USC luminaries named to AAAS

By Kukia Vera

School of Pharmacy Professor Jean C. Shih and Provost C. L. Max Nikias are among five leading scientists at USC named Fellows of the American Association for the Advancement of Science in recognition of outstanding contributions in science and engineering.

Shih, the sole Health Sciences Campus faculty member named, was recognized in the neuroscience category for distinguished contributions to the field of molecular neuropharmacology, particularly for contributing to the present knowledge on monoamine oxidases and their roles in behavior. Her findings have therapeutic applications for depression, anxiety and aggression, as well as Parkinson’s and Alzheimer’s disease.

Shih, a University Professor and the Boyd P. and Elsie D. Welin Professor in Pharmacology and Pharmaceutical Sciences, has won international acclaim for her study of how the brain enzyme monoamine oxidase (MAO) affects behavior. Her laboratory was the first to clone the human MAO A and B genes and to unravel the structure, functions and regulation of these genes. MAO has profound effects on behavior and influences neurotransmitters crucial to emotion, such as serotonin, dopamine and norepinephrine. For example, Shih’s work has shown that mice lacking both MAO genes display relentless aggression.

Shih, who has previously won two MERIT Awards from the National Institutes of Health, has had more than 30 consecutive years of NIH funding for her work.

The American Association for the Advancement of Science (AAAS) is the world’s largest general scientific society and publisher of the prestigious journal Science.

Joining Shih and Provost Nikias as new AAAS fellows are Maja Mataric, an associate professor in the Viterbi School of Engineering, and Douglas Capone and Howard Taylor, both from the College. The USC awardees will be among 471 scientists honored in February 2008 at the Fellows Forum of the 2008 AAAS Annual Meeting in Boston, Mass.

The tradition of AAAS fellows being named, was recognized after years of strife.

USC medical team delivers aid to Liberia

By Katie Neith

In the midst of escalating civil war, Kathryn Challoner was evacuated from Liberia by the U.S. Embassy in 2003 when rebels invaded the capital city of Monrovia. This fall, she went back to the country as it struggles to rebuild after years of strife.

Challoner is co-director of the division of international emergency medicine in the Department of Emergency Medicine at the Keck School. Armed with medical supplies, teaching materials and a team of two other Keck faculty, two emergency medicine residents, three nurses and three Keck medical students, she spearheaded a trip in September to help aid a country devastated in need.

“Liberia is a country on the edge—the infrastructure is in ruins, 85 percent of the population is unemployed, there are 35 Liberian physicians left and even basic resources are missing,” said Challoner. “If the country is to emerge with any degree of stability after civil war, partnerships need to occur to help build capacity.”

This was Challoner’s 11th trip to West Africa and her fourth visit to Liberia.

She and her team transported and delivered more than 600 pounds of antibiotics and other medical and surgical supplies donated by Direct Relief International, Operation USA and M edical A ssistance Program International. Challoner’s colleagues donated teaching materials and manuals, which helped the team teach a free three-day medical symposium at the American Medical School of Medicine and Public Health.

USC School of Dentistry cheers decision to fluoridate region’s water

By Veronica Jauriqui

When the Metropolitan Water District (MWD) announced it would increase its fluoride levels from 0.1-0.4 parts per million to 0.7-0.8 parts per million, a cooperative of 26 cities and water agencies in Southern California, supplies water to 18 million people in six counties from Santa Barbara to San Diego.

On Oct. 28, the MWD increased its fluoride levels from 0.1-0.4 parts per million to 0.7-0.8 parts per million, a level that both the California Department of Public Health and the U.S. Centers for Disease Control and Prevention (CDC) recommend for optimal dental health.

“A tremendous achievement and one that will significantly impact many regional municipalities,” Sekiguchi said. “It was a long time coming.”

For every dollar spent in fluoridation, we’re talking about $38 saved in dental bills. Few public health measures have such a favorable cost-benefit ratio.”

— Eugene Sekiguchi, USC School of Dentistry associate dean for International, Professional and Legislative Affairs

Sekiguchi was part of the statewide alliance of oral health experts who lobbied state and local legislators to increase fluoridation levels of municipal water supplies. Other members of the coalition included USC School of Dentistry Dean H. Harald Slavkin, faculty members Charlie Goldstein and Stanley H efetz, and Tim Collins, dental director for the Los Angeles County Department of Health Services.

H efetz, a clinical professor in the school’s Division of Health Promotion, Disease Prevention and Epidemiology and resident expert on fluoridation practices, said California lagged far behind the rest of the nation in fluoridation of public water. In 2000, the CDC reported that less than 29 percent of the public water supplies, it was a victory for oral health advocates who understand fluorides’ important role in maintaining good dental health.

For Eugene Sekiguchi, USC School of Dentistry associate dean for International, Professional and Legislative Affairs, it was an accomplishment representing more than a decade’s lobbying in support of the issue.

“T is a tremendous achievement and one that will significantly impact many regional municipalities,” Sekiguchi said. “It was a long time coming.”

Happy 90th birthday, Dr. Berman!

Members of the campus community turned out in Pappas Quad on Oct. 31 to celebrate the 90th birthday of David Berman, distinguished professor emeritus of cell and neurobiology (seated, center), and also commemorate his 55 years—and counting—of service to the Keck School of Medicine.
USC researchers show that peer pressure can help reduce drug use in teens

By Jennifer Chan

High-risk teenagers who participate in peer-led substance abuse prevention programs reduce their drug use by approximately 15 percent versus traditional curricula, suggests a study led by USC researchers. The study appears in the November 2007 issue of the journal Addiction and is now available online.

“Most substance abuse prevention programs disseminate information about the bad effects of drugs and teach resistance skills without considering the impact of peer influence,” said Thomas Valente, associate professor of preventive medicine at the Keck School of Medicine. “Generally, our study emphasizes the importance of peer influence,” Valente continued. “Programs that incorporate this type of interactive programming can be very effective, but they depend on how peer influence is channeled.”

The study assessed data on their use of tobacco, alcohol, marijuana and cocaine. Students were assigned randomly by classroom to receive one of the two curricula or to the control group.

“Reducing drug use among the high-risk teen population at these alternative schools is tough,” Valente said. “It is encouraging to see this type of positive influence among students who live and go to school in challenging environments.”

However, the study also found that students with a peer environment that supports substance use did not benefit from the interactive program. Students with substance-using friends increase their own use in the peer-led condition.

“Peer influence can go both ways. Some students benefited because of the positive social influence of their friends, while others were harmed by negative influence of their substance-using peers,” Valente concluded. “Programs that incorporate this type of interactive programming can be very effective, but they depend on how peer influence is channeled.”

The National Institute on Drug Abuse funded this study.
The USC Pain Center at the Keck School of Medicine has announced the first
fundraising walk to support the upcoming research initiative.

**USC Pain Center to sponsor Dec. 2 fun run/walk**

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fundraising walk to support the upcoming research initiative.

**WATER: Fluoridation of water called long overdue**

The MWD estimates that the cost to increase fluoridation levels will amount
to less than one dollar per family per year. But Sekiguchi said that it could translate into much more savings by avoiding costly dental services.

“For every dollar spent in fluoridation, we’re talking about $20 million grant to town and municipalities to upgrade their fluoridation processes, it was the boon fluoridation advocates were seeking.

“Like immunizations against infectious diseases, fluoridation is an inexpensive and highly effective adjunct to reduce the prevalence of tooth decay,” said Slavkin added.

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has a backup system on the East Coast.

**By Veronica Jauriqui**

In the first epidemiologic study of oral cancer in ethnic subpopulations in
California, two researchers from the
USC School of Dentistry have identified
a strong relationship between the incidence of oral cancer and race and ethnicity.

Satish Kumar and Parish Sedghizadeh, clinical professors in the school’s Division of
Dental Sciences, along with Lihua Liu from
the Keck School of Medicine’s Department of Preventive Medicine,
ethnicity.

USC study identifies strong links between oral cancer incidence and ethnicity

The research team theorized that cultural habits are to blame.

Their findings will be published in an upcoming issue of the journal Oral
Surgery, Oral Medicine, Oral Pathology, Oral Radiology and Endodontology.

Though the cancer will claim the lives of 7,500 Americans this year, it is
the most diagnosed cancer in many
developing countries—including India, China and Vietnam.

Up to two-thirds of oral cancers are caused by tobacco or alcohol use,
according to the Oral Cancer
Foundation.

Kumar and Sedghizadeh theorized that groups who engaged in these high-risk behaviors would also experience higher rates of oral cancer. They were right.

“From what we know of how the cancer develops, we can extrapolate that cultural habits and lifestyle choices are
directly linked to the prevalence of oral cancer in certain groups,” Kumar said.

For example, African American and
Caucasian men, with the highest rates of cancer of the tongue, also have the highest rates of cigarette smoking in the
state.

In Asian groups, Koreans have the highest cigarette smoking rates. They practice of chewing tobacco, or areca
tuat, most common in South Asian cultures, may account for that group’s likelihood of developing the disease in the
inner cheek.

**WATER: Fluoridation of water called long overdue**

Continued from page 1

State’s population received fluoridated water. Only five other states had lower percentage numbers.

“California was pretty close to the bottom of the list when it came to fluoridation,” Heffetz said.

“This represents a sizeable increase,” Heffetz said. “We will definitely see a profound improvement in oral health in our communities.”

Fluoride is a naturally occurring mineral that helps teeth resist decay by strengthening the protective layer of tooth enamel. It also can reverse newly formed cavities.

Its health benefits have been touted since the 1940s when the first communities began fluoridating their drinking water, said USC School of Dentistry Dean Harold Slavkin. DATA suggests that fluoridation can reduce decay by 30 percent, he said.

“In Los Angeles County, we have several million people without access to routine dental care, especially in the vulnerable populations of children and the elderly,” he said. “Fluoridation of drinking water can improve the quality of life of more than half a million people just in Los Angeles County alone.”

State legislators passed a bill in 1995 to fluoridate all of the state’s water, said Slavkin, “but without any financial support.”

W hen First 5 LA—a California initiative that funds services directed at children—approved a $20 million grant to water boards and municipalities to upgrade their fluoridation processes, it was the boon fluoridation advocates were seeking.

“Like immunizations against infectious diseases, fluoridation is an inexpensive and highly effective adjunct to reduce the prevalence of tooth decay,” said Slavkin added.

The MWD estimates that the cost to increase fluoridation levels will amount to less than one dollar per family per year. But Sekiguchi said that it could translate into much more savings by avoiding costly dental services.

“For every dollar spent in fluoridation, we’re talking about $38 saved in dental bills,” he said. “Few public health measures have such a favorable cost-benefit ratio. And in the end, we’re saving teeth and improving our region’s oral health.”