

USC Pharmacy celebrates 50-year partnership with Allergan

By Kukla Vera

Celebrating a partnership of more than 50 years, the School of Pharmacy and Allergan, Dean R. Pete Vanderveen hosted a luncheon on March 19 in Irvine. Guests of honor were USC Life Trustee Gavin Herbert—a founder of Allergan and chairman emeritus of the company's Board of Trustees—and Pharmacy Dean Emeritus John A. Biles.

Based in Irvine, Allergan is a multi-specialty health care company focused on discovering, developing and commercializing innovative pharmaceuticals, biologics and medical devices.

The luncheon recognized the generous support of Allergan to USC's fellowship program and offered a rare opportunity to reflect on the role the company has played in the School. Herbert is a former chairman of the

School's Board of Councilors.

At the event, Vanderveen said, "Long before I arrived at USC, Allergan was playing an important leadership and generous support role to the School, and we deeply appreciate it."

Allergan's support of the School of Pharmacy includes the naming of two professorships, the Gavin S. Herbert Professorship in Pharmaceutical Sciences, currently held by Sarah Hamm-Alvarez, and the John A. Biles Professorship in Pharmaceutical Sciences, held by Wei-Chiang Shen. Additionally, Allergan named the Herbert Hall of Administration at the School and has supported a thriving fellowship program with funding at \$820,000 for the current academic year alone.

"There would not be an Allergan

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From left, USC Life Trustee Gavin S. Herbert, Dean Emeritus John A. Biles and School of Pharmacy Dean R. Pete Vanderveen.

LAC+USC Replacement Facility opening delayed

By Jon Nalick

Due to construction delays, LAC+USC Medical Center officials have pushed back the scheduled opening of—and transfer of patients to—the LAC+USC Replacement Facility from June to September at the earliest.

Carolyn Rhee, project director of the replacement facility, said the current lack of medical gas certification and continuing challenges to stabilize the air balancing system necessitated the postponement.

"Construction completion is difficult," she said, especially in projects of such considerable magnitude. "But we're moving forward."

To prepare for the move, hospital and project officials already have trained more than 3,000 people in orientation classes on a broad range of topics including employee parking and changes in patient-care delivery at the new site.

Rhee said hospital staff has assembled, and continues to work on, a comprehensive plan to ensure a smooth transition when the time comes, adding, "The safety of the patients and staff is key."

HSC serves up longer hours for hot food and coffee

To better serve students, campus eateries recently extended their hours to as late as 6 p.m. for hot meals and 8 p.m. for lighter fare and coffee.

Einstein Bros. Bagels in Zilkha Neurogenetic Institute is now open 6 a.m. to 6 p.m. on weekdays, except Fridays when it closes at 5 p.m. The Plaza Marketplace food court is now serving hot meals from 7 a.m. to 5 p.m. and the attached cafe serving Starbucks coffee and pastries is now open until 8 p.m.

Responding to a student survey, administrators at the Keck School of Medicine and the Schools of Pharmacy and Dentistry requested the change to bolster service to all USC students who live, study and train on the Health Sciences Campus—and students say they've already noticed the changes.

Pamela Lincoln, a second-year pharmacy student, said the expanded hours save her from the inconvenience of having to leave campus for a hot cup of coffee.

"It's helpful because this is the only place I study. Before I would have to drive 15 minutes," to reach a suitable coffee shop, she said.

Sondra Hernandez, HSC Food Service manager, said the new hours will continue until May 19. Then, Einstein's and the Plaza Marketplace will close at 3 p.m. and the cafe will close at 5 p.m. However, the businesses will return to the new, expanded schedule after summer if it is popular with student patrons.

Lacrimal gland study awarded \$1.6 million

By Meghan Lewit

Keck School of Medicine researchers received a \$1.6 million, grant from the National Institutes of Health to study the function and regulation of the lacrimal gland—a moisture-producing gland in the orbital cavity of the eye. Chuanqing "Chuck" Ding, assistant professor of research, Department of Cell and Neurobiology at the Keck School, is leading the research.

Lacrimal fluid, the major component in tears, acts as a lubricant for the ocular surface. It also plays critical roles in protecting the health of the ocular surface and maintaining normal function of the eye.

However, the exact function of the lacrimal duct system draining the gland is still unclear.

"It's a poorly investigated field. For a long time, many investigators assumed that the lacrimal duct system was nothing more than a transport system, or a pipeline, for lacrimal fluids, and researchers didn't really pay much attention to it," Ding said. "Recent data now suggest that these ducts play a major role in the secretion and modification of lacrimal fluids."

Using a number of novel techniques, such as microperfusion and live cell imaging, researchers will be

able to observe—with a state-of-the-art multi-photon confocal microscope—the functional changes of lacrimal duct cells marked with fluorescent dyes. Janos Peti-Peterdi, associate professor, Department of Physiology and Biophysics, is collaborating with Ding.

"It's a groundbreaking technique for studying the lacrimal duct system,"

said Joel Schechter, professor, Department of Cell and Neurobiology, another collaborator. "It's never been done."

Other investigators participating in this project are Austin Mircheff, professor, and Yan-ru Wang, senior research associate, both in the Department of Physiology and Biophysics.

The research may lead to new therapies for dry eye, a chronic condition that affects millions of people.

"The ultimate goal is to find the underlying mechanisms that control lacrimal fluid production," said Ding. "It's truly a unique project and has the potential to revolutionize our thinking of the lacrimal function and dry eye and finding new therapeutic approaches."

A person with dry eye syndrome experiences constant pain and a gritty sensation that, untreated, can lead to scarring of the cornea and vision loss.



Chuanqing Ding



Salerni Collegium celebrated its 50th anniversary on March 8 at the Salerni/Medical Faculty Wives and Friends annual scholarship dinner in Los Angeles. Left, George Stoneman accepts an award for his dedication to and efforts on behalf of Salerni Collegium from president John Gonzalez.

Study suggests new way to fight cancer

By Carl Marzali

Fasting for two days protects healthy cells against chemotherapy, according to a study appearing online the week of March 31 in *PNAS Early Edition*.

Mice given a high dose of chemotherapy after fasting continued to thrive. The same dose killed half the normally fed mice and caused lasting weight and energy loss in the survivors.

The chemotherapy worked as intended on cancer, extending the lifespan of mice injected with aggressive human tumors, reported a group led by Valter Longo of the USC Davis School of Gerontology and USC College.

Longo has been studying aging at the cellular level for 15 years and has published in the nation's leading scientific journals. He is the Albert L. and Madelyne G. Hanson Family Trust Associate Professor at the USC Davis School with joint appointments as associate professor of biological sciences at USC College and in the USC/Norris Cancer Center.

Test tube experiments with human cells confirmed the differential resistance of normal and cancer cells to chemotherapy after a short period of starvation.

Making chemotherapy more selective has been a top cancer research goal for decades. Oncologists could control cancers much better, and even cure some, if chemotherapy was not so toxic to the rest of the body.

Experts described the study as one of a kind.

"This is a very important paper. It defines a novel concept in cancer biology," said cancer researcher Pinchas Cohen, professor and chief of pediatric endocrinology at UCLA.

"In theory, it opens up new treatment approaches that will allow higher doses of

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ETCETERA

Keck School of Medicine neurosurgeon **Michael L. J. Apuzzo** was recently named a 2008 University Distinguished Alumnus of Boston University, an honor awarded in previous years to luminaries including the Rev. Martin Luther King Jr. and former Secretary of Defense William Cohen.

Apuzzo, the Edwin M. Todd/Trent H. Wells Professor of Neurological Surgery, Radiation Oncology, Biology and Physics at the Keck School, is internationally known for his work on minimally invasive techniques, cellular and molecular neurosurgery, functional restoration, and nanotechnology.

He is editor of the leading international neurosurgical journals *NEUROSURGERY* and *Operative NEUROSURGERY* as well as the Internet journal *NEUROSURGERY-Online*.

Alan Yu, associate professor of medicine and physiology and biophysics, has been chosen as co-editor of *The Kidney*, the seminal two-volume text covering all aspects of nephrology.

Yu said he is especially honored to be chosen for the post, in part because the sole previous editor was neurologist Barry M. Brenner.

"He was my mentor at Harvard and is one of the foremost and well-recognized nephrologists in the country, maybe the world," Yu said.

The 2,250-page book has been translated into multiple languages and is known internationally as the key reference in nephrology. Yu joins a rotating

group of five editors who are now working on the ninth edition of the top-selling book, to be published in 2009 by Saunders Elsevier.

The nonprofit Space Foundation will honor the Keck School of Medicine Atherosclerosis Research Unit and its director **Howard N. Hodis**, professor of medicine and preventive medicine, on April 10 for helping develop software to improve the diagnosis of heart disease.

In cooperation with NASA, the Space Foundation inducted the USC team into the 2008 Space Technology Hall of Fame for its work on ArterioVision, software used with a standard ultrasound to measure precisely the thickness of the two inner layers of the carotid artery, known as the carotid intima media thickness.

Doing so allows doctors to determine the age and health of a patient's arteries and better predict and minimize his or her risk for heart disease.

Initially developed at NASA's Jet Propulsion Laboratories in the 1990s, ArterioVision is derived from the video imaging communication software used to process pictures from NASA spacecraft imagery. The Atherosclerosis Research Unit tested and adapted it for diagnostic medical use.

Hodis and the Atherosclerosis Research Unit will be honored in Colorado Springs at the 24th National Space Symposium, an annual gathering of the global space community.

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Conference focuses on nanotech medicine

By Carl Marziali

Major discoveries in nanotechnology over the past five years compel an accelerated search for medical applications, said organizers of a national conference held at USC March 20-21.

The conference provided a public showcase for some of the discoveries and opportunities discussed earlier in the week during a USC-hosted workshop on translational nanoscience.

"Advances in engineering and science at the nanoscale now offer the potential to make very, very small particles, devices, machines—things that could either deliver a therapeutic to the human body or be inserted into the human body to combat disease," said Steven Moldin, executive director of USC's Washington, D.C., Office of Research Advancement.

"This is all being driven by technological advances at a pace that was unanticipated even five years ago."

USC was chosen to host the meeting because of its expertise in engineering and fabrication sciences and nanochemistry, Moldin noted, and because the university already has a Biomedical Nanoscience Initiative, co-chaired by Richard Cote of the Keck School of Medicine of USC and Mark Thompson of USC College.

The purpose of the conference was to match basic nanotechnology research with medical areas having urgent needs, said co-organizer James Murday, director of physical sciences development in the D.C. Office of Research Advancement.

"What are some of the major problems facing doctors and clinicians where they would significantly benefit from some new approaches to solve problems, and is there anything in the nano world that offers hope?" he asked.

As a scientist in the Department of Defense, Murday was one of the architects of the National Nanotechnology Initiative. The multi-agency initiative program coordinates more than \$1.5 billion in annual research grants.

"The goal (of the conference) was to see where the sweet spots are—promising opportunities for nano-enabled technologies to make significant impact to medicine and health. In turn, those insights will provide strategic investment guidance to the funding communities," Murday said.

He identified three major areas highlighted at the conference: tissue regeneration and implants, diagnostics and imaging, and drugs and therapeutics.

The conference included presentations from researchers at leading research centers, including USC, the California Institute of Technology, the University of California system, Baylor College of Medicine, Rensselaer Nanotechnology Center, the University of Illinois and General Electric.

Keck School Professor Emeritus Leslie Bernstein honored for distinguished career

Leslie Bernstein, Professor Emeritus at the Keck School of Medicine, has received distinct honors as the first biostatistician/epidemiologist and the first woman to be awarded the American Association for Cancer Research (AACR) Prevent Cancer Foundation Award for Excellence in Cancer Prevention.

She was honored for her distinguished research career in cancer epidemiology and prevention, spanning nearly 25 years of discovery. Bernstein is

internationally recognized as a preeminent researcher and scholar whose work has vast implications on the quality of life of cancer survivors.

The award has been given annually for the past six years to a scientist for seminal contributions to the field of cancer prevention research in basic, translational, clinical, epidemiological or behavioral science.

An active member of AACR since 1995, Bernstein has served in various capacities, including as an editorial

board member of *Cancer Epidemiology, Biomarkers and Prevention*, as a participant in Women in Cancer Research activities, and as a member of several committees.

Bernstein received the award at the Sixth Annual AACR International Conference on Frontiers in Cancer Prevention Research in Philadelphia, where she also gave an award lecture, "Breast Cancer Prevention: Learning from the Past, Mentoring the Future."

Bernstein is also one of two recipients of the 2007 Komen Brinker Award for Scientific Distinction, the highest award of merit from the Susan G. Komen for the Cure organization.

The Brinker Award for Scientific Distinction was established in 1992 to



Leslie Bernstein

honor the efforts of acknowledged pioneers in two critically important components of the fight to end breast cancer: clinical work and basic research.

Bernstein received the award for her clinical work as a pioneer in research on the link between physical activity and breast cancer, as

well as her leadership in efforts to understand patterns in breast cancer incidence, including the troubling rise in risk among new immigrants to California.

She was recognized formally for her award-winning efforts during the 30th annual San Antonio Breast Cancer Symposium, a major international gathering of breast cancer researchers, clinicians and patient advocacy organizations, held in San Antonio.

USC School of Pharmacy students win national honors

By Kukla Vera

The American Pharmacists Association, the Rho Chi Society and the American Society of Health-System Pharmacists have recognized USC students and their peers for excellence in pharmacy practice among student pharmacists.

At the American Pharmacists Association's meeting in San Diego, USC student Brandi Chock was one of four students nationwide to be awarded the APhA-Academy of Student Pharmacists Student Leadership Award.

Chock, a 2009 Pharm.D. candidate, is the president of the USC chapter of the APhA/CPhA.

She was recognized at a special dinner in Sacramento this month, along with the other national winners and her faculty advisor, professor Michael Wincor.

Also at the meeting, USC won four prestigious group awards. The 2008-09 Project CHANCE Award went to the School of Pharmacy in recognition of student work in safety-net clinics. The school also took the National Operation Immunization Award for efforts to vaccinate and to educate Californians about immunization.

Student work also was recognized with the Region 8 Heartburn Awareness Challenge Award and the Region 8 Operation Diabetes Award. Both honors recognize students for their superior efforts to improve the health of the community in these specific areas.

The Rho Chi Society, the national academic honors society in pharmacy, awarded the USC Theta Chapter a project proposal award for its submission, "Mental Health and Sleep Disorders." On hand to accept the award at the Rho Chi annual meeting in San Diego was Amy Eng, president of the USC Rho Chi chapter.

School of Pharmacy professor Ron Alkana was named to the Rho Chi Alumni Honor Roll, and Wincor was elected Region 8 councilor on the organization's national executive board.

In addition, the American Society of Health-System Pharmacists honored USC students Christina Phan and Todd Okamoto with the organization's Annual Leadership Award. This award recognizes students who are national role models for their leadership in professional pharmacy organizations.

CHEMO: New approach aims to protect healthy cells

Continued from page 2

chemotherapy. It's a direction that's worth pursuing in clinical trials in humans."

Felipe Sierra, director of the Biology of Aging Program at the National Institute on Aging, said, "This is not just one more anti-cancer treatment that attacks the cancer cells. To me, that's an important conceptual difference."

Sierra was referring to decades of efforts by thousands of researchers working on "targeted delivery" of drugs to cancer cells.

Study leader Longo focused instead on pro-

tecting all the other cells.

Sierra added that progress in cancer care has made patients more resilient and able to tolerate fasting, should clinical trials confirm its usefulness.

"We have passed the stage where patients arrive at the clinic in an emaciated state. Not eating for two days is not the end of the world," Sierra said.

"This could have applicability in maybe a majority of patients," said David Quinn, a practicing oncologist and medical director of USC Norris Hospital and Clinics.

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The emergency telephone system can handle 1,400 simultaneous calls. It also has a back up system on the East Coast.

Calendar of Events

The HSC Calendar is online at www.usc.edu/hscalendar

Monday, Apr. 7

NOON. Fellows' Core Curriculum Conference. "Edema & Diuretics," Mirosław Smogorzewski, USC. GNH Drs. Dining Rm. A & B. Info: (323) 226-7307

NOON. "Pathogenesis of Systemic Lupus Erythematosus: Chance Favors Susceptible Hosts," Shu Man Fu, Univ. of Virginia. GNH 6441. Info: (323) 442-1946

4 P.M. "Dyslipidemia in Transplant Patients: Research in Progress," Jacob Ahdoot, USC. GNH 10-340. Info: (323) 226-7307

Tuesday, Apr. 8

9 A.M. Neurology Grand Rounds. "Optical Intrinsic Signal Imaging of Seizures and Cortical Spreading Depression," James Chen, UCLA. ZNI 112. Info: (323) 442-7686

11 A.M. "Newer Therapies in Diabetes: Mechanisms and Clinical Applications," Jane Weinreb, UCLA. HMR 100. Info: (323) 442-2806

NOON. Cancer Ctr. Grand Rounds. "Roles of the Transcription Factor LRF in Hematopoiesis," Takahiro Maeda, City of Hope. NOR 7409. Info: (323) 865-0801

2:30 P.M. Translational Science Symposium.

"Immunological Challenges in Clinical Transplantation," Various speakers. KAM B21. Info: (323) 361-8681
Tuesday, Apr. 8

4 p.m. KSOM faculty and staff are invited to a Town Hall meeting. Dean Carmen A. Puliafito will present an update of activities and strategic directions for the Keck School of Medicine. Info: (323) 442-2830

Wednesday, Apr. 9

7 A.M. Medicine Grand Rounds. "Endocarditis," John Fan, USC. GNH 1645. Info: (323) 226-7556

Notice: Deadline for calendar submission is 4 p.m. Monday to be considered for that week's issue—although three weeks advance notice of events is recommended. Please note that timely submission does not guarantee an item will be printed. Send calendar items to HSC Weekly, KAM 400 or fax to (323) 442-2832, or e-mail to eblaauw@usc.edu. Entries must include day, date, time, title of talk, first and last name of speaker, affiliation of speaker, location, and a phone number for information.

NOON. Renal Grand Rounds. "Genetic and Inherited Renal Disorders: Diabetic Nephropathy," Sharon G. Adler, UCLA. GNH 6441. Info: (323) 226-7307

NOON. USC Ctr. for Excellence in Research. "Beyond the Genome: Implications of Genetic Research for our Understanding of Ourselves," Carol Prescott, USC. UPC: CUB 329. Info: (213) 740-6709

4 P.M. USC Ctr. for Excellence in Research. "Securing External Funding for Research in Crime, Justice and Related Issues," Leora Rosen, USC. UPC: CUB 329. Info: (213) 740-6709

Thursday, Apr. 10

9 A.M. USC Childhood Obesity Research Ctr. Symposium. "Childhood Obesity: Genes, Brains, and Behavior," Gary Taubes, author of *Good Calories, Bad Calories*. NRT Aresty Aud. Info: (323) 442-4101

Friday, Apr. 11

8 A.M. The Saban Research Inst. of Childrens Hospital Los Angeles Distinguished Lecturer series. "Imitation in Autism: Findings and Mechanisms," Sally Rogers, UC Davis. CHLA Saban Research Bldg. Info: (323) 361-8424

NOON. "Medical & Surgical Treatment of Resistant Hypertension," Mitra Nadim and Fred Weaver, USC. GNH 7420. Info: (323) 442-6130

NOON. "Immune Repair Responses in HIV," Kathleen Rodgers, USC. GNH 6441. Info: (323) 226-7504

NOON. Pharmacology and Pharmaceutical Sciences Seminar. "Neuroactive Steroids Mediate Alcohol Sensitivity in Rats and Humans: Therapeutic Relevance," A. Leslie Morrow, Univ. of North Carolina. PSC 104. Info: (323) 442-1427

Keck School students named AMSA leaders

Three Keck School of Medicine students have been named to key leadership positions in the American Medical Student Association (AMSA) for the 2008-2009 year.

At the AMSA annual meeting in Houston March 12-16, the organization elected fourth-year student Brian Hurley as its president, and named third-year student Rebecca Sadun to the student office staff as the Director of Student Programming.

Second-year student Russell Buhr was named chair of the newly-formed Committee on Student Life, which will focus on student wellbeing and advocacy, personal and professional development, medical education quality and affordability, and fostering a sense of

community among future physicians.

Hurley is the first AMSA president to be elected from Keck School, and will move to Washington, D.C., to work full-time in the national office for a year before he enters the match the following year.

Sadun will take a year away from Keck to work full-time in the national office in Washington, D.C., facilitating projects and campaigns and to serve as a resource for local chapters at the national level.

Run by and for students, the American Medical Student Association is the oldest and largest organization of physicians-in-training and serves as a voice advocating for progressive change in patient and student rights.

ALLERGAN: Event highlights longtime ties to USC

Continued from page 1
without John Biles," noted Herbert, referring to contributions Biles made to the company in its early days more than a half century ago.

Dean Emeritus Biles thanked all at the gathering, especially Herbert for the tremendous support that Allergan provided to the School of Pharmacy over the past decades.

Vanderveen took the opportunity to note, "Dean Biles truly stands as one of our greatest deans. I can only hope to lead as effectively during my tenure as Dean Biles did during his."

Additional attendees at the event included Allergan executives and the four fellows they are currently mentoring through the fellowship program. Allergan hosts more USC fellows than any other fellowship site and plans to increase the number of fellows to nine in the 2008-09 academic year.

Attending the event from the Allergan Global Regulatory Affairs group were Rick Wilson, senior vice president; Marty Solberg, vice president and a member of the School of Pharmacy Board of Councilors, who

has spearheaded the fellowship program; and Matt Moran, senior director, who oversees many of the fellows' activities.

Janet Cheetham, one of the first fellows in the program when Biles led the School, also attended. Cheetham is currently vice president of clinical operations at Allergan. As Vanderveen mentioned at the event, "I guess the fellowship program works, given Janet's success at Allergan."

Director of the USC fellowship program, Bill Gong, attended the event along with Frances J. Richmond, director of the School's regulatory science program. Many of the fellows are involved in regulatory work at Allergan.

Rosemarie Christopher, a member of the School's Board of Councilors who has been pivotal in the fellowship program, also attended.

One of the fellows, Lee Ming Boo, said, "The fellowship has given me an opportunity to participate on the regulatory team tracking a drug from development to approval."

Boo received a Pharm.D. from USC in 2004, followed by a research fellowship at the school

HSC NEWSMAKERS

Complete listing at: www.usc.edu/uscnews/usc_in_the_news/

A Mar. 31 Bloomberg article quoted USC/Norris cancer researcher **David Quinn** in an article about a USC-led study which found that short-term starvation techniques may help shield healthy cells from the damaging side effects of chemotherapy. Stories also ran in the *New Scientist* and AFP.

On Mar. 31, CW News cited a USC study that found children who eat three hot dogs a week are nine times more likely to develop leukemia.

A Mar. 31 *Seattle Post-Intelligencer* highlighted research led by heart researcher

Amytis Towfighi which found evidence linking excess abdominal fat to an increased rate of stroke among females.

A Mar. 25 *New York Times* article quoted child obesity researcher **Donna Spruijt-Metz** about a new study finding that adolescents who eat breakfast are more likely to exercise and less likely to be overweight.

A Mar. 25 *Press-Telegram* article quoted CHLA pediatrician **Mark Sklansky** and cardiovascular surgeon **Vaughn Starnes** in an article about a girl brought to the U.S. for heart surgery at CHLA.

KCBS-TV Channel 2 news also reported the story.

A Mar. 25 *New York Times* article featured a study by USC researchers and several other institutions that identified all 1,116 unique proteins found in human saliva glands. Reuters ran a similar article.

A Mar. 25 *Medical News Today* article featured researchers at CHLA discovering a way to dramatically enhance the growth of stem cells from umbilical cord blood after transplantation.

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