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CE science program prepares youth for future achievement

In a pilot project at 4-H afterschool programs in El Cajon (San Diego County), at-risk elementary school kids are learning how to use the lens of science to explore the world of animals. Their guides are local high school and community college students. These student teachers earn college credit by attending weekly seminars where UC experts and others show them how to develop their capacity for teaching, leadership and teamwork.

The idea behind the Community Science Education and Leadership (SEAL) Project is to promote academic preparedness by creating more educational and community-service learning opportunities for at-risk youth.

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Registration deadline extended to Sept. 2 for retiree reunion

There's still time to send in your registration for the 2003 ANR Retiree Reunion. The deadline has been extended to Sept. 2. (We're sorry to say the deadline for signing up for the wine train has passed). The reunion will be held Oct. 8-10 in Napa Valley. Questions? Call us at 510/987-0135 or you can send an email to anrdevelopmentservices@ucop.edu.

UC genome team awarded \$2.4 million grant by National Science Foundation

Tim Close, professor of genetics in the department of botany and plant sciences at UC Riverside, has been awarded a \$2.4 million grant by the National Science Foundation for a project that will facilitate researchers' access to the barley genome to build a fuller understanding of cereal plant traits relevant to agriculture and biology. (A genome is all the DNA in an organism, including its genes.) The title of the research project is "Coupling Expressed Sequences and Bacterial Artificial Chromosome Resources to Access the Barley Genome."

While Close is the principal investigator (PI) for the research project, *Tao Jiang* and *Stefano Lonardi* of the department of computer science at UCR are the co-PIs. The other senior personnel for the project is *MingCheng Luo* of the agronomy and range science department at UC Davis.

The NSF Plant Genome Research Project granted the award for a four-year period starting Sept. 1. This is the first time UC Riverside has been chosen to lead a project by NSF's Plant Genome Research Project program.

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VP Gomes to join Assembly Council meeting on Sept.16—all members invited to take part

By *Dan Marcum*

The Assembly Council will be gathering for its first meeting of the year at Kearney Ag Center (in Parlier) on Sept. 16-17, and all Assembly members (anyone with a CE appointment in California) are invited to attend.

Vice President *Gomes* will address the Assembly Council at 11 a.m. on Tuesday, Sept. 16, and plenty of seating will be available for Assembly members to attend and listen to his presentation. In addition, campus and subregional representatives will be soliciting ideas from members for this year's Council initiatives and projects.

You are also encouraged to email your concerns and ideas to me at dbmarcum@ucdavis.edu. Don't miss your opportunity to be heard.

Announcements and reports are posted on the Assembly Council website (<http://groups.ucanr.org/AAC/index.cfm>).



Passing the Gavel. The Assembly Council has installed officers for 2003-04, with Shasta-Lassen farm advisor Dan Marcum succeeding Solano nutrition, family and consumer sciences advisor Diane Metz (at right) as president. Gloria Barrett, director of Sacramento County UCCE, is the organization's new president-elect.

UCCE science education program [\(from p. 1\)](#)

The project is the brainchild of *Steve Dasher*, the county's 4-H youth development advisor; *Martin Smith*, assistant CE specialist at the UC Davis School of Veterinary Medicine (SVM); and *Don Klingborg*, associate dean of SVM Extension and Public Programs. Smith is director of the Animal Ambassadors Program, the science education curriculum used in the project.

The other partners in the project, which brings together three levels of the educational system, are El Cajon Valley High School, Grossmont College (a community college in El Cajon), the Division and the county's 4-H Youth Education Foundation, which operates the afterschool programs where the pilot is being conducted. Dasher said UCCE identified the local needs that sparked the project's development.

Offered by Grossmont College, the training seminars bring in UC faculty and other experts to introduce student teachers to effective teaching methods, curriculum training, career exploration

and topics such as how to work with diverse audiences.

Dasher said the project lets students earn credit for achieving skills related to their academic goals. They also have the chance to form relationships with instructors who can become their role models and mentors. Contributing to their academic and career preparation is one of the project's objectives.

The Animal Ambassadors curriculum they teach was developed by Vet Med Extension in conjunction with local 4-H programs and K-6 schools. It uses the world of animals as a bridge to help youth develop an interest in science and acquire critical thinking and life skills. Animal Ambassadors was honored as a USDA national Program of Excellence for youth development in 2001.

Earlier this year Dasher and Smith presented the results of the first year's pilot test at USDA's annual Children, Youth and Families at Risk (CYFAR) conference, held in Minneapolis. The evaluations showed, among other things,

an increase in the science literacy scores for all youngsters (average age: 10), including for kids for whom English is a second language. Dasher said one of the aims of the project is to enhance the quality of science programs and instruction for children in nonformal educational settings.

The student teachers in the project said during focus group interviews that it helped them clarify their education and career goals. They also said it improved their skills in leadership, teamwork, communications and problem-solving.

According to Dasher, the experience prompted many to plan to pursue teaching as a career or add it to another facet of their lives.

Projects like the SEAL partnership that promote community involvement through service-learning opportunities can help youth form stronger attachments to the community, Dasher said.

Initial funding for the SEAL Project was made available through a grant from the Division.

NSF grant [\(from p. 1\)](#)

"Barley researchers have made tremendous advances in the past several years," said Close, "with the production of fundamental genomic resources such as a bacterial artificial chromosome library now being used worldwide, several mapping populations, and a microarray representing nearly 22,000 genes. But still, much remains to be done to couple these resources to make it simple for anyone to access the barley genome. In a nutshell, that is the aim of our project—to simplify for everyone. Indeed, by easing the distribution of information, our project will help extend the knowledge of plant genetics to university and high school teaching environments." ...

The information gained in Close's project will accelerate map-based cloning of genes that control agriculturally important traits, particularly in barley and its very close relatives, wheat and rye, and also in other cereal plants such as rice and maize through the use of comparative genetic maps.

UC part of new initiative to share patented research on agriculture

The University of California and its Davis and Riverside campuses have joined 12 other institutions and foundations in an effort aimed to simplify the management and sharing of their intellectual property and facilitate access to each others current and future patented agricultural technologies.

A paper outlining the new initiative appears in the July 11 issue of *Science* and is coauthored by the chancellors or presidents of the universities or foundations.

Named PIPRA or the Public-Sector Intellectual Property Resource for Agriculture, the initiative also aims to achieve food security for the poor and excluded of the world, and has long-term goals for coordinating research-based technology packages and know-how for projects that will directly address critical global agricultural needs.

"One of the University of California's objectives in technology transfers is the public benefit and it makes intuitive sense that collective action with other institutions may enhance our impact in that regard," said President *Atkinson*. "PIPRA is an experiment that will test this supposition. It may also lead to new paradigms of action that could be important in other technologies as well." ...

Besides the University of California, PIPRA participants include the Donald Danforth Plant Science Center, the Rockefeller Foundation, North Carolina State University, Ohio State University, Boyce Thompson Institute for Plant Research, Rutgers University, the State University of New Jersey, Michigan State University, Cornell University, the McKnight Foundation, the University of Wisconsin-Madison and the University of Florida.

(Both of these articles are excerpts from UCR press releases that can be read in full at <http://www.newsroom.ucr.edu/>.)

Names in the news

■ **Ruihong Zhang**, associate professor in the UC Davis biological and agricultural engineering department, received the New Holland Young Researcher Award, one of the most prestigious honors bestowed by the American Society of Agricultural Engineers.

The award was given for Zhang's contributions to the advancement of science and engineering of bioconversion systems of organic wastes. Zhang developed and patented a new anaerobic digestion system that converts digestible organic feedstock into biogas as an energy source, organic fertilizer or stable soil amendment. The system is expected to make significant contribution to the Bioenergy Development Initiative in the U.S. Zhang recently served on a key National Academy of Sciences committee that is developing advice for dealing with emissions from animal feeding operations.

■ **Thomas A. Miller**, professor of entomology at UC Riverside, received the G.J. Mendel Honorary Medal for Merit in the Biological Sciences for his work in insect physiology, toxicology and genetics, and for his efforts to encourage and foster research partnerships with scientists in Eastern European countries. The award is one of the world's top honors in the biological sciences.

■ UC Davis engineering professor emeritus **George Tchobanoglous**, an international authority on wastewater treatment, management and reuse, is the 2003 winner of the Athalie Richardson Irvine Clarke Prize for excellence in water research. The Clarke Prize is given annually by the National Water Research Institute to recognize outstanding scientists who have implemented better water-science research and technology. The prize includes a gold medallion and \$50,000.

■ **Carl Winter** has been appointed to the United Nations' Food and Agricultural Organization/World Health Organization Joint Expert Committee on Food Additives. His term runs to 2006.

Winter is director of the FoodSafe Program and an extension food toxicologist in food science and technology at UC Davis. Winter also received this year's Hod Ogden Award from the U.S. Centers for Disease Control and the Association of State and Territorial Directors of Health Promotion and Public Health Education. The award honors imaginative and creative efforts promoting good health.

■ **Husein Ajwa**, associate extension specialist in vegetable crops at UC Davis, was among those recently honored with a White House Closing the Circle Award. He was recognized for his research on methyl bromide alternatives with the U.S. Department of Agriculture's Agricultural Research Service Water Management Research Laboratory in Parlier, Calif. In total, 26 award winners were selected from more than 200 nominations.

■ UC Davis vegetable crops professor **Kent Bradford** received the Seed Science Award, presented by the American Society of Agronomy, Crop Science Society of America and Soil Science Society of America. Bradford helped create the UC Seed Biotechnology Center in 1999 and serves as its director.

■ UC Davis pomology professor **Ted DeJong's** career work on peaches has been recognized by the National Peach Council, which recently awarded him the Carroll R. Miller Outstanding Peach Researcher Award. DeJong is known internationally for his research on crop responses to environmental stresses, photosynthetic activity and dry matter partitioning.

■ **Bill Mayhew**, professor emeritus of zoology at UC Riverside, will receive this year's George B. Fell Award from the Natural Areas Association. It is the association's highest level of recognition. The award is given to individuals who have made major contributions to the preservation of natural areas. Mayhew is a founder of UC's Natural Reserve

System and devoted over 35 years of bringing many thousands of acres under University stewardship. The association aims to preserve natural diversity.

■ **Cristina Sandoval**, manager of the Coal Oil Point Natural Reserve on the Santa Barbara Coast, will receive the 2003 Stewardship Award of the Natural Areas Association. She is recognized for her record of building partnerships with the public and for the exemplary quality of her successful plover recovery efforts. The western snowy plover, which makes its home on a beach in the reserve, has been federally listed as threatened since 1993.

■ **William M. Longhurst** is the 2003 recipient of the Wallmo Award for his significant contributions and improvements to the knowledge of mule and black-tailed deer and their management. Longhurst served for more than 25 years as a zoologist and professor of wildlife biology at UC Davis and was the resident wildlife scientist at the Hopland Research and Extension Center from its inception in 1951 until his retirement in 1978.

■ **Sonya Varea Hammond**, director of UCCE in Monterey County, was named by Gov. **Davis** to the Board of Directors of the 7th District Agricultural Association (Monterey County Fair). The goal of the association's activities is to enhance county revenues.

■ **Steven Beissinger**, chair of the Division of Ecosystem Sciences in the College of Natural Resources at UC Berkeley, has been elected to the Board of Directors of the National Audubon Society.

■ **George F. Oster**, professor in CNR's Division of Insect Biology, was named Miller Research Professor for Fall 2003.

■ **John Taylor**, professor in UCB's plant and microbial biology division, received the Lucille K. Georg medal from the International Society for Human and Animal Mycology.

ANR researchers win national research award for research on reducing back injuries for farmworkers

The National Institute for Farm Safety recognized a UC team of researchers with a National Farm Safety Research Award at its annual meeting, held June 25 in Windsor, Canada. The award was given for research activity contributing to improved prevention of agricultural injury or illness.

Team members are *James Meyers*, UCB agricultural health specialist; *John Miles*, UCD professor of biological and agricultural engineering; *Julia Faucett*, UCSF professor in the School of Nursing; *Ira Janowitz*, UCB ergonomist; *Diana Tejada*, UCD research coordinator in biological and agricultural engineering; *Ed Weber*, UCCE Napa County viticulture farm advisor; *Rhonda Smith*, UCCE Sonoma County viticulture farm advisor; and *Linda Garcia*, UCCE Sonoma County director and advisor.

The team was recognized for an article, "Priority Risk Factors for Back

Injury in Agricultural Field Work," published in the *Journal of Agromedicine* (V8(1):37-52).

The award citation reads as follows: "This team of researchers at the University of California has been among the leaders of recent research on ergonomics in agriculture. Their work has been innovative and exclusively field-based, lending practical strength to their findings and recommendations. ...

"The paper provides important validation of the use of ergonomics methods applied to manual jobs typical in agriculture and gives new insight to the causal factors for back injury in the involved jobs. ...

"The *Journal of Agromedicine* considered the paper important enough to dedicate an extensive editorial in the same issue to supporting its findings as pointing the way to improved understanding of and prevention of ergonomics injuries in agriculture."

Area dairy advisor Wubishet retires

Abraham Wubishet, area dairy advisor headquartered in San Bernardino County, has retired after 13 years of dedicated service with UC Cooperative Extension.

Wubishet, who has a doctorate in dairy science from the University of Illinois, Urbana-Champaign, joined UC in 1990. As an area dairy advisor, he also served Los Angeles, San Diego and Riverside counties. His responsibilities included planning and conducting an educational and research program in dairy waste management and water concerns.

When he was hired, dairy waste management was a new area of work for CE. Many producers got to know him through his very popular and well-attended annual Dairy Manure and Wastewater Management Symposium.

Prior to joining UCCE, he taught at Alcorn State University in Lorman,

Miss., and at the College of Agriculture at Addis Ababa University in Ethiopia. He also worked at the Dean Milk Company in Louisville, Ky., and for the Abernossa Range Management Project.

Wubishet serves as a referee for *Theriogenology*, an international journal of animal reproduction. He is a member of the "Group of Experts" of the United States of America National Committee of the International Dairy Federation. He is also a member of a research project-reviewing group for New Mexico Water Resources Research Institute.

He has published research articles in the *Journal of Dairy Science*, *Theriogenology* and other scientific and trade journals.

Abraham also holds a bachelor of science degree in animal science from Haile Sellassie I University in Ethiopia and a master of science degree in dairy manufacturing from the University of Kentucky in Lexington.

Wubishet said he now plans to "run his kids around" and travel.

South Coast REC seeks proposals for research projects

South Coast Research and Extension Center (SCREC) is soliciting proposals for new and continuing research and demonstration projects in 2004.

Proposals are due by Oct. 7.

Located on 200 acres, SCREC has land suitable for growing row, orchard and field crops, and turfgrass, landscape and nursery plants. Usable orchards available for new research include 900 'Hass' avocado trees, 112 'Valencia' orange trees and 132 low-chill apple trees in 11 varieties. There is also ample greenhouse bench space.

SCREC also provides labor, equipment, facilities and technical and management support to UC academics and to personnel from cooperating non-UC organizations such as USDA. Up to 4,500 hours of labor will be awarded to support approved projects.

Contact *Julie Chavez* (949/653-1824 or jgchavez@ucdavis.edu) for more information.

For proposal forms, please visit <http://danrec.ucdavis.edu/rec/form> or call Chavez.

ANR REPORT

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