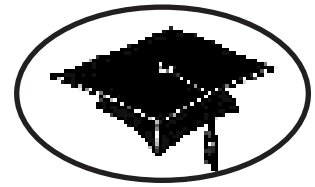

Berkeley Emeriti



T I M E S

January 2006

Professor Emerita Janet King
Department of Nutritional Science and Toxicology

**“What Makes Our Children Fat
and What Can We Do About It?”**
Saturday, January 21, 2006

The prevalence of childhood obesity has reached an all-time high. If the trend is sustained, we may experience a decrease in the life-expectancy of Americans for the first time in our history. What can be done to reverse the trend? Professor Emerita King will discuss the responsibilities of family, schools, the food industry and society in general.

Professor King received her B.S. at Iowa State University (which in 1998 awarded her the Distinguished Achievement Citation, the highest award given an alumnus) and her Ph.D at the University of California, Berkeley. She is the recipient of numerous prestigious awards including the Excellence in Research Award of the American Dietetic Association, the Borden Award and the Lederle Award from the American Society for Nutritional Sciences, the International Prize in Modern Human Nutrition from the University of Lausanne, Switzerland, and the W. O. Atwater Award from the U. S. Department of Agriculture. She is a member of the National Academy of Sciences, Institute of Medicine.

Together with her late colleague Doris Calloway, she has been responsible for the Department of Nutritional Sciences and Toxicology’s exceptional international standing and reputation. At present Professor King is a Senior Scientist at the Children’s Hospital Oakland Research Institute. Her research focuses on the impact of diet on hormonal and metabolic pathways linked to poor pregnancy outcomes in obese women and zinc depletion in children and adults. She is the current chair of the United Nations Expert Consultation on Harmonization of Dietary Standards. She also recently chaired the joint HHS/DAS committee that issued the 2005 federal dietary guidelines.

UCBEA Special Event

Friday, February 24, 2006, from 4 pm - 5:30pm
The Faculty Club, Howard Room

We invite you to join us for a special event featuring Gail Kaufman, CEO of the UC Berkeley School/University Partnership Project, who, along with her colleagues will discuss their plan to recreate the University High School/Junior High School.

*Reservations required. Refreshments will be served for a modest fee of \$5.
See enclosed reservation form and return it to the Faculty Club by February 10.*

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Berkeley Emeriti

T I M E S



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Published before each meeting of the UC Berkeley Emeriti Association: To provide closer networking for members with meeting announcements, meeting reviews, executive committee actions, pertinent campus news, and to reach out to members who cannot attend the meetings.

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***E. coli* Cooks with Gas!**

At the UCBEA luncheon on Saturday, November 5, Professor Sidney Kustu of the Department of Plant and Microbial Biology gave a fascinating account of how she discovered gas channels through cell membranes.

A principal focus of her studies has been the common bacterium of the human gut, *Escherichia coli*, a tiny self-replicating, much studied single-cell organism. Although it is the simplest of organisms, having only a single membrane separating its interior from the external environment, it has a genetic code for 4400 proteins, mostly enzymes. Professor Kustu compared our understanding of this organism to having all the disassembled parts of a clock without knowing how they are put together. She is a microbial physiologist who studies how the parts go together and has investigated a part that had been incorrectly characterized, the ammonium transport protein.

E. coli must transport its nutrients from an aqueous external environment across the oily membrane that confines the watery interior of the cell. Nitrogen is a nutrient needed in abundance because it is essential for proteins and nucleic acids. Nitrogen in the external medium that is taken up by the bacterial cell is in the form of ammonia (NH₃) or ammonium (NH₄⁺). Prior to the work reported here it was believed that the ammonium transport protein transported some form of the charged ammonium ion. This seemed plausible because when ammonia gas is dissolved in water, as in a household cleaner, NH₄⁺ ions greatly out-number the uncharged NH₃ molecules, and membrane proteins usually handle charged species. However, the transport protein piercing the oily membrane is really just an open channel that exactly fits ammonia gas (NH₃) molecules and completely excludes water molecules. Inside the cell the ammonia is rapidly assimilated, preserving a very low ammonia level that maintains the concentration gradient to keep ammonia diffusing in. Professor Kustu showed a detailed diagram of the channel obtained by x-ray diffraction by Robert Stroud's group at UCSF. The high resolution of the image confirmed that it is indeed a gas channel.

In 2000 it was reported that Rh protein was an ammonium transporter, but a search of the literature led Kustu to believe that it was a carbon dioxide transporter. Subsequent experiments using the green alga *Chlamydomonas* confirmed that it is a CO₂ gas channel. The Rh protein is very abundant in human red blood cells and makes possible the required very rapid exit of CO₂ from these cells in the lung.

The influences of molecular biology, genetics and evolutionary science attend Professor Kustu's work, and her masterful use of them is impressive. Her work further confirms Jacques Monod's assertion (which she quoted): "If you understand the biology of *E. coli*, then you understand the biology of the elephant."

Larry Waldron



Meetings of Special Concern: CUCEA and UC Faculty Welfare

An annual joint meeting of the Council of UC Emeriti Associations (CUCEA) and the Council of UC Retirees Associations (CUCRA) was held with the President's Office (UCOP) this fall at UCSF. Those attending heard about retiree's health benefits, which are included in the UC budget and are not paid from UCRS. The cost is \$130 million per year in expenses for retirees and a total of \$850 million including active employees. This has become a big issue for UCOP. Accounting rules will require UC to recognize this expense as an accrued liability by 2007. At that time the expense is estimated at \$8 – 10 billion. We are often reminded that health benefits are not vested, and the cost of health insurance is rising. Members of the UC Berkeley Emeriti Association Board and CUCEA are watching these issues closely and will act as emeriti advocates.

The Treasurer's Office updated attendees on UCRS Investment performance. UC is paying Fidelity \$40/person to manage a portion of the UCRS funds and to administer the new FidelityNetBenefits system.

In the afternoon CUCEA met and each campus Emeriti Association's reported on its activities. UC Davis has prepared an information booklet for emeritus faculty containing a number of useful policies, privileges, benefits and services extended to emeritus professors. Your UCBEA Board is considering production of a similar booklet. The UCI Emeriti Association offered flu shots for all retirees this fall. UCSB offers free parking to emeriti, and UCLA charges \$150 per year for parking. Berkeley will host the fall 2006 CUCEA meeting.

One last point worth mentioning in view of the *San Francisco Chronicle* articles, UCOP is expanding its UC Advocacy program ("UC for California Alliance") aimed at addressing some of the University's current challenges. (When the program was described to us salaries were not yet a public issue.) The intent is to broaden support for UC through an electronic advocacy effort called "GetActive" at www.UCforCalifornia.org. Persons signing up for this program will be advised, via e-mail, on important issues and encouraged to contact their legislative representatives with a pre-drafted letter, which can be modified by the sender.

The November UC Faculty Welfare meeting was concerned primarily with issues on the future of UC Health Plans, Health Savings Accounts, and Medicare Part D. By now, everyone should be aware that with a UC health plan you do not sign up for Medicare Part D. The UC Health Plans are approved Medicare Rx plans, and if one were to sign up for Medicare Part D, the UC Health plan would be cancelled.

Louise Taylor

Our 'Unsung Hero'

We've learned that the Spring 2004 Undergraduate Experience Survey named Professor Emerita Paola Timiras as one of Berkeley's 'Unsung Heroes' – one of the 200 instructors or staff persons who have gone beyond the call of duty to provide undergraduates with help in academic or personal matters.

More than 4,000 students submitted nominations chronicling extraordinary acts of kindness and dedication that had either rescued them from failure or personal tragedy, or had transformed their lives.

UCTV's "Med Ed Hour"

Interested in learning more about avian flu, Tourette's Syndrome, or the impact of domestic violence on children? UCTV's "Med Ed Hour" features a variety of programs aimed at persons interested in expanding their knowledge base on medical/health issues, or keeping current on research. The "Med Ed Hour" airs on Tuesday, Wednesday and Thursday from noon - 1 pm. Log on to www.uctv.tv/meded for a complete program schedule.

Dues Time Starts the Year

The dues are now \$15/year. Please make your check out to UCB Emeriti Association. If you wish to make any additional contribution, indicate this on your check (so the bookkeeper knows it is not for several years' dues).

This newsletter shows two reasons why your dues are well spent. The first is that they help to support the administrative work that the Retirement Center provides to the Association. The second reason is the report by Louise Taylor (past president of UCBEA) of this year's joint meeting of CUCRA and CUCEA. One may describe these annual joint meetings as UC systemwide networking. These meetings have also provided critical information to UC emeriti and retirees so that they can effectively advocate for campus and systemwide benefits. This happy state of affairs will continue as long as UC is convinced the emeriti are really interested in their local organizations. The largest expense of each of these local organizations is their mailings to their members and sending an officer to these yearly meetings. Dues please.

Stephen Diliberto

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Spring Events on Campus

Quake '06 Centennial Lecture Series
Sibley Auditorium, Bechtel Hall
7:30 pm, free, open to the public

Wednesday, February 1, Mary Lou Zoback,
*The 1906 Earthquake: Lessons Learned, Lessons
Forgotten, and Future Directions*

Thursday, February 16, Eric Elsesser, *Improving
Seismic Safety and Performance of Buildings
Through Innovative Structural Engineering*

Wednesday, March 1, Kathleen Tierney, *Social
Dimensions of Catastrophic Disasters: From the
1906 Earthquake to Hurricane Katrina*

Dance: Double Bill: *Barbed & Wired* and *Coming
Home*, Zellerbach, Room 7 (enter stage door) \$5

Thursday and Friday, February 2 and 3, (8 pm)
Saturday, February 4, (2 pm and 8 pm)

Theater: *Seven Lears*, a play which follows the
“seven ages of man” in the life of King Lear, by
Howard Baker, one of Britain’s most controversial
playwrights. Zellerbach Playhouse, Seniors \$8

Fridays, March 3, 10, (8 pm)
Saturdays, March 4, 11 (8 pm)
Sundays, March 5, 12 (2 pm)

Book Event: *Crossing Three Wildernesses*
Institute of East Asian Studies Conference Room,
2223 Fulton St., 6th Floor

Tuesday, March 7, 4 pm U Sam Oeur and Ken
McCullough. *Crossing Three Wildernesses* is
U Sam Oeur’s memoir of his life and experiences
in Cambodia and the United States. Ken
McCullough is a Minnesota poet who has
worked with Oeur since first meeting him at an Iowa
Writers’ Workshop in the 1960s.