

UC Davis Department of Food Science and Technology Newsletter

Volume II, Number 1

www-foodsci.ucdavis.edu

Winter 1998

Chair's Column

It's been a few years since we published our last newsletter, and we decided it was time to bring you up to date on our department. We're still located in Cruess Hall and the Institute of Marine Resources (IMR) building, as well as in the Food Science and Technology Building (which formerly housed Environmental Toxicology). This past fall our pilot plant, shop, and cold rooms were re-roofed, and we're looking forward to a campaign to renovate the pilot plant. You'll be hearing more about this in coming issues.

After several years of declining undergraduate enrollments and an effort at student recruitment, we are enjoying having over 100 undergraduates in our major, along with 80 graduate students. Our Food Science Ph.D. program has been in place for several years (since 1990) and we are proud of our Food Science Ph.D. alumni.

With the influx of students and increases in tuition, we are working to increase scholarship programs. Martin Yan has offered to help us by his dinner and appearance at an evening's fund raiser in Freeborn Hall on March 17. (Yes! We know it's St. Patrick's Day!!) You can read more about this event on page 10 - we're planning to have a good time at a silent auction, with proceeds going to our undergraduate scholarship fund. Professor Emeritus Bor Luh and Mrs. Luh have made a major contribution to this fund, which we will acknowledge at the banquet.

We have some new faces among our faculty. Inside we introduce you to Linda Harris, food safety microbiologist, and Ellen Hopmans, food analytical chemist. We also bid farewell to two faculty members, Clarence Sterling and Mendel Mazelis, who died this past year.

We're proud to share a number of accomplishments by our faculty, staff and students. In future issues we hope to share more of your accomplishments through your replies to our request for updates (page 11).

Our product development team has made the IFT Product Development Competition finals four of the past six years. The 1996 team, which developed Bagelrrito, a chicken, vegetable and salsa stuffed bagel, was featured in an NBC Dateline segment.

With a generous donation from the Anheuser-Busch Foundation, we are pleased to announce recruitment of a faculty member to fill the Anheuser-Busch Endowed Professorship in Malting and Brewing Science. See article below for details.

Charlie Shoemaker
Department Chair

Anheuser-Busch Foundation Endows Brewing Professorship

The Anheuser-Busch Foundation has provided an endowment to establish the Anheuser-Busch Professorship in Malting and Brewing Sciences in our department. This endowment, which will continue the first academic program in brewing science in the U.S., will support an endowed professorship in fermentation science. The purpose of the endowed professorship is to provide a permanent source of funding for teaching and research in malting and brewing sciences.

The endowment was announced by Doug Muhleman, Anheuser-Busch Vice President of Brewing Operations, at the 1997 FS&T Student Recognition Banquet. Doug was the featured speaker at that event. In his letter to Dean Barbara Schneeman, Doug stated, "It is the Foundation's desire that the faculty member filling the professorship would be an accomplished researcher and teacher. This individual should have a demonstrated passion for the brewer's art and a scientific background in microbiology, biochemistry, or food science. The professorship recipient's research objectives should relate to the malting and brewing process." "It is the

intent of the endowment to provide support for undergraduate and graduate student training in malting and brewing research."

We are particularly grateful that this endowment will enable us to strengthen our brewing science program.

The position, at the Associate and Full Professor levels, is being advertised internationally in search of topnotch applicants. Applications should be received by March 15, 1998, to assure consideration. We anticipate interviewing candidates during Spring, 1998. Address questions concerning the position to Norm Haard, Search Committee Chair, at 530-752-2507 (nfhaard@ucdavis.edu). The description is on our web site: www-foodsci.ucdavis.edu. We encourage you to share this information with anyone who might be a potential candidate.

UC Davis is the only public university in the U.S. offering an accredited four-year program in brewing science. This program attained international prominence under the leadership of Professor Michael Lewis, who retired in 1994. We are proud to claim over 150 graduates, most of whom currently are working in the brewing industry, who have completed degrees from our program.



Associate Dean David Reid, Anheuser-Busch Vice President Doug Muhleman, Charlie Shoemaker, and Food Science Master Advisor Everett Bandman gather at the announcement of the Anheuser-Busch Endowed Professorship in Malting and Brewing Sciences.



FS&T Alumna Barbara Schneeman, (BS, 1970; PhD, Nutrition, UC Berkeley, 1974) is Dean of the College of Agricultural and Environmental Sciences at UC Davis. Dean Schneeman was appointed to succeed John Kinsella after his death in 1993. She holds a faculty appointment in our department, as well as the Department of Nutrition.

Faculty News

John Bruhn, Dairy Food Specialist, was elected a fellow of the Institute of Food Technologists. Also, the IFT Dairy Foods Division presented John with a plaque recognizing his leadership, enthusiasm and professionalism; he chaired that division from 1995-97. John has worked with dairy foods processors statewide through research, courses, workshops and lectures to maintain and improve the quality and safety of processed milks and dairy foods.

Walt Jennings, Emeritus Professor, received the M.J.E. Golay Award for his pioneering work in the development of capillary chromatography. The award, sponsored by Perkin-Elmer in honor of Marcel J. E. Golay, has been presented annually for over 10 years. Dr. Jennings, who retired from our department in 1988, was presented the award, consisting of the Golay Medal, a scroll and a financial endowment, at the 1996 International Symposium of Capillary Chromatography in Italy.

John Krochta was selected to be a G. Malcolm Trout Visiting Lecturer and Scholar at Michigan State University. John's selection was based on the significant advances he and his research group have made in the area of edible films.

Bob Price, Seafood Specialist, received a citation in recognition of his efforts with the Seafood HACCP Alliance and its mission to help educate the seafood industry in complying with the mandatory FDA HACCP regulation which became effective in December, 1995.

Charlie Shoemaker received a College Affirmative Action and Diversity Achievement Award, in recognition of his efforts to significantly advance a work environment that is positive, inclusive and free of bias.

Dean Barbara Schneeman was awarded the U.S. Food and Drug Administration Commissioner's Special Citation. The Harvey W. Wiley Medal accompanied the citation. Dean Schneeman, a member of the Science Board Subcommittee, was acknowledged for her contributions in advancing scientific research.

Norm Haard was recently presented with the Earl P. McFee Award while attending the 42nd Atlantic Fisheries Technologists Conference in Newport, RI. The award recognizes outstanding research contributions to the field of fisheries technology. Professor Haard's research contributions to the enzymology and biochemistry of aquatic organisms were emphasized during the presentation. He is the 28th recipient of this award.

Al Tappel was proclaimed a Lifetime Honorary Member of the Oxygen Club of California for his distinguished career as a pioneer in Vitamin E and biological lipid peroxidation research.

FoodSafe Program Director, Carl Winter, has co-authored a Scientific Status Summary entitled "Assessing, Managing and Communicating Chemical Food Safety Risk." The summary, which was published by the IFT Expert Panel on Food Safety and Nutrition in Food Technology, was co-authored by F. Jack Francis of the University of Massachusetts.

Paul Singh received the 1997 DFISA/FPEI Award for a Distinguished Food Engineer (Dairy & Food Industries Supply Association Foundation and Food & Process Engineering Institute). The award, presented every two years, recognized Singh as a leader in educating and promoting the fundamental paradigms of food engineering education, as an authority in food engineering research and technology and as one who has served his profession. Dr. Singh recently collaborated with Kenneth Valentas (Univ. of MN) and Enrique Rotstein (Pillsbury) to write the Handbook of Food Engineering Practice. This applications-oriented handbook covers food engineering processes and manufacturing techniques, including unit operations and physical and rheological properties of foods. It also discusses analytical methods, simulation procedures, sanitary guidelines and process controller design.

Christine Bruhn is chairing the Food and Nutrition Science Alliance (FANSA), a partnership of four organizations that have joined forces to

speak with one voice on food and nutrition issues. Member organizations are IFT, the American Dietetic Association, the American Society for Clinical Nutrition, and American Society for Nutritional Sciences. In addition to serving as chair, Bruhn also serves as IFT's member representative to the group. Work groups identify key messages the public needs to know about various issues. FANSA has issued statements on dietary supplements, dietary risk, and interpreting nutritional codes. A statement on Vitamin E is being developed.

An all-day symposium honored **John Whitaker** at the National American Chemical Society Meeting in Las Vegas last August. Entitled: Food Enzymes, Inhibitors and Other Proteins: The Forty-Year Career of Professor John R. Whitaker, the symposium consisted of presentations by 12 of his former students, colleagues and friends. With subjects ranging from the chemistry of proteins to the development of new enzymes by *in vitro* mutagenesis, Whitaker's extensive impact on enzymology was strongly delineated. The breadth of his career was also illustrated by the age range of the speakers: from the 20's to the 80's. His dedication to students was exemplified by reports of former students and postdocs. An evening reception and dinner concluded the event.

Bruce German Selected as First John Kinsella Endowed Chair

Bruce German, has been appointed as the initial holder of the John Kinsella Endowed Chair. The Chair, endowed by a gift from Kraft General Foods in honor of the College's former dean, John Kinsella, supports research and teaching, focusing on interrelationships among food, nutrition and health. A stated goal of the Kinsella Chair is to foster interdisciplinary collaboration across academic departments. Bruce is especially skilled at bringing together scientists as collaborators. His extensive joint projects contribute to the development of his own program and represent creativity he has shown in recognizing linkages between his projects and the work of other scientists in the areas of Food Science, Nutrition, Animal Science and Medicine.

Dr. German joined our department in 1987. He completed his Ph.D. in Food Chemistry at Cornell University under the mentorship of John Kinsella, and remained in the Kinsella lab three additional years as a postdoctoral fellow. Much of Bruce's work has focused on mechanisms of tissue oxidation and the effect of diet on this process. He is involved with several projects under the umbrella of tissue oxidation as affected by dietary fats.

Food Science Department Web Site

(<http://www-foodsci.ucdavis.edu/>)

Have you visited the department's Web Site lately? If not, you may find it quite interesting and informative. The following is what you will find should you decide to explore, and you may even get some ideas for items you would like to see included on the site. Let us know your thoughts!

Faculty Interest List
Mission Statement
History of Department
What is Food Science? (Questions and Answers)
Food Science Video Offer
Undergraduate Program Information
Graduate Program (Includes on-line application for admission)
Class Materials (Current quarter up-to-date)
Food Tech Club News
Current Events (Departmental)
Programs within Food Science Department

- Center for Consumer Research (Includes excellent food irradiation page)
- CIFAR (California Institute of Food and Agricultural Research)
- DRINC (Dairy Research and Information Center)
- FoodSafe Program
- Seafood NIC (HAACP Workshops, etc. Excellent web page!)

IFT (link to Inst. of Food Technologists)
Prince Edward Island Food Technology
Centre Food Science Index link (An abundance of information here!)

UC Davis Hosts Third International Conference "Food for Health in the Pacific Rim"

Last October 1997, the Third International Conference, "Food for Health in the Pacific Rim" was held at the UC Davis Buehler Alumni and Visitors Center. This conference followed previous successful international conferences in 1991 and 1994 hosted by the Wuxi University of Light Industry (China), in collaboration with UC Davis. John Whitaker played a major role in putting the conference together with help from Charlie Shoemaker and other FS&T faculty members.

The purpose of the conference was to bring together food scientists and technologists from academia and the food industry in the Pacific Rim. The objective was to exchange ideas and develop collaborations for enhancing international cooperation and advancing food science and technology and its applications. Attendees represented Australia, Brazil, Canada, China, England, Hong Kong, Japan,

Mexico, Taiwan, Thailand and the US. Approximately 100 were in attendance during the four-day conference which included 72 presentations and 32 posters. The Proceedings will be available sometime in early 1998.

Thanks to Our Industry Advisory Council

Our thanks to the current Industry Advisory Council Members listed below. We appreciate the time and effort they have devoted to help us develop our curriculum and other programs.

Jacqueline Beckley - RJR Nabisco
T. Jeffrey Boese - California League of Food Processors
Robert Boynton - Leprino Foods
Tom Butterworth - Austin Food Tech., Inc.
Don Corlett - Corlett Food Information Spectrum
Anthony J. DelVecchio - Calgene
Mark Dinardo - Lipton
Pat Fehling - Fehling and Associates
John Finley - Monsanto
Seth Goldsmith - Dole Fresh Vegetables
Dee Graham - R&D Enterprises
Margaret Lawson - FMC Corporation
Henry Leung - Frito Lay
Nick Melachouris - Nestlé
Warren Mooney - Liquid Sugars, Inc.
Jim Moran - Kraft General Foods
Douglas Muhleman - Anheuser-Busch, Inc.
Glenn Nedwin - Novo-Nordisk Biotech, Inc.
William Perry - GFF International
Joel Sidel - Tragon Corporation
Laszlo Somogyi - SRI International
Zack Wochok - Pacific Grain Products

We also express our appreciation to the following individuals who have rotated off of the council:

Lee Blakely
Tom Elliot
Walt Jennings
Chris Rufer
Gary W. Sanderson

Herman J. Phaff Culture Collection Dedicated

The Herman J. Phaff Yeast Culture Collection was held October 4, 1996 at UC Davis. Formerly known as the "Davis Yeast Collection," the collection was renamed to honor Professor Phaff for his lifelong efforts to assemble this important collection. The Food Science and Technology Department and CIFAR hosted the celebration at the Buehler Alumni Center. From 1952 to 1981, Phaff directed

19 Ph.D. students and hosted 20 postdoctoral visitors from 12 countries. Many former students and post docs returned to speak in the dedication program including Marty Miller, Sally Meyer, Arnold Demain, Eric Johnson, Graham Fleet, and Marc-Andre Lachance. With the exception of Phaff's longtime collaborator, Marty Miller from UC Davis, most of his former students have gone on to other universities where they founded their own collections.

Former student and UCD professor Chet Price is working with CIFAR's Sharon Shoemaker to respond to the need to preserve the industrial and academic value of this irreplaceable, biological treasure. The collection has over 6000 strains collected from Mexico, Arizona, Venezuela, Argentina, Japan, Taiwan, Hawaii, the Caribbean Islands and Australia. These collecting trips resulted in the description of over 50 new yeast species. Professor Phaff is still updating the collection records at age 85. For more information on efforts to preserve the collection, contact CIFAR, Food Science and Technology Department, UC Davis, Davis, CA, 95616-8598, or email: spshoemaker@ucdavis.edu.

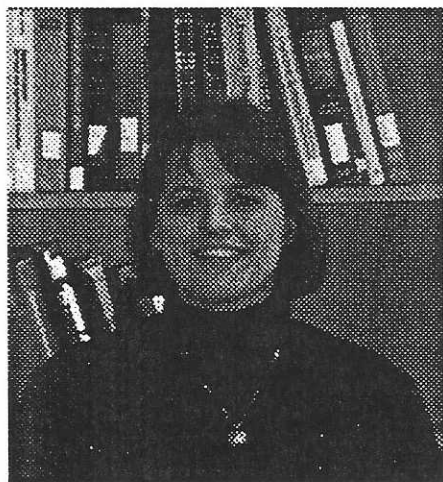
California Institute of Food and Agricultural Research (CIFAR)

CIFAR is a self-supporting program within the College of Agricultural and Environmental Sciences directed by Dr. Sharon Shoemaker since its inception in 1992. CIFAR is located on the UC Davis campus at 250 Cruess Hall. CIFAR was created to enhance channels for research collaboration, integrate scientific disciplines through project collaboration and sponsorship, and promote technology exchange between UC Davis researchers, government agencies, and the food and agricultural industries.

Ongoing projects provide solutions for problems in the area of food safety, food preservation, biotechnology (including industrial enzymes), functional foods, alternative fuels, energy utilization, and membrane applications for process water recovery. CIFAR directs the National Science Foundation Center for Aseptic Processing and Packaging (CAPPS) and the UC Davis Mobile Membrane Test and Demonstration Unit (MTDU), funded by the Electric Power Research Institute. (See article on the MTDU on page 10.) For additional information on CIFAR, contact Sharon Shoemaker, Executive Director, 530-752-2922; fax 530-752-6578; email: spshoemaker@ucdavis.edu.

David Reid Heads CAES Division of Human Health and Development

David Reid is currently serving a three-year term as Associate Dean of the Division of Human Health and Development. One of four divisions in the College of Agricultural and Environmental Sciences, this unit is comprised of Agricultural and Resource Economics, Environmental Design, Environmental Toxicology, Food Science and Technology, Human and Community Development, Nutrition, Textiles and Clothing, and Viticulture and Enology. Professor. Reid continues to teach courses in Science and Society (Feeding the Planet: Influences on the Global Food Supply), food chemistry and food freezing, as well as maintain his research program.



Ellen Hopmans

Ellen Hopmans, Food Chemist, Joins Faculty

Our most recent faculty recruit, Ellen Hopmans, joined FS&T as an Assistant Professor in April, 1997. Ellen is a graduate of Wageningen Agricultural University in the Netherlands, with a PhD in Toxicology from the Department of Food Science and Nutrition at Iowa State University. Prior to joining FS&T she was a University of California President's Postdoctoral Fellow at Lawrence Livermore National Laboratory working on development of an analytical method for heterocyclic amines in meat. Dr. Hopmans, whose expertise is in the purification and analysis of trace contaminants in foods, teaches FST 103, Physical and Chemical Methods for Food Analysis as well as FST 250 and 250L, Chromatographic and Electrophoretic Methods and the corresponding laboratory.

Ellen has jumped in to her position here with enthusiasm. She is currently serving as one of the two faculty advisors to the Food Tech Club.



Linda Harris

Linda Harris Joins Department as Food Safety Microbiologist

Linda Harris, Asst. Cooperative Extension Specialist in the area of microbial food safety, joined our department in January, 1996. Linda was recruited after the retirement of George York. Prior to moving to Davis, Linda was an Assistant Professor at the University of Guelph. She obtained her BS in Food Science and MS in Food Microbiology at the University of Alberta, Edmonton, and her PhD in Microbiology at North Carolina State University. Her research interests are microbial food safety and applied microbiology with an emphasis in fresh, processed and fermented fruits and vegetables and safety and spoilage of meat and meat products.

In addition to assuming leadership for the Food Sanitation Short Courses, Linda has also been involved with several other courses, and works with groups such as apple juice processors to ensure product safety. She is a strong supporter of our Product Development Teams, and a willing and enthusiastic participant in our annual Faculty/Student Challenge College Bowl.

When she is not busy with her professional activities, Linda enjoys a wide range of hobbies including cooking, gardening and woodworking.

Ericka Barrett Retires

Ericka Barrett retired from her position as Professor and Food Microbiologist in March, 1997. Most of you probably remember Dr. Barrett for her outstanding, well-organized, comprehensive lectures in food microbiology, FST 104.

Dr. Barrett joined our department in 1976, after completing B.A., M.A. and

Ph.D. degrees in Microbiology at UC Berkeley. During her tenure at UC Davis, Dr. Barrett served as Associate Dean of Resident Instruction for the College between 1988 and 1991 and as FS&T Department Chair between July, 1992 and June, 1995. Jim and Ericka are retiring to rural life in Humboldt County.

Faculty Sabbaticals

Several of our faculty have been taking advantage of sabbatical opportunities in recent months.

During 1996-97 Kathryn McCarthy and Mike McCarthy spent a year in Lausanne, Switzerland, at the Nestlé Research Center. Kathryn's projects, as a member of the technology transfer team focused on applying technologies from other industries (plastic, chemical, paper) to the food industry. Mike's work tested the feasibility of a low-field magnetic resonance imaging spectrophotometer for process control and for process visualization.

The Nestlé center in Switzerland has also attracted Bruce German, who is currently there on sabbatical leave through June, 1998. Bruce is studying the role of fat in foods and health, specifically addressing three questions: 1) how are membrane phospholipid compositions regulated, (2) how is oxidative deterioration of lipids caused in cells, and (3) how do fats affect the structure/sensation of foods.

John Krochta is on a nine-month sabbatical at the School of Packaging, Michigan State University. During his leave John is revising his introductory packaging course and developing an advanced food packaging course, as well as exploring new research opportunity areas and teaching approaches.

Everett Bandman is beginning a six-month sabbatical this month. During the first three months he plans to visit a number of laboratories nearby which are engaged in muscle research. The second three months will be spent in collaborative research at the University of Tokyo and the University of Hokkaido.

Kinsella Library Donated to Department

The family of John E. Kinsella, former Dean of the College of Agricultural and Environmental Sciences at UC Davis and faculty member in the Department of Food Science and Technology, has donated Dean Kinsella's food science library to our department. The collection of over 400 books has been catalogued and shelved in a special area of our library. A bookplate in each book indicates that it was a gift from the Kinsella family to the Department.

Alumni News

Ken Lindauer (BS, '58) was a 1996 recipient of the College Award of Distinction. Ken, who lives in Red Bluff, CA, is an ardent entrepreneur, a skilled orchardist, and a gifted leader. He has served as president and chief financial officer of the Tehama County Farm Bureau and president of numerous prune organizations. His organizational abilities and commitment have helped to create a relationship of collaboration between grower and packer.

Our department is well-represented at RJR Nabisco in New Jersey, where alums **Jackie Beckley** (BS, '72), **Jackie Amemiya** (BS, '82; Ph.D. Ag Chem, '87), and **Cathy Walchak** are all working.

Doug Muhleman (BS, Ferm Sci, '77; MS '79) has been promoted to Vice President of Brewing at Anheuser-Busch in St. Louis.

Laura (Calfie) Marlow (BS, '79; MS, '81) is co-founder and secretary-treasurer of III Sigma Corporation. The company, which is located in Lenexa, Kansas, designs and manufactures equipment to measure bulk density of foods and other commodities. Laura and Brian have two children and enjoy Kansas, which is not as flat as Davis.

Hildegard Heymann (MS, '80; PhD Ag Chem, '86) has been appointed Unit Leader of the Food Science and Engineering Unit (comprised of the Departments of Agricultural Systems Management, Biological & Agricultural Engineering, Food Science & Human Nutrition and Hotel & Restaurant Management) in the College of Agriculture, Food and Natural Resources at the University of Missouri, Columbia. Dr. Heymann has been on the Food Science faculty at the University of Missouri since 1986, and she has recently been co-author with Harry Lawless of *Sensory Evaluation of Food: Principles and Practices*.

Miang Hoong Lim (MS, '83; PhD, '89) has joined the faculty of the Food Science Department at the University of Otago in Dunedin, New Zealand.

Susan Ebeler (MS, '85; PhD Ag Chem, '93) is an Assistant Professor in the Department of Viticulture and Enology at UC Davis. Sue is a member of the Food Science Graduate Group. Her research focuses on flavor chemistry and analysis, including the correlation of instrumental and sensory methods of flavor analysis, as well as the health effects of wine.

Tom Shellhammer (BS Ferm Sci, '87; MS, '89; PhD Bio & Ag Engr, '97) is an Assistant Professor in the Department of Food Science and Technology at Ohio State University.

Suanne Klahorst (BS, '88), recently accepted a career position at the California Institute of Food and Agricultural Research (CIFAR) at UC Davis as a Program Representative. Currently, she is leading a

project for the California Energy Commission aimed at surveying energy issues in the California food processing industry. This information will assist the CEC in developing programs and areas of research in energy management that can contribute to efficiency while enhancing profitability for the food processing industry in California. Prior to her position at UC Davis, she had 10 years experience in technical services, sales and marketing to California food processors.

Rebecca Tupper Newman (BS, '90) is Director of Quality Assurance at Sierra Nevada Brewing Company in Chico, CA. Sierra Nevada has just completed a very successful start-up of their expanded production facility.

Paul Sapan (BS, '92), in partnership with Gail Kakashita have formed Ka:Sa Food Solutions, a product development company located in San Leandro, CA. Paul was a member of the 1992 Product Development Team that developed Jazzy Java, a carbonated coffee beverage, which was our first finalist in the IFT competition.

Stephanie (Dodge) Doan (BS, Ferm Sci '96) is a Food Scientist at Lipton in Stockton, CA. Stephanie has developed two pink pasta sauces, Tomato Alfredo in the Five Brothers line, and Spicy Cheddar and Tomato in Ragù Cheese Creations.

Clark Linde (MS, '97), has taken a position at Clorox in Pleasanton, CA.

Betschart, Mooney, and Yan Honored by College

Each fall the College of Agricultural and Environmental Sciences honors about a dozen distinguished friends, faculty, and alumni with the Award of Distinction, the highest recognition presented by our College. The award recognizes individuals whose contributions and achievements have enriched our College's image and reputation and enhanced its ability to serve the public.

This year three of our Food Science alums were among the recipients:

Antoinette Betschart (Home Economics, 1960) - is Pacific West Area Director for USDA research centers. She has written more than 120 papers on cereal grain, legume, and oilseed quality.

Warren Mooney (Food Science, 1955) - is a member of our departmental Industry Advisory Council, and has served on the College Dean's Advisory Council and on the UC Foundation Board of Directors. Warren established the Emil Mrak Prize in Food Science and Technology which recognizes an undergraduate student for leadership, and he was key in establishing the Liquid Sugars Distinguished Visitors series which funds campus visits by industry leaders.

Martin Yan (Food Science, BS 1973; MS 1977) - is a well known and respected food and restaurant consultant and a certified Master Chef. Martin has hosted over 1,500 "Yan Can Cook" television shows, authored 10 books, and made many public appearances to educate audiences about cooking as well as the science behind it.

Martin Visits Herman Phaff's Lab

Drs. Ann Vaughan-Martini and her husband Alessandro Martini from the University of Perugia, Italy spent the months of November and December 1997 working in the Herman J. Phaff Yeast Culture Collection Lab in Cruess Hall. Together with Professor Emeritus Phaff, they prepared a manuscript describing a new species of yeast and carried out the required laboratory procedures to justify a new species.

Ann and Sandro Martini are not newcomers to Davis. Ann was an undergraduate here and later earned her M.S. with Professor Martin Miller as her supervisor. Sandro was a postdoctoral visitor from Italy in Phaff's lab from 1969-71. Sandro and Ann met in Davis and were married here. They returned to Perugia where Sandro became a Professor in the Dipartimento di Biologia Vegetale. Ann earned her Ph.D. in Perugia and is now an Associate Professor in that department.

UCD Alumnus Hosts International Aseptic Symposium

UC Davis alumnus Dr. Tin-Yin Liu is currently Director of the Food Industry Research and Development Institute (FIRDI) in Hsinchu, Taiwan. Dr. Liu is active in the UC Davis alumni organization in Taiwan. Recently, he chaired the International Symposium entitled "Advances in Aseptic Processing and Packaging Technologies" which was held in Hsinchu last November.

The UC Davis Center for Aseptic Processing and Packaging (CAPPS), directed by Dr. Sharon Shoemaker, sponsored Drs. Diane Barrett, Jung Han, and graduate student Wendy Ma to represent CAPPS / UC Davis at the symposium. Ma, Barrett, and Han presented posters at the meeting and Shoemaker gave the FMC presentation.

UCD is one of several sites conducting research in aseptic technologies through CAPPS, funded by the National Science Foundation. Sharon Shoemaker, who also attended the meeting, commented that UC Davis enjoys a good relationship with Taiwan alumni, and Chancellor Vanderhoef is planning to meet with alumni in Taiwan this month.

Staff News

With early retirement incentives and normal retirements we have had a number of changes in our staff. Staff who have retired whom many of you may remember include Andy Anderson (recalled), Jim Buhlert, Ernie Burton, Julie Hell, Diane King, Cora Morgan (recalled) Pat Poirier, Larry Rasser, and Al Wilson (recalled). Fortunately, many familiar faces are still with us and they continue to maintain and enhance department programs and assist the faculty and students.

Welcome to several new staff members: Eva Clark is assisting Sharon Shoemaker in the CIFAR office. Virginia Watson is working with CE Specialists Diane Barrett and Linda Harris. Brenda Graf is working with John Bruhn (DRINC) and Christine Bruhn (Center for Consumer Research).

Several staff were selected to receive staff incentive/recognition awards for 1997: Andy Anderson, Carol Cooper, Mike Cummings, Judy DeStefano, Bill Felver, Anita Garcia, Judy Howard, Karen Hunter, Dennis Lewis, Sam Matoba, Clara Robison, Karen Strack, Al Wilson, and Teri Wolcott. The awards recognize distinctive and extraordinary achievements.

Service awards were presented to:

Diana Melbourn	15 years
KarenJo Hunter	20 years
Clara Robison	30 years
Bill Felver	35 years

Carol Cooper was awarded the 1997 Walker Trophy for Advising Excellence. This award, presented by the College of Ag and Environmental Sciences, is given for outstanding contributions made by a staff advisor. Students nominate and select the recipient based on criteria including knowledge of requirements, effective communication, knowledge of career opportunities, honest concern for students, accuracy of information, availability and approachability. Former staff advisor Diane King, who is now retired, is a prior recipient of this prestigious award.

An Employee Recognition Award was also presented to Carol Cooper for her efforts as a member of the team which developed guidelines and procedures concerning the General Education requirements guide for the College of Agricultural and Environmental Sciences.

Jody Renner-Nantz received the Outstanding Paper Award at the 1997 American Association of Cereal Chemists Annual meeting. Jody's paper, which was in collaboration with Charlie Shoemaker, was entitled, "Molar Mass and Size of Cereal Starches by LiBr/DMSO Size Exclusion Chromatography and Laser Light Scattering." The award was based on

relevance to industry, scientific originality, value and supportable conclusions, and oral/visual presentation. Jodi will receive the award at the 1998 AACC meeting in Minneapolis.

Pamela Tom is Chair-Elect and Program Chair of the Northern California Section of IFT (NCIFT). Following her term in this position, Pam will serve as Chair of NCIFT during the 1998-99 year.

Emeriti Faculty Send Greetings

Best wishes, much success and good health in 1998 from the Emeriti Professors of the Department. For most of you, we were your Professors for about 40 years. But when the University needed to downsize because of economically hard times, most of us over 62 responded, thereby saving the younger faculty even though they often have to work harder as departments lost faculty. There are more than 650 emeriti at UC Davis, since about 20% of us chose to retire; the University only needed 10% downsizing but now it can rebuild with younger faculty.

The Department currently has 19 emeriti. Unfortunately, in June 1997, Professor Emeritus Mendel Mazelis passed away (see page 11). Most of us are still quite active, thanks to the Department permitting us the space to be productive. A few of us have developed exciting opportunities outside the University. Some continue to offer courses or fill in when needed; others continue their research. Some do both. Some provide educational opportunities (teaching and research) to students in developing countries.

In 1996, the UCD Emeriti Association, with the Retirees Association, took the leadership in raising funds to write the first complete history of the Davis Campus. All the funds were raised within a year, the first chapter is written and the entire project will be completed well before our 100th anniversary (2006).

Best wishes from all of us. Come to see us as often as possible and write us even more often.

Richard Bernhard
Wade Brant
Walter Dunkley
Robert Feeney
Dieter Gruenwedel
Jerald Henderson
Walter Jennings
Michael Lewis
Bor Luh
Larry Merson

Martin Miller
Robert Pearl
Herman Phaff
Tom Richardson
Howard Schutz
Lloyd Smith
Al Tappel
John Whitaker
George York

Short Courses Scheduled in Early 1998

Food Sanitation Workshop
Feb. 4-5 (L. Harris - 754-9485)

The Professional Brewers Certificate Program
Jan. 5-Feb. 13 (M. Lewis - 756-4302)

Contemporary Brewing Science and Technology
Feb. 16-20 (M. Lewis - 756-4302)

Better Process Control School
Feb. 23-26 (D. Barrett - 752-4800)

Spring Dairy Industry Conference
Feb. 25-26 (J. Bruhn - 752-2192)

Cheese Manufacturing Short Course
March 17-20 (M. Rosenberg - 752-4682)

Aseptic Processing and Packaging Workshop
March 19-20 (D. Barrett - 752-4800)

Concentrated and Dried Milk and Whey Products Symposium
March 30-31 (J. Bruhn - 752-2192)

Introduction to Statistical Methods for Sensory Evaluation of Foods
April 2-4 (M. O'Mahony - 752-6389)

Sensory Evaluation: Overview and Update
April 6-8 (M. O'Mahony - 752-6389)

Milk Processing and Technology Short Course
April 15-16 (J. Bruhn - 752-2192)

Freezing Technology for the Frozen Food Industry
April 27-29 (D. Barrett - 752-4800)

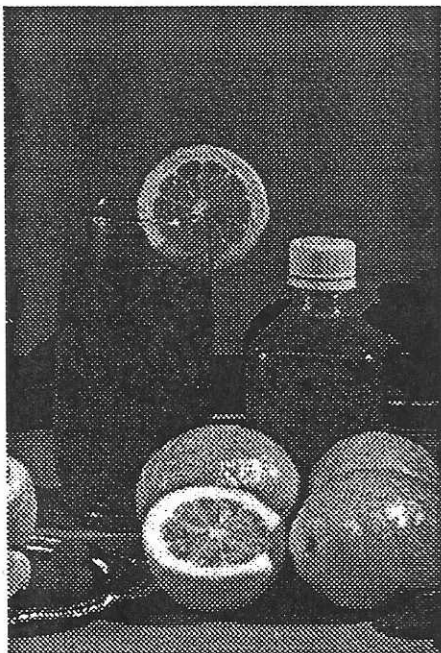
Getting Started in the Specialty Food Business
May 16-17 (L. Harris - 754-9485)

Advanced/Specialty Cheese Short Course
May 18-20 (M. Rosenberg - 752-4682)

Pre-Picnic Day Barbecue Set for Friday, April 17

Mark your calendars!! The annual Food Science Pre-Picnic Day Barbecue will be Friday evening, April 17, 1998, in the Cruess Hall Courtyard. Our expert chefs will be barbecuing steak, salmon and chicken. Notices will be mailed in March to those of you in California. If you live outside of the state and are interested in details, drop a note or email: tkwolcott@ucdavis.edu.

Picnic Day is Saturday, April 18, with the parade beginning about 9:00 am. Lodging fills up fast in Davis for Picnic Day weekend, so if you're planning to visit the campus and stay over, consider booking your accommodations now!



This raspberry-lemon based beverage, with suspended citrus juice sacs, was our entry in IFT's Product Development Competition.

Raspberry Wisdom - Another Winner

The most recent product conceived in our Product Development class, *Raspberry Wisdom*, was selected as a finalist in the 1997 IFT Student Association Product Development Competition. We have had finalists in four of the six years we have entered the competition.

Raspberry Wisdom is a raspberry lemonade-based beverage supplemented with suspended lemon and orange juice sacs and *Ginkgo biloba* leaf extract. The beverage uses state-of-the-art technology, incorporating intact fruit juice sacs, enzyme infusion and a fluid gel system. Enzyme infusion removes the lemon or orange peel; the fluid gel is formed by hydrating gellan gum powder. The name stems from the raspberry lemonade base plus the claim that *Ginkgo biloba* leaf extract improves the circulation of the blood to the brain, which may enhance an individual's memory.

Team members were Winnie Boyajian, Lisa Chan, Chiuyee Chen, Ardeshtir Forouhar, Erin Kamei, Regina Lam Vernon Lee, Vai-meng Leonard, Joanne Lao, and Aaron McCLEndon. We're very proud of our team!

Pilot Plant Draws Picnic Day Crowd

Visitors young and old swarmed through the Pilot Plant on Picnic Day last April to taste ice cream samples, test their sense of smell in identifying common aromas, and learn the science behind cotton candy making. Students were on hand to answer questions about our major.

Kim Decker Selected as 1997-98 Peer Advisor

This year's Peer Advisor is Kim Decker. She is a fifth year senior majoring in Food Science with the Consumer Food Science Option. Kim is also minoring in English. She is interested in pursuing a career in writing in the food industry. Fall Quarter Kim did an internship at a Sacramento Valley area publisher in the publicity, acquisitions and editorial areas. Currently she is doing research with Dr. Christine Bruhn on calcium consumption in adolescents. Kim has also been a member of the College Bowl Team and the UC Davis competitive cycling team. We're glad to have her to assist our undergrads.

Food Tech Club News

The Food Tech Club's main goal is to provide members with a firsthand glimpse of the food industry. During the year the Club offers seminars on job opportunities for food scientists. Representatives from companies such as General Mills, Herman Goelitz Confections and Industrial Food Design recently provided insights on the food industry. The Club will offer interviewing and career workshops to help students prepare for work in the real world.

The Food Tech Club has a strong tradition of catalyzing interaction between faculty, staff and students of the department and major. Last October the Club hosted a Halloween Potluck in the Cruess Hall Courtyard, where all guests were encouraged to bring creepy Halloween dishes and participate in a costume contest. Many people enjoyed this event and were quite amused at our grand prize costume winner, a clean-shaven professor dressed up as Elvira, the Queen of Darkness. Guests dined on such delights as litter box cake, microbial delight (flavored agar in petri plates enhanced with a variety of microbe-looking candy), Jabba the Hutt cake and monster mash.

The Club also participates in other activities such as the Spring Department Barbecue and Picnic Day (see related articles) and hosting the Northern California IFT Student Awards Night and Banquet at which industry representatives sponsor students for dinner. The awards night recognizes all of our student scholarship, fellowship, and award recipients.

As fund-raisers, last year and again this year the Club will be canning Valentines Day gifts and will be holding a raffle at the March 19, 1998, NCIFT Meeting in Pleasanton. Anyone interested in donating something for the raffle, let us know!

This year's officers are:

President	Sheryl Yamamoto
Vice President	Patty Jung
Secretary	Veronica Wong
Treasurer	Doris Lau

Activities	Maria Kaushal and Aaron Uesugi
Publicity	Noelle Lee and Hann Nguyen-Pham
NCIFT Reps	Mike Leonard and Susan Slagle
Faculty Advisor	Ellen Hopmans

The Food Tech Club continues to grow and strives to provide its members with fun and educational activities.



The 1997 Department Picnic Day Float, "Attack on the Killer Tomatoes" placed third in the Parade Competition. Students dressed as scientists pursued others dressed as tomatoes (costumes courtesy of Carol Cooper) as both roller-bladed around the float. This was the first year in many that we've had a float, and we plan to reinstitute this tradition.

Kudos to Students

Ju-Wen Wu received first place in the graduate student competition at the Pacific Fisheries Technologists meeting last April in Astoria, Oregon. Ju Wen's paper was "Use of protease inhibitors from tomato in whitening surimi."

The UC Davis College Bowl team traveled to the University of Idaho last March for tough Western Regional competition. Team members included graduate student Rick Fitzgerald, and undergrads Trang Nguyen, Kim Decker, and Ardeshtir Forouhar. Practice is already underway for the 1998 Western Regionals, which will be in Sun Valley, Idaho.

UC Breakfast at Atlanta IFT - Get Your Tickets!

Remember to order your tickets for the UC Breakfast at the IFT Meeting in Atlanta in June. The breakfast, which provides an opportunity to catch up on department activities, as well as renew acquaintances with faculty and other alumni, will be Monday, June 22, 1998. Tickets can be ordered from IFT directly with your registration for the annual meeting, or they are available on sight in Atlanta through Saturday, June 20. See you there!!

1996-97 Scholarship and Award Recipients

Alice C. Bridge Memorial Scholarship
Doris Lau
Trang Ngoc Nguyen
Loretta Tong

American Assn. of Cereal Chemists Scholarship
Ana Marie Ibanez-Carranza

Larry Carlson Memorial Prize (Home Wine and Beer Trade Assn.)
Sean Squires

California Cheese and Butter Assn. Scholarship
Trang Nguyen

California Creamery Operators Assn.
Thomas A. Trezza

California Dairy Industries Scholarship
Apostolos Angelidis
Paul Gerhardt

California Dairy Research Foundation Fellowship
Catherine L.C. DeMulder-Johnston

California League of Food Processors Scholarship
Jennifer Donovan
Leonard Fong
Marie Nguyen

Cliff and Jane Carpenter Memorial Fellowship
Benoit Rousseau
Vasana Weerasinghe

Clorox Company Graduate Scholarship
Catherine L.C. DeMulder-Johnston
Jane Yegge

Marie and William Cruess Award (NCIFT)
Daphne Solis
Sheryl Yamamoto

Food Processors Sanitation Assn. Prize
Sheryl Yamamoto

IFT Junior/Senior Scholarship (Nabisco Foods Group)
Daphne Solis

IFT Graduate Fellowship (Refrigerated and Frozen Foods Division)
Irene Luna-Guzman

Jastro Shields Graduate Research Scholarship
Jean Marc Dessirier
Leonard Fong
Choong Min Kang
Kyle Sasahara

Sherman J. Leonard Memorial Award
Juan Gonzalez
Wendy Ma
Kyle Sasahara
Charlene Wee

Molecular and Cellular Training Grant (NIH)
Kamni Vijay

Emil Mrak Memorial Scholarship
David Johnston

Emil Mrak Prize in Food Science
Erin Kamei

Cecilia E. Murphey Scholarship
Vai-meng Leonard

Thomas A. Nickerson Memorial Award
Luis Cisneros-Zevallos
Stuart Nolan
Benoit Rousseau

B.S. and Alta Schweigert Award
Doris W. Lau
Kamni Vijay

Peter J. Shields Scholarship
Vai-meng Leonard

George F. Stewart Memorial Award
 The IFT Product Development Team:
Winnie Boyajian
Regina lam
Chiu Yee Chen
Joanne Lao
Ardeshir Forouhar
Vernon Lee
Erin Kamei
Aaron McClendon

UC Davis Athletic Fund
Tracie Gong

UCDMC Volunteer Services Scholarship
Tracie Gong

Yellow Dog Society Scholarship
Luis Cisneros-Zevallos
Loretta Tong

Western Candy Conference Provides Sweet Undergrad Scholarship

The Western Candy Conference has announced that it will annually award a prize to an undergraduate student majoring in Food Science or Food Biochemistry at UC Davis. Preference will be given to incoming students with an interest in the confectionery industry, and with financial need. This year's prize is \$5,000! The purpose of the prize will be to help stimulate visibility and student awareness of the confectionery industry, with the hope of encouraging students to enter this profession.

Undergraduate Enrollments Are Up!

Efforts of the Recruitment Committee, headed by Dr. Norm Haard, are paying off! We are up 25 students from last year to a ten-year high of 102 students for the Fall 1997 quarter. This is up from a low of 49 students in 1993.

As one of our recruitment activities, we held an ice cream social for all campus outreach personnel (those who go to high schools to recruit and those who do counseling for transfer students at community colleges) and "Undeclared" and "Exploratory" advisors. Many of them were not fully aware of our majors, and we have received some referrals from them.

We also have faculty and students call students who are admitted to UCD in the Food Science major to answer any questions they may have and encourage them to choose UCD and Food Science. Just because they are admitted, it does not mean they choose to come here.

Student Recruitment Video Available

You can learn what's new and exciting at UCD Food Science and Technology through video cassette. The Department engaged alumnus Natalie Lum (former peer advisor, 1980) and her video production company, 2POP, to produce a 10-minute high-tech video featuring the Department.

The video is part of our multi-tiered Student Recruitment Program. Aimed at high school and community college students, the video introduces food science as a career opportunity through campus and Department scenes, and interviews with students, faculty and alumni. We are distributing the video to CA high schools and community colleges through career counseling offices and science faculty. Also we will mail the video directly to students who express an interest in our program.

We gratefully acknowledge substantial financial support from the food industry, 2POP, and the College of Agricultural and Environmental Sciences. If you would like a copy of the video for recruiting purposes, send your request to Carol Cooper.

1996-97 B.S. Graduates

December 1996

Henny Hendra
 Sean Squires
 Brewery in Dallas, TX
 Ethell Wilson, Jr.

March 1997

Adrienne Christina Hui Brouwer
 Vet School, UC Davis
 Lisa Allison Chan
 Dr. McDougall's Foods, San Francisco, CA

Gary Soriano Gaspar
 Mother's Cookies, Oakland, CA

Susan Hartono
 Indonesia

Daphne Kay Solis
 Medical School, UC Irvine

Susan S. Tham
 Business School, CA State University, Hayward

June 1997

Julie Lynn Blackwell
 Naumes Fruit Processors, Yuba City, CA
 Winnie Bi Boyajian

Graduate School, CalPoly, Pomona
 Minyu Huang

Quaker Oats Co., San Leandro, CA
 Christina Yaa Jacobson

Clorox Company, Pleasanton, CA
 Erin M. Kamei

MLO, Fairfield, CA
 Vai-meng Luana Leonard
 Nestle USA, Solon, OH

Aaron Beth McClendon
 Early California Foods, Visalia, CA

Hung Tuan Nguyen
 Trang Ngoc Thu Nguyen

Andreas A. Throuvalas
 Greece

1996-97 M.S. Degrees

- Adolfo Alarcon-Mendez**
Food Science (R. Boulton)
Direct PC measurement and interpretation of wine filterability.
Winery Engr., Franciscan Vineyards, St. Helena, CA
- Catherine Rosalyn Alcantara**
Bio & Ag Engr (J. Krochta)
Barrier and mechanical properties of whey-protein-isolate-based films: Film drying rate of coated-food integrity studies.
Prod. Dev. Leader, Waltham (Kal Kan) Pet Foods
- Keith Kendall Bodine**
Food Science (A. Noble)
Perceptual astringency and sourness of aluminum sulfate, selected acids, and phenolic compounds.
Asst. Winemaker, Chateau Morrisette, Meadow of Dan, VA
- Niclas Lars Bogren**
Food Science (R. Boulton)
The effect of sulfur dioxide on Saccharomyces cerevisiae.
Asst. Process Dev. Sci., Bayer Corp., Berkeley, CA
- Robert Eugene Bolan**
Food Science (R. Boulton)
Development of a fluidized bed crystallizer for wine treatment.
Winemaker, Stags Leap Winery, Napa, CA
- Salvatore Caesare DeIanni**
Food Science (R. Boulton)
Investigation of a simple chromatographic method for determining urea in wine.
Enologist, Cuvaision Winery, Calistoga, CA
- David Matthew DeSante**
Food Science (A. Noble)
A study of fermentation kinetics in wine utilizing nonlinear parameter estimation methods.
Asst. Winemaker, Canoe Ridge, WA
- Jean-Marc Dessrier**
Food Science (M. O'Mahony)
Sensory difference tests: Sequential sensitivity analysis modifications for Thurstonian modeling predictions
(PhD granted by ENSIA in France).
PhD student, UC Davis
- Thomas Joseph Evans**
Food Science (S. Ebeler)
SPME coupled to GC/MS for the detection of 2,4,6-TCA.
LaCrena Vinera, Forest Hill, CA
- Thomas Martin Flores**
Food Science (M. Lewis)
The role of wort β -glucan in lautering: The relationship between total β -glucan, β -glucan molecular weight, viscosity and lauter runoff rate in a model system.
Brewmaster, Clipper City Brewing Co., Baltimore, MD
- Greg Fry**
Food Science (J.-X. Guinard)
Comparison of static headspace and solid phase microextraction headspace gas chromatographic sampling techniques for

- some relevant volatile components of beer.*
Kraft General Foods, NY
- Daniel Benson Kahn**
Food Science (M. Lewis)
Brewing interest.
- Caren Lynn Komrosky**
Food Science (M. Lewis)
A quantitative study of total growth, carbon Saccharomyces cerevisiae in growth-promoting and growth-limiting wort fermentations.
Anheuser-Busch, Van Nuys, CA
- Joanne Susan Levengood**
Food Science (R. Boulton)
A survey of copigmentation in cabernet sauvignon.
Winemaker, Gilbertsville, PA
- Julio Jose Lopez**
Food Science (R. Boulton)
Enology interest.
Asst. Winemaker, Rioja, Spain
- Irene Luna-Guzman**
Food Science (D. Barrett)
Use of calcium and heat treatments to maintain the quality of fresh-cut cantaloupe melons.
Ph.D. student, UC Davis
- Rossella Mazzucchelli**
Food Science (J.-X. Guinard)
The effects of sugar and fat on the sensory properties of milk chocolate.
PepsiCo, Inc., NY
- Michele Lisa Pontrelli**
Food Science (A. Noble)
The contribution of glycosides to aroma in Zinfandel.
Tragon, Pleasanton, CA
- Maria T. Rodriguez-E.**
Food Science (R. Boulton)
Sensory science interest.
- Anil Kumar Sharma**
Food Science (Y. Lee)
Study of pathogenicity and disease progression of Salmonella typhimurium in transgenic mice carrying OMT 10-OGH transgene.
Ph.D. student, UC Davis
- Richard Avery Sowalsky**
Food Science (A. Noble)
Effect of concentration, pH and anion species on the sourness and astringency of organic acids.
Robert Mondavi Winery, Woodbridge, CA
- Adam Suprenant**
Food Science (A. Noble)
Cork sensory quality control.
- Brent Corey Trela**
Food Science (A. Waterhouse)
Resveratrol: Isomeric molar absorptivities and stability.
Winemaker, Hoodspout Winery, Hoodspout, WA
- Yumin Wang**
Food Science (M. Lewis)
- Phillip Randolph "Randy" Whisler**
Food Science (M. Lewis)
Plan II
Brewer, River City Brewery Sacramento, CA

- Dana Ann Wong**
Food Science (M. O'Mahony)
Cognitive strategies of the triangle difference test.
Sensory Tech., Natl. Food Lab, Dublin, CA
- Ou Xle**
Agr & Env Chem (D. Reid)
Mechanisms of the food preservation activity of trehalose.
- Dorene Har-Ping Yip**
Food Science (M. O'Mahony)
Triadic and tetradic taste discrimination testing: Thurstonian and sequential effects.
Scientist, Frito-Lay, Plano, TX

1996-97 Ph.D. Degrees

- Sameena Akbar**
Microbiology (C. Price)
Genetic analysis of the signal transduction network that activates the transcription factor sigma-B of Bacillus subtilis in response to adverse environmental conditions.
Post-doc, FS&T, UC Davis
- Abdulameer Ahmed "Ameer" Allaith**
Agr & Env Chem (G. Smith)
Osmoregulation in Rhizobium meliloti: Purification, characterization, and regulation of N-acetylglutaminylglutamine (NAGG) synthetase.
Professor, University of Bahrain
- Maria Jesus Arrizubleta-Balerdi**
Biochem & Mol Biol (E. Bandman)
Sequence elements that determine myosin dimerization specificity.
Returned to Spain
- Josefina Belloque**
Food Science (G. Smith)
¹H-FT-NMR studies on the structure stability of the bovine milk whey protein β -lactoglobulin.
Instituto de Fermentaciones Industriales, Spain
- Qun Chen**
Agr & Env Chem (E. Bandman)
Organization and linkage of the chicken sarcomeric myosin heavy chain multigene (MyHC) family.
Post-doc, School of Medicine, UC San Francisco
- Theodoros G. Kallitsis**
Food Science (R.L. Merson)
Ozone absorption and reaction in enzyme and phospholipid liposome suspensions.
Army, Greece
- Kelly Sam Miller**
Bio & Ag Engr (J. Krochta)
Physical properties of whey protein isolate films: D-Limonene permeability, water vapor permeability and mechanical properties.
Research Engineer, Frito-Lay, Plano, TX
- Edna Cristina Ramirez**
Food Science (J. Whitaker)
Purification and characterization of cystine lyase in broccoli.
Post-doc, FS&T, UC Davis

Membrane Mobile Test Unit Assists with Waste Water Treatment

UC Davis owns a mobile Membrane Test and Demonstration Unit (MTDU) which is designed to allow on-site evaluation of membrane filtration technology for process wastewater. The unit is housed in a 48 ft. by 8 ft. semi trailer divided into sections:

- analytical laboratory
- low pressure area to test micro-filtration and ultrafiltration systems
- high pressure area to test nanofiltration or reverse osmosis
- dissolved air filtration unit for prefiltration.
- ozonation post treatment

The MTDU is operated by CIFAR (see article page 4); and funded by the Electric Power Research Institute (EPRI) which coordinates site visits and financial arrangements. The MTDU uses over 60 membranes from several state-of-the-art manufacturers but does not endorse the products of individual manufacturers.

Since its inception in October 1992, the MTDU has visited 35 sites across the US. The first site visit was Tri Valley Growers, at which CIFAR prepared an economic analysis. A membrane system was eventually installed at the Oberti facility that resulted in savings from waste reduction estimated at nearly \$2 million annually. Other sites where membrane systems were implemented after MTDU involvement include Basic American Foods in Idaho, Del Monte in Washington, Dole and NorCal Crosetti in California, Butterball Turkey in Arkansas, Ocean Spray Cranberries, Inc. and Tuscan Dairy Farms in New Jersey, Widmer's Wine Cellars in New York, and Maui Pineapple in Hawaii.

One way to arrange for an MTDU site visit is to contact your local electric power supplier. The energy supplier contacts EPRI, Palo Alto, CA to arrange a visit. A simple contract with UC Davis is required, in addition to a financial contract with EPRI. Often utilities arrange for several customers to gain access to the unit while it is in their geographic area. For information contact CIFAR, 530-752-2922.

Campus Gets New Area Code, Street Address

Effective Nov. 1, 1997, the area code for Davis changed to 530. The old 916 code will continue to also be operative until May, 1998. The campus has formally adopted the street address "One Shields Avenue". This address, which does not identify a particular street or building, satisfies US Postal Service requirements, and should help expedite mail delivery to campus.

Martin Yan Banquet to Benefit Undergraduate Scholarship Fund

Chef Martin Yan will sign books and entertain guests at a banquet in Freeborn Hall on the evening of March 17. Guests will "Explore the Exciting World of Chinese Cuisine" with Martin. During the reception (5:30 - 7:00 pm) we will also hold a silent auction, with proceeds from that and the book sale going to benefit our undergraduate scholarship fund. Tickets for the reception and banquet are \$50 (\$400 to reserve a table for eight), and seating is limited. So, if you are interested in attending, RSVP soon using the enclosed card, or phone Teri at 530-752-8079. We are also accepting items for the silent auction.

If you are unable to attend the event but would like to contribute to the undergraduate scholarship fund, you are welcome to send donations (checks payable to UC Regents) to Undergraduate Scholarship Fund, Department of Food Science and Technology, UC Davis, Davis, CA 95616-8598.

We're looking forward to an evening of fun and collegiality with our alums.

Dairy Research and Information Center (DRINC)

The Dairy Research and Information Center (DRINC), housed in our department, is an administrative unit of the College of Ag and Environmental Sciences. DRINC identifies UC research resources that can be used to answer dairy food and dairy production-related questions. Director John Bruhn reports that the Center provides information on the status of dairy-related research to University personnel, public interest groups and interested public and dairy industry organizations. It also teams with state and national dairy organizations to support the development of educational programs for dairy production and processing industries.

DRINC maintains close working relationship with state and national agencies and other research organizations with the goal of facilitating communication between universities and outside organizations. For additional information, contact John Bruhn at 530-754-MILK, or email: DRINC@ucdavis.edu.

**Picnic Day is
Saturday, April 18**

Center for Consumer Research Focuses on Consumer Decision-making

The Center for Consumer Research, under the leadership of Director Christine Bruhn, is involved with education and research in the consumer domain. Research projects conducted by the Center generate knowledge that can lay the basis for effective decision-making by consumers at a personal level and for effective policy and actions by public and private organizations. The Center's core research program focuses on food and nutrition issues, however other factors which impact consumer health and well-being have been also addressed.

Consumer research, which aims to increase the information exchange between those who provide goods and services and those who use them, benefits the public, health professionals, consumer organizations, regulatory agencies, and industry. The Center uses the approach developed by social psychologist Kurt Lewin in the 1930's of involving potential users of the information in research. This strategy has been shown to result in greater utilization of research results.

Funding sources for specific projects have included USDA, California Dairy Center, California commodity groups, and the UC Systemwide Biotechnology Research and Education Program. For more info, contact Christine Bruhn at 530-752-2774; email cmbruhn@ucdavis.edu.

**We'd like to hear
from you!**



The UC DAVIS DEPARTMENT OF FOOD SCIENCE & TECHNOLOGY NEWSLETTER will be published twice yearly to inform our alumni and friends about faculty, staff, student, and alumni activity, curricular developments, research results, and other topics of interest. We welcome your suggestions, corrections and comments. Address communications to:

Newsletter
Food Science and Technology Dept.
University of California
Davis, CA 95616-8598
phone: 530-752-8079
fax: 530-752-4759
foodsci@ucdavis.edu

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IN MEMORIAM

Clarence Sterling

(1919-1996)

Professor Emeritus Clarence Sterling died August 13, 1996. Professor Sterling graduated from the UC Berkeley with an A.B. in botany and forestry in 1940 and a Ph.D. in plant anatomy and morphology in 1944. Clarence taught at the University of Wisconsin and the University of Louisville before he returned to UC Davis as a faculty member. He became an Emeritus Professor in 1981.

His primary research areas included plant anatomy and the microscopic, sub-microscopic and molecular structure of foods. He was also widely recognized as an expert in floral morphology and reproductive morphology of gymnosperms, rose and lilies.

Clarence's main strengths included quiet dedication to his research and his forthright discussion. He was the ultimate university scholar, a hard-working, quiet and unassuming professor, always seeking intellectual truths. He was a valuable and refreshing member of the faculty.

In addition to his wife Nora, he is survived by five children and twelve grandchildren.

Mendel Mazelis

(1922-1997)



Mendel Mazelis, Emeritus Professor, died June 30, 1997. He was a member of the department faculty from 1961 until 1991. Mendel liked advising and helping students, and he reminded others that, without students, there would be no university. He will long be remembered by colleagues and former students for his wonderful stories.

Mendel started his academic career in 1939 at UC Berkeley, where he earned a B.S. degree in 1943. Following graduation, he joined the U.S. Navy as a lieutenant in World War II, where he served in the battles of Leyte, Saipan and Okinawa.

Mendel received his Ph.D. at UC Berkeley in 1954 under Dr. Paul Stumpf and became a member of the UC Davis faculty in 1961 as a plant biochemist studying enzymatic systems in plant materials. He was a member of several professional societies, and he served as a master advisor to students in the food biochemistry major.

Professor Emeritus Stumpf said of Mendel, "he had a fantastic sense of humor; he was a funny little guy. Wherever he went, by making a few remarks, people would gather to listen to his jokes."

Mendel is survived by his wife, Noreen, and son, Jacob.

Alumni - Tell Us About You

We're interested in hearing from you, and your classmates are too. Please help us keep our mailing list up to date by completing the form below and returning it to us. Include any news items about yourself that we could share with our alumni.

Name _____

Degree & Date _____

Address _____

Business _____

City _____ State _____ Zip _____

Your title _____

Address _____

phone: _____

email: _____

New address? (please check) Home () Business ()

City _____ State _____ Zip _____

News about yourself _____



Dinner with Martin Yan

Tuesday, March 17, 1998

Freeborn Hall

Martin, who is one of our more well-known alums, will be with us for an evening of dinner and fun to help benefit our undergraduate scholarship program.

See details inside, or phone 530-752-8079 for more information.

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