be able to expand this year.

According to Heather Macdonald, medical director for the program and assistant clinical professor of obstetrics and gynecology and breast surgery at the Keck School of Medicine of USC, program patients are seen Fridays at LAGI-USC’s Breast Diagnostic Clinic.

“A nurse assigned to the program helps these patients navigate through the medical system, assisting them with tracking tests, follow-ups with doctors and scheduling appointments. “This program serves the needs of women who are at high risk of breast and ovarian cancer (80 percent and 60 percent, respectively), and who typically have to interact with seven different departments to get the testing and treatment they need—which is at times denied them because of their young age,” explained Macdonald.

Currently, the program assists 80 to 100 women and has a waiting list of women wanting to take part. The new grant will allow the program to contract extra genetic counseling help to expand the number of patients who can be seen, and to create a peer-support community.

“These are rough experiences for patients who don’t have friends going through the same thing,” she said. “We needed to create a medical home at County Hospital for these patients.”

Marc Hudibert, executive director of the Avon Foundation Breast Cancer Crusade, said, “Our mission since our founding in 1955 has been improving and saving women’s lives, and we believe that the Avon Familial Breast and Ovarian Cancer Prevention Program fits that mission. We’re proud to be the largest corporate philanthropy dedicated to women’s causes globally, and we’re happy to support cancer prevention through USC.”

Macdonald expressed gratitude for the grant.

“We were so excited when Avon called to renew their support of this program,” she said. “They have really taken us on as a partner, and we’re so appreciative. The grant will enable us to provide so much more than the bare-bones services. We believe that the care we give shouldn’t vary by insurance, affordability or where you go.”

F. Laird Facey, Keck School alumnus, 81

Keck School of Medicine alumnus Frederick Laird Facey ’57, died at his home on Jan. 5. He was 81.

A Keck School of Medicine graduate of the Class of 1957, Facey served as a surgical resident at the LA County-USC Medical Center, after which he joined the USC faculty and eventually served as a clinical professor of surgery.

In lieu of flowers, the family requests that donations be made payable to the Keck School of Medicine of USC. Please send in care of Michael Mayne at 1510 San Pablo Street, Suite 600, Los Angeles, CA 90033, in honor of the Class of 1957 Endowment Scholarship Fund in memory of Laird Facey.

The Weekly Etcetera

Jean Sun, a third-year medical student, and Joseph Li, a second-year medical student at the Keck School, have received the American Medical Association Foundation’s 2013 Leadership Award.

The award provides medical students, residents/fellows and early career physicians from around the country with special training to develop their skills as future leaders in organized medicine and community affairs.

The AMA Foundation will honor 20 individuals with Leadership Awards at its annual Excellence in Medicine Awards ceremony on Feb. 11 in Washington, D.C.
By Sara Navas

In a talk that gave nods to the illustrious history of the USC Norris Comprehensive Cancer Center, director Stephen Gruber gave his annual State of the Cancer Center address on Jan. 22 to a large crowd of cancer center members, staff and students.

2013 marks the 40th anniversary of the cancer center’s founding as one of the original eight comprehensive cancer centers in the United States, and Gruber was keen to look back on how the center has grown today and plans for the future in the context of the milestones of the past.

“Comprehensive Cancer Center still stands as one of the hallmark institutions of the war against cancer here in the U.S.,” said Gruber. “It’s critical to note that, as of today, there are exactly 41 comprehensive cancer centers, and we still play a leadership role.”

Gruber noted that 2013 also marks the 30th anniversary of the establishment of USC Norris Cancer Hospital. The hospital, which has recently undergone a cosmetic refresh in its lobby and some inpatient areas, has also had significant capital investments in new equipment and technologies.

“Ultimately, our goal is to bring great therapies to our patients and to provide exquisite, personalized care to our patients. We can only do that by advancing our research mission,” he said.

In outlining the cancer center’s 11 core research facilities and one developing core, Gruber continued to carry through the theme of building on the past. For each core, he highlighted key research developments of years past alongside the recent strides made by current members and plans for future research.

Gruber emphasized the success of the cancer center in the development arena, with almost $180 million raised since the beginning of The Campaign for the University of Southern California, which launched in 2010. He noted that the cancer center’s total goal for the campaign is $485 million, and that continued success in philanthropy is an important component in the success and growth of the cancer center.

“Our goal is to bring great therapies to our patients and to provide exquisite, personalized care to our patients.”

—USC Norris Comprehensive Cancer Center Director Stephen Gruber

USC research finds depressed stroke survivors may face triple the risk of death

People who are depressed after a stroke may have a tripled risk of dying early and four times the risk of death from stroke than people who have not experienced a stroke or depression, according to a USC-led study released Jan. 11.

The study will be presented at the American Academy of Neurology’s 65th Annual Meeting in San Diego, Feb. 16 to 23.

“Up to one in three people who have a stroke develop depression,” said study author Anoush Towfighi, assistant professor of neurology at the Keck School of Medicine of USC and a member of the American Academy of Neurology. “This is something family members can help watch for that could potentially save their loved one.”

Towfighi, who is chair of the Department of Neurology and associate chief medical officer at USC-affiliated Rancho Los Amigos National Rehabilitation Center, noted that similar associations have been found regarding depression and heart attack, but less is known about the association among stroke, depression and death.

The research included 10,550 people between the ages of 25 and 74 followed for 21 years. Of those, 73 had a stroke but did not develop depression; 48 had a stroke and depression; 8,138 did not have a stroke but did depression; and 2,291 did not have a stroke but had depression.

“After considering factors such as age, gender, race, education, income level and marital status, the researchers found that the risk of dying from any cause was three times higher in individuals who had stroke and depression compared to those who had not had a stroke and were not depressed. The risk of dying from stroke was four times higher among those who had a stroke and were depressed compared to people who had not had a stroke and were not depressed. “Our research highlights the importance of screening for and treating depression in people who have experienced a stroke,” said Towfighi.

“Given how common depression is after stroke, and the potential consequences of having depression, looking for signs and symptoms and addressing them may be key.”

The Weekly NEWSMAKERS

A Jan. 29 report in Forbes quoted Mark Humayan, Cornelius J. Pings Professor of Biomedical Sciences and professor of ophthalmology, biomedical engineering, cell and neurobiology at USC, about the Argus II, an experimental retinal prosthesis awaiting approval from the Food and Drug Administration. “No one really thought it would be possible because the tissue around the eye is so soft and delicate,” Humayan said. “If we continue to develop this type of technology and begin to understand the new electrical language of pulses to the brain, to the eye, we can apply it to other parts of the body and we can change our world and how we relate to it.”

A Jan. 29 article in the San Jose Mercury News noted that California’s stem cell agency governing board includes a representative from the Keck School of Medicine.

A Jan. 28 report by CBS News quoted Benjamin Emanuel, associate professor of neurology at the Keck School, about former Israeli prime minister Ariel Sharon, who has been in a coma since 2006 after suffering a stroke. “You basically want improvement,” Emanuel said. “Over time, the longer you go without improvement the less likely you are going to improve.”

A Jan. 26 broadcast on NPR’s “All Things Considered” featured interviews with Elizabeth Benjamin, assistant professor of clinical surgery at the Keck School, and Demetrios Demetriadis, professor of surgery and chief of the division of trauma and critical care at the Keck School, about advances in trauma care of gunshot victims.

A Jan. 27 post on the Athens (Ga.) Patch featured an upcoming presentation by Michael Goonan, who holds the Dr. Robert C. and Veronica Atkins Endowed Chair in Childhood Obesity and Diabetes and is professor of preventive medicine, physiology & biophysics and pediatrics at the Keck School of Medicine, about sugar, high fructose corn syrup and obesity.

A Jan. 26 report by the Visalia Times-Delta mentioned a partnership between USC and Tulare Regional Medical Center. The story noted that the first robotic surgery at Tulare was performed by Inderbir Gill, chairman and professor of the Catherine and Joseph Areyt Department of Urology at the Keck School, in 2011.

A Jan. 25 broadcast on KRTK-FM quoted Thomas Vangsness Jr., professor of orthopaedics at the Keck School, who performed shoulder surgery on radio personality Gary Bryan.

A Jan. 26 article in the San Gabriel Valley Tribune quoted Astrid Heger, professor of clinical pediatrics at the Keck School, about a proposed law that would give victims of sexual abuse more time to sue abusers. “I think that children should be allowed to sue or seek redress in the courts for abuse of any kind against them when they reach adulthood because, obviously, they can’t take advantage of the legal system as children,” Heger said.

A Jan. 23 article in the Orange County Register noted that Wendy Mitchell, professor of clinical neurology at the Keck School, created a pediatric patient with opsoclonus myoclonus syndrome, an autoimmune disease triggered by a form of cancer called neuroblastoma.

A Jan. 23 story in the Ventura County Star featured a prostate cancer presentation by Tanya Dorr, assistant professor of clinical medicine at the Keck School. “There has been a tremendous increase in new therapies being developed for prostate cancer in the last five years, making it a very rewarding time to be treating men with prostate cancer,” Dorr said. “My discussion will emphasize hope.”

A Jan. 23 article in Science Daily quoted Mark Krieger, assistant professor of clinical pediatrics at the Keck School and chief of medical staff at Children’s Hospital Los Angeles, about the Food and Drug Administration’s approval of a clinical trial for children to test an auditory brainstem implant. “We are looking forward to offering this innovative procedure to provide sound to deaf children in the United States,” Krieger said. Gordon McComb, professor of pediatrics at the Keck School, was noted as being part of the clinical trial team.

A Jan. 18 article in Proteomonitor featured a study led by Anirban Mitra, senior research associate in the Department of Pathology at the Keck School, and a colleague, finding that heavy smokers are more likely to develop aggressive, deadly bladder cancers than are nonsmokers.
Bremen Student International Research Travel Grant supports students with a global health interest

By Amy E. Hamaker

Second-year Keck School of Medicine of USC student Ryan Kobayashi got the opportunity to gratify his passion for global health when he and fellow student Grant Meyer spent eight weeks at an orphanage in Haiti last summer to pursue research on the link between childhood diseases and sanitation.

“We were able to work with the clinical staff in Haiti to analyze the relationships between people who get sick and their hygiene practices,” said Kobayashi. “We created a survey that could accurately portray the attitudes and practices of the population we were studying, and did a hand washing promotion and education intervention as well. It was an amazing learning experience.”

Kobayashi and Meyer’s research took place thanks to the Bremen Student International Research Travel Grant (a part of the Global Health Scholars Program), supported by Joel Brennan, a Keck School alumnus (65).

Brennan spent his early career with the Centers for Disease Control and Prevention studying infectious diseases while living in Guinea and Burkina Faso, West Africa. There, he worked on the global eradication of smallpox and control of vaccine-preventable diseases.

During his time at the World Health Organization in the late 1970s, he was responsible for orthopoxvirus research and the certification of smallpox eradication. He also investigated the first epidemic of Ebola hemorrhagic fever in the Democratic Republic of the Congo with an international team in 1976. Returning to the CDC in the 1980s, Brennan worked on the epidemiology and control of malaria.

More recently, at the Fogarty International Center at the National Institutes of Health, he has directed programs training leaders in science and public health in poor countries while continuing research on the epidemiology, control and eradication of malaria and other tropical infectious diseases. Brennan has written more than 150 articles and book chapters and edited several books on disease burdens, malaria and research capacity strengthening in low-income countries.

This background led him to fund the Bremen Student International Research Travel Grant, which allows Keck School students to undertake clinical experience, field or laboratory research in a foreign country. Grants range from $2,000 to $5,000. Travel and research in a foreign country must be at least eight weeks, and a scientific report is required.

“Dr. Brennan’s wishes to give students international research experience rather than a straight clinical shadow. The projects can be very diverse. Previous recipients have traveled to the Amazon to determine the effectiveness of a particular book’s use in the field by village leaders with no medical training, and have researched the depression stigma within an HIV community in Africa,” Sanchez believes that exposing students to different cultures is mutually beneficial and makes them more compassionate and informed doctors. “Issues that affect another community can have repercussions in the United States,” he said.

“They have the tools to function in different cultures and institutions on medical problems of mutual interest and have grown in great esteem for the World Health Organization.”

During his time at the CDC, Brennan spent his early career with the Centers for Disease Control and Prevention studying infectious diseases while living in Guinea and Burkina Faso, West Africa. There, he worked on the global eradication of smallpox and control of vaccine-preventable diseases.

Dia 3 p.m., BROM Surgical Grand Rounds. "The Surgical Management of DVT:" William Lee, USC, DOH 1st Floor Auditorium. Info: (323) 442-9064

Tuesday, Feb. 12


Thursday, Feb. 14


Friday, Feb. 15

2 p.m., Surgical Grand Rounds. "Transplant Education Network – Liver Graft Survival and Beyond: Renal Function, HCV and HIV." James Trotter, Baylor University. DOH 1st Floor Auditorium. Info: (323) 442-9064

Monday, Feb. 18


Calendar of Events

Monday, Feb. 4

11:30 a.m. – 1 p.m., BROM Research Seminar. "Mitochondrial-Derived Peptides and their Role in Health and Disease," Pinchus Cohen, USC, NRT Anatomy Auditorium. Info: (323) 442-7732

Tuesday, Feb. 5

Noon. Psychiatry Grand Rounds. "Telemedicine and Telepsychiatry: Models of Care and Education for Students, Residents, Faculty and Primary Care Providers," Donald Hiby, UC Davis. ZNI 112. Info: (323) 442-4065


Wednesday, Feb. 6


Thursday, Feb. 7


6:30 p.m. – 8:30 p.m., Sleep Apnea Community Opportunities," various speakers. CHLA, Staufer Conference Room, Anderson Pavilion. Info: (323) 442-7874

Notice: Deadline for calendar submission is aHAM 400

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