



RMI

UC DAVIS

Robert Mondavi Institute for Wine and Food Science

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Executive Director's Update

By Clare Hasler

I remember writing this column for the spring issue when many Northern Californians were begging for the rain to stop. Today as the thermometer once again approaches 108 degrees, rain would certainly be welcome! But at least it's a dry heat....

One positive aspect of the dry weather is that it is conducive to construction. As you can see in the story below, construction on the RMI academic building is now underway.

The hectic pace of campus life slows down dramatically after the end of the academic year. This is a wonderful time to host visitors at UC Davis, and the RMI has been very busy engaging with the food and wine industry during the last two months. Both the Coca-Cola Beverage Institute for Health & Wellness and Fresh Express spent time on campus to connect with faculty, tour facilities, and explore research opportunities in the areas of nutrition, food safety, postharvest technology, and food processing.

Constellation Wines U.S. held their annual technical conference at UC Davis and had an opportunity to associate with faculty in the Department of Viticulture and Enology. Members of the Institute of the Masters of Wine also visited the campus to hear about the latest developments in viticulture, enology, and the wine business.

Beer took center stage in the spring as faculty, staff, and friends of the UC Davis Department of Food Science and Technology celebrated the grand opening of the Pilot Brewery on April 7. We are very grateful to Anheuser-Busch for the generous support of this new teaching and research facility. We were able to showcase the brewery again on June 14 when donors to the Davis Chancellor's Club attended a tour and tasting with Professor Charlie Bamforth.

Wine, beer, food, art, and entertainment will be celebrated during "davisfest" on October 15, 2006. The RMI is proud to partner with the Davis Downtown Business Association in this



inaugural event highlighting the best of Davis to the region. Mark your calendars for this exciting event for the whole family!

Finally, congratulations to Andy Waterhouse who has been appointed as interim chair of the UC Davis Department of Viticulture and Enology!

Enjoy the rest of the summer and stay cool!



Clare

RMI Construction Update

UC Davis Architects and Engineers

By Allen Lowry



Electrical conduit being installed under the RMI basement slab

Activity on the site of the RMI academic building is starting to ramp up significantly. Current work is focusing on trenching for and placement of underground piping, fabrication of reinforcing steel, setting up of more subcontractor trailers, and lots of paperwork associated with all of the above. If you have recently driven by the site in the afternoon lately, you may think the project has been put on hold due to lack of activity. Nothing could be further from the truth. The crew has been working 3am to noon to beat the Central Valley heat wave! Hopefully by the October issue of the RMI E-news, there will be a structure sprouting from the ground!

Events

UC Davis Pilot Brewery Grand Opening

By Melissa Haworth



Alumnus Doug Muhleman (l) and John Serbia (r) of Anheuser-Busch assist Charlie Bamforth (c) pour milled grain into the mash mixer to start the mashing process

Thanks to the contributions and dedication of many supporters, most notably Anheuser-Busch, UC Davis students will learn the craft of brewing on state-of-the-art equipment. The newly completed UC Davis Pilot Brewery has only a 45-gallon capacity but mimics the full-size systems found in modern breweries down to the last detail.

Students, staff, faculty, and friends of the Department of Food Science and Technology celebrated the grand opening of the brewery on April 7, 2006, with a ceremonial first mash. In the brewing world, "mash" refers to the process of steeping the germinated and dried grain in hot water in order to break it down into soluble, fermentable sugars. The mash takes just 30 minutes, while the entire brewing process requires about 5 hours.

The more than 50 attendees couldn't enjoy the tasty results of the mash (beer made at UC Davis is for teaching and research only) but they did toast the occasion with a selection of Anheuser-Busch brews. VIP attendees included alumnus Doug Muhleman, group vice president of Brewing Operations and Technology for Anheuser-Busch, Mike Chase, project engineer of Brewing Operations and Technology for Anheuser-Busch, and Neal Van Alfen, dean of the UC Davis College of Agricultural and Environmental Sciences.

The brewery is already being put to good use. During spring quarter, more than 20 students in Professor Charlie Bamforth's Food Science and Technology 102B course (Malting and Brewing Practicum) had a chance to brew beer using the equipment and gain experience sure to help them in their careers.

Cruess Hall is just the temporary home for the pilot brewery. Ultimately, it will be moved to a more fitting location in the Anheuser-Busch Brewing and Food Science Laboratory. Once the \$10 million fundraising goal is reached, the laboratory will be built on the south edge of the UC Davis campus within the RMI complex.

Brewery Dedication Photos



Doug Muhleman (r) and Charlie Bamforth (l) toast the momentous occasion



UCD Alumnus (MS Food Science '03) Alberto Sun (l), Brewing Group Manager, Fairfield Brewery with Doug French (r), Engineer of Anheuser-Busch Corporate Brewing Engineering & Technology



Mike Chase of Anheuser-Busch, St. Louis



(l to r) FS&T Staff Research Associate Candy Wallin; Mike Chase; FS&T Management Services Officer Karen Gurley; and Darren Goodlin, Manager, Instrumentation Technologies & Development, Anheuser-Busch, St. Louis



John Serbia and Alberto Sun of Anheuser-Busch



Fermenters in the new pilot brewery

Constellation Wines U.S. Top Management and Staff Visit Campus

By Clare M. Hasler

Approximately 100 top management and staff from Constellation Wines U.S. were on campus for 2 days in June for their annual technical conference. Constellation Wines



U.S. is the mainstream U.S. arm of the world's largest wine company, Constellation Brands.

They are the leading producers of premium and super-premium wines in the United States, with properties such as Robert Mondavi Private Selection and Woodbridge by Robert Mondavi representing the entire spectrum of wine styles and price points.

Faculty members Dave Smart, Roger Boulton, Sue Ebeler, Andy Walker, Doug Adams, and Hildegard Heymann presented overviews of their research to the group from Constellation. The RMI hosted a delicious wine and food reception following the program. UC Davis Chancellor Larry Vanderhoef also stopped by to chat with key executives.

Anil Shrikhande, vice president of Research and Development, Constellation Wines U.S., was very pleased with the program presented by Department of Viticulture and Enology faculty. He stated that "... all the Constellation management and other technical staff were impressed with the technical presentations."

Fresh Express Explores UC Davis Post-Harvest Technology Expertise

By Clare M. Hasler

Five guests from Fresh Express (Salinas, Calif.) visited the campus in June to explore research opportunities. The company, which was acquired last year by Chiquita Brands International, is the world's largest packaged salad company and the leader in packaged fresh foods. Visitors from Fresh Express included Tanios Viviani, president, James R. Lugg, executive vice president, Joan Rosen, director, Food Safety and Regulatory Affairs, and Jennifer Whittle, Innovations Department. Robert W. Fisher, a member of the board of directors of Chiquita, also participated in the visit.



The group enjoyed a comprehensive overview of research competencies in the areas of postharvest technology, food safety, and food processing during their meetings with many UC Davis faculty, including Charlie Bamforth, chair of the Department of Food Science and Technology, Diane Barrett, Cooperative Extension specialist, Marita Cantwell, Cooperative Extension specialist in plant sciences, Beth Mitcham, Cooperative Extension Specialist in pomology, Adel Kader, professor of plant sciences, Jim Thompson, biological and agricultural engineering, and Roberta Cook, marketing specialist in agricultural resource economics. Bill Biasi, pomology staff research associate, led a tour of the postharvest laboratory.

The visit was a huge success. Tanios Viviani was very pleased with the warm reception, stating that the agenda was “impeccable” and that he was “... excited with the opportunities to create a stronger partnership.” Jim Lugg, also a member of the College of Agricultural and Environmental Sciences Dean’s Advisory Council, shared the following thoughts: “The presentations were great and certainly stimulated our imaginations. As always, we came away from UC Davis very excited about the people and programs there.”

Coca-Cola Beverage Institute for Health & Wellness Tour Campus Research Facilities

By Clare M. Hasler



(l-r): Clare Hasler, Don Short, Susan Roberts and Joe Speroni join Shields Library wine bibliographer Axel Borg, and department head Daryl Morrison in viewing rare beverage literature housed in Special Collections

The RMI hosted three visitors from the Coca-Cola Beverage Institute for Health & Wellness in May. Company representatives included Don Short, president, Susan Roberts, associate director, Health and Nutrition, and Joe Speroni, vice president, Non-Carbonated Beverages, Global Development and Integration.

The Beverage Institute for Health & Wellness supports nutrition research, education, and outreach, with a primary focus on beverages. The Beverage Institute is responsible for evaluating emerging wellness trends and ingredients on behalf of The Coca-Cola Company, conducting clinical research in support of company brands, and establishing research programs that lay the foundation for the development of new beverages to meet the nutritional and wellness needs of

consumers. The institute is seeking centers of excellence for collaboration that can help them provide unbiased research suitable for making health claims for their new products.

The visit began with a dinner for faculty and guests at Season’s Restaurant, hosted by the RMI. The following day was filled with individual and group meetings which included presentations from faculty in the Department of Nutrition and the USDA Western Human Nutrition Research Center (WHNRC). Institute visitors were also treated to a tour of the brand new state-of-the-art research facility for the WHNRC, expected to open this summer. The day concluded with a private showing of rare selections from the Hurty-Peck Library of Beverage Literature housed in Special Collections in the UC Davis Shields Library. This collection was built by A.W. Noling and contains over 6,500 titles in all areas of beverage literature including water, juice, coffee, tea, chocolate, and carbonated drinks as well as beer, wine, and spirits.

Masters of Wine

By Clare M. Hasler

Approximately 25 members of the Institute of the Masters of Wine visited UC Davis in June to hear overviews from several faculty on various aspects of the wine industry, including wine sensory evaluation (Ann Noble, professor emeritus, viticulture and enology), the future of the wine industry (Bob Smiley, professor, Graduate School of Management), and effects of water stress on vineyard performance (Larry Williams, viticulture and enology). Andy Waterhouse kindly provided an overview of the Department of Viticulture and Enology.



The Institute of the Masters of Wine exists to promote the highest level of educational achievement for the wine industry, culminating in the internationally recognized qualification of Master of Wine (MW). As a corporate entity it organizes all aspects of the MW examination and education programs, runs tastings and other events, offers membership services to the 251 MWs worldwide, and provides information and access to specialist advice for the wine industry in general.

RMI Co-Sponsors Founding Food Studies Symposium

By Carolyn de la Pena

In May, members of the campus community attended a day-long symposium entitled *Founding Food Studies*, an interdisciplinary conference featuring graduate student work facilitated by professors Carolyn de la Pena from American Studies and Kimberly Nettles from Women and Gender Studies. The RMI was one of the event sponsors, and Clare Hasler, RMI executive director, gave the opening address on behalf of the campus. Attendees heard four panels made up of students from the departments of Food Science and Technology, Human and Community Development, Nutrition, History, Sociology, Cultural Studies, and Education. Several UC Davis faculty members provided commentary and facilitated discussion and Amy Bentley, an associate professor in the department of Food Studies, Nutrition, and Public Policy at NYU gave the lunchtime keynote address.



A lively interdisciplinary exchange was had by all who attended. Many attendees and participants commented that the event demonstrates the growing strength of food scholarship on campus. And, perhaps even more important, it demonstrates the desire of faculty in the sciences, humanities, and social sciences to forge collaborations to learn from one another and challenge each other to think more critically about the complexities of food.

Orley Ashenfelter Seminar and Reception

By Hilary Hoynes

The campus visit of Princeton University Professor of Economics Orley Ashenfelter provided a wonderful opportunity for collaboration between the RMI and faculty in the UC Davis departments of Economics and Viticulture and Enology. Ashenfelter is the Joseph Douglas Green 1895 Professor of Economics at Princeton University. He is a distinguished labor economist working on diverse issues such as evaluation of the effect of schooling on earnings,

the cross-country measurement of wage rates, and many other issues related to the economics of labor markets.



Orley Ashenfelter

Ashenfelter gave a midday lecture titled “The Value of a Statistical Life: Problems and Prospects” to a packed crowd in the Department of Economics. The lecture highlighted his keen empirical skills and his ability to synthesize and critique a large body of literature. The crowd even got interesting musical elements to illustrate the economics! In addition to his prominence as a labor economist, Ashenfelter is a wine enthusiast and is heavily involved in conducting economic analyses of the wine industry. This passion has turned into a business -- he publishes a wine newsletter called *Liquid Assets* (<http://www.liquidasset.com>). Ashenfelter has developed a straightforward formula (based on weather statistics) for predicting the potential future prices (and therefore the quality) of wines of any vintage. He recently finished a visiting position at the Public Policy Institute of California where he was researching the California wine industry.

Andy Waterhouse hosted a wonderful tour of the viticulture and enology department and facilities for Ashenfelter and three faculty members from the economics department. This was a real treat for Ashenfelter who had toured many wineries but had not experienced anything comparable to the UC Davis research environment. Following the tour, the RMI and the Institute for Governmental Affairs co-hosted a reception which included a wine tasting, food, and refreshments.

Davis Fest

The RMI is proud to partner with the Davis Downtown Business Association for a local festival showcasing the best of Davis to the surrounding region in the areas of food, wine, beer, entertainment, and art. Mark your calendars for this event on Sunday, October 15, from noon to 5 p.m. in the downtown Davis area. For more information, please visit www.davisfest.com or www.davisdowntown.com.



Research\Faculty News

Department of Viticulture and Enology Names New Interim Chair



Dr. Andrew L. Waterhouse

The Department of Viticulture and Enology has announced the appointment of Andy Waterhouse as the interim department chair. Andy's research activity focuses on the chemistry of a class of natural phytochemicals called the phenolic compounds. Two types of effects are addressed -- those that are important to the taste of wine, and those that relate to the health effects of wine consumers. In both cases, mutually beneficial collaborations are conducted with others who can utilize chemical data and assistance from his laboratory.

In the area of wine quality, his current interest is on the effect of oxidation on wine chemistry, and how this oxidation affects important quality parameters of wine, such as taste and color. His team has been studying micro-oxygenation and its effect on wine color and tannins. In general, the effects they are seeing are small, but with higher levels of oxygen come significant changes. They are in the

testing stages of some new theories they have on wine oxidation chemistry.

Andy also participates in the development of general analytical methodology of interest in wine analysis and has a few different methods published in this area. His researchers are currently applying a number of different methods to look at new grape or wine treatments being offered by various companies.

We look forward to working in a greater capacity with Andy and congratulate him on his new position.

Dave Smart Granted Tenure

On May 12, UC Davis's Department of Viticulture and Enology announced that Dave Smart has been granted promotion and tenure and has earned the title of associate professor. He received universally glowing remarks from faculty, external reviewers, college administration, and the campus Committee on Academic Personnel. Professor Smart's research program focuses on rootstock root physiology and soil nutrient cycling. His current interests relate to the physiological process of root aging and population dynamics of roots under field conditions. His laboratory is using geochemical approaches to determine where and at what time of the season grapevine roots are foraging.



He has also been extensively involved in global climate change research and looks at how elevated carbon dioxide in the atmosphere influences nitrogen and carbon cycling in the plant-soil system. He currently has a project in the Napa Valley that examines the role that vineyards play in soil carbon sequestration and carbon dioxide exchange and how this differs from oak-woodlands. Smart teaches VEN 101C, a field laboratory course covering spring and summer vineyard management, soil fertility management, and principles of vineyard establishment. Smart received his M.S. and Ph.D. degrees in Botany from UC Davis.

The RMI congratulates Dave for all of his hard work and dedication!

Charlie Bamforth Honored by IFT Fermented Foods & Beverages Division and the University of Nottingham



Charlie Bamforth signing his latest publication

Charlie Bamforth was honored at the Institute of Food Technologists annual meeting in Orlando, Florida, as the 2006 Fermented Foods and Beverages Division Lecturer for his leadership, expertise, and extraordinary contributions in the field of fermentation technology. Charlie has also been invited to join the University of Nottingham as a Special Professor in the School of Biosciences. These appointments are given in recognition of distinguished service and are to facilitate collaboration in research and to strengthen links between University of Nottingham personnel and those engaged in research outside.

Bamforth is the first Anheuser-Busch Endowed Professor of Brewing Science. He assumed the chair of the Department of Food Science and Technology in July 2005. UC Davis is the only

public university in the United States offering an accredited four-year program in brewing science.

Congratulations, Charlie!

Upcoming Conferences

Fall Culinary Tour of Tuscany Co-Sponsored by the RMI

Travelers will discover the food, wine, art, and lifestyle of Tuscany and Umbria, two of Italy's most colorful regions, during a fall culinary and cultural tour coordinated by UC Davis Extension.

This "Food, Wine, and Culture of Tuscany" tour, scheduled for Oct. 10–20, 2006, will feature instructors from Apicius -- The Culinary Institute of Florence -- as tour guides. The tour is co-sponsored by the RMI.



Tour participants will taste the food and wine of Tuscany and Umbria, and explore the relationships between the regions' food and traditions, art, and lifestyles. They also will have the opportunity to interact with chefs and food-and-wine experts, while learning how to prepare authentic Italian cuisine. The tour will include visits to local markets, restaurants, wineries, cheese factories, art galleries, and museums.

Tour members will learn about the cultural norms of food consumption, then compare them with the rules of music, dance, and poetry. They also will explore the relationships between food and religion, gender, tradition, art, and lifestyle.

Some of the highlights of the tour will be visits in Florence to the culinary institute, the Uffizi Gallery, and the Academia gallery, home to Michelangelo's statue of David. Tour members also will visit the Parmigiano Cheese Factory in Parma, and participate in a chocolate workshop and dinner with renowned European chocolate and pastry chef Andrea Bianchini.

Participating in the tour from UC Davis will be Dennis Dutschke, professor of Italian and associate vice provost for International Programs, and Beth Greenwood, director of International Programs, UC Davis Extension.

A complete itinerary for the tour is available online at <http://extension.ucdavis.edu/tourism/>.

"RMI wine and food bytes: News from the cutting edge of wine and food science" is the newsletter of the Robert Mondavi Institute for Wine and Food Science at the University of California, Davis. It is distributed quarterly. Please feel free to share the newsletter with your colleagues in the wine and food sciences.