

**RMI****UC DAVIS**

Robert Mondavi Institute for Wine and Food Science

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E-news #022: Spring 2010

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Executive Director's Update

By Clare Hasler



Summer is almost here. Time for graduation parties, picnics, gardening, the beach, and other warm weather activities. Although perhaps I am being a bit too optimistic on the weather part since it is raining as I write this! But of course we will all complain about the heat as soon as the temperature hits triple digits...

The good news is that the rainy spring weather hasn't dampened construction on the new addition to the Robert Mondavi Institute. The August A. Busch III Brewing and Food Science Laboratory and the Teaching and Research Winery are on track for completion and move-in within the next three months as you can read in project manager [Julie Nola's update below](#). The formal grand opening of the facility is scheduled for the morning of January 28, 2011.

It has been a very busy spring for events hosted by the institute. Margrit Biever Mondavi became a "Supreme Lady of the Vine" in February at the Winter Assemblage of the [Brotherhood of the Knights of the Vine](#). In March we hosted the second annual "Cheese Loves Beer" [tasting event](#) which was a smashing success—it was sold out with a waiting list. Charlie Bamforth and Moshe Rosenberg really outdid themselves this year. Mark your calendars for "Cheese Loves Beer III" on March 5, 2011. In April, Harold McGee was the featured speaker for our [Spring Lectureship](#), attracting the largest attendance since the series was launched in fall 2004.

As the number of our programs continue to expand, so does the pressure on our budget. With the help of Kathy Barrientes, director of development for the College of Agricultural and Environmental Sciences, a "Friends of the RMI" program was recently launched. Funds from this program will be directed, in consultation with the executive committee and board of executives, toward the most important outreach and research activities. You can see more details about this program on the front page of the [RMI website](#). This program is one of the fundraising strategies included in our new strategic plan, which will be finalized within the next couple of months.

Wishing you an enjoyable and relaxing summer!

A handwritten signature in blue ink, appearing to read "Clare", with a stylized flourish at the end.

Clare

Construction Update on Winery, Brewery, and Food Processing Facility

By Julianne Nola



We are in the home stretch of construction. The exterior building has color and provides a perfect match to its neighbor, making the RMI complex feel unified. Concrete walks are going in, landscape work has started with soil preparations, and soon the four large rainwater collection tanks will be set into place at the south of the facility. Inside, the Teaching and Research Winery is seeing paint and the resinous flooring. The brewery and food science side is finishing up drywall and above-ceiling utilities and will have its

share of paint and flooring to follow. Casework in the labs and classrooms will be going in mid-May. We will spend the last weeks of construction on starting up and testing building equipment and systems and finishing the landscape work.

The project remains on schedule for completion in August. Construction work can be viewed on the live [webcam](#), which is also on the home page of the [RMI](#) website.



Margrit Mondavi Honored at the RMI by the Brotherhood of the Knights of the Vine

By Clare Hasler



From left, UC Davis Professor Emeritus Louis Grivetti, Margrit Mondavi and Christopher Walsh. (Photo by Tia Gemmell, Riverview Media Photography)

The Brotherhood of the Knights of the Vine is the oldest wine-oriented organization in the United States. The organization seeks to promote the American wine industry and to educate members on the benefits and enjoyment of wine. The brotherhood is a founding member of the International Federation of Wine Brotherhoods (Fédération Internationale des Confréries Bachiques)—an umbrella organization that was created in 1964. The Brotherhood of the Knights of the Vine is a charter member of the federation, which now includes more than 150 wine brotherhoods throughout the world and has 25 chapters nationwide. They have funded scholarships for students in the Department of Viticulture and Enology at UC

Davis for more than 30 years.

The brotherhood held its Grand Assemblage of Spring and Enthronement dinner at the Robert Mondavi Institute Sensory Building in February 2010. As part of the assemblage, Margrit Biever Mondavi was honored as the new Supreme Lady of the Vine. Robert Mondavi, her late husband, was a Supreme Knight of the organization. The rank of Supreme Knight and Supreme Lady is bestowed upon individuals who have made outstanding contributions to the cause of American wines.

More than 80 officers, members, and special guests attended the black-tie gala, organized by Grand Commander Michael D. Doukas of the Chancellery chapter in Sacramento. UC Davis chancellor Linda P.B. Katehi provided welcoming remarks.



UC Davis chancellor Linda P.B. Katehi. (Photo by Tia Gemmell, Riverview Media Photography)

RMI Hosts the Second Annual “Cheese Loves Beer” Event

By Clare M. Hasler

The second annual “Cheese Loves Beer: Mastering the Marriage” tasting event was hosted by the Robert Mondavi Institute on March 6th in the Silverado Vineyards Sensory Theater.



From left, Keren Kles, Jing Zhang, and Pilar Hernandez Sanchez.

A sold-out crowd of more than 80 consumers, students, faculty, and members of the brewing industry were treated once again to the far-reaching expertise and humorous musings of professors Moshe Rosenberg (Cooperative Extension specialist, Dairy Engineering and Technology), and Charlie Bamforth (Anheuser-Busch Endowed Professor of Malting and Brewing Sciences).

During his lecture, “Cheese—from serendipity to science and art,” Dr. Rosenberg discussed the different cheese varieties and the evolution of their unique flavor and quality attributes. Dr. Bamforth’s presentation, “Beer is best for brie and beyond,” highlighted the rich diversity that exists in beer styles. He talked of how to appreciate beer to the fullest: what temperature to serve it at, how to pour it, and what to look for and savor. You can pre-order Bamforth’s latest book, “Beer Is Proof God Loves Us: Reaching for the Soul of Beer and Brewing,” due in the fall, at [Amazon](#). Bamforth says, “It is a very personal journey into the wonders of beer and brewing. I want to make people laugh but also make them more mindful of what beer means in this society and this world.”

Following their lectures, Rosenberg and Bamforth led a tasting of the following eight cheese and beer pairings:

- Pierre Robert and Sierra Nevada Kellerweis
- St. Nectaire and Josephs Brau’s Dunkelweizen
- Tom de Aquitaine (Clisson) and Anchor Steam Anchor
- Mahon and Miller Coors’ Henry Weinhard’s Private Reserve
- Red Hawk and Napa Smith’s Amber Ale
- Mezzo Secco and AB-InBev’s Chelada
- Fourme d’Ambert AOC and Bison Chocolate Stout
- Pere Joseph and North Coast Old Rasputin

If you didn’t have the opportunity to join us for this fun-filled event this year, you can enjoy a snippet by viewing the following television clips: [KCRA](#) and [Fox40](#). And mark your calendars for “Cheese Loves Beer III” on Saturday March 5, 2011!

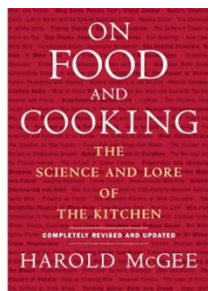
Food Writer Harold McGee Explores the Science of Eating and Drinking

(Adapted from a February 16, 2010, press release by Pat Bailey, UC Davis News Service)



Author and New York Times columnist Dr. Harold McGee, an authority on the chemistry of foods and cooking, was the featured speaker during the Robert Mondavi Institute for Wine and Food Science Spring Lectureship on April 15. More than 200 attended the event, which was hosted in the new UC Davis Conference Center. His lecture was entitled “Science and the Experience of Eating and Drinking.”

McGee writes The Curious Cook column for the *New York Times*. He is also a member of the Robert Mondavi Institute Board of Executives. After teaching literature and writing for several years at Yale, he decided to write a book about what he refers to as “the science of everyday life.” The resulting book, “On Food and Cooking: The Science and Lore of the Kitchen,” was published in 1984 and was hailed by *Time* magazine as a “minor masterpiece.” It won the Andre Simon Memorial Book Award in Britain.



In 1990, McGee published the book “The Curious Cook: More Kitchen Science and Lore.” In this book, he attempted to solve common kitchen puzzles such as how much oil can be emulsified into mayonnaise with one egg yolk or how oil spatter from a frying pan winds up on the inside of the cook’s glasses. He also sought to explain the scientific basis for links between diet and disease.

McGee has written for a broad range of publications ranging from the scientific journal *Nature* to *Fine Cooking* magazine and has lectured at universities, scientific meetings, and culinary schools. In 1995 McGee was elected to the James Beard Foundation’s Who’s Who in American Food, and in 2005 he was named food writer of the year by *Bon Appétit* magazine.

McGee’s remarks were followed by brief presentations from professor and wine and flavor chemist Dr. Susan Ebeler (UC Davis Department of Viticulture and Enology), professor and sensory scientist Dr. Jean-Xavier Guinard (UC Davis Department of Food Science and Technology), and food anthropologist Dr. Melissa Caldwell (UC Santa Cruz). Ebeler discussed how scientists use analytical chemistry to understand the relationships between food and wine composition and flavor perception. Guinard talked about how consumers perceive the sensory properties of foods and beverages and whether these preferences are innate or learned. Taking an ethnographic perspective, Caldwell discussed the social and cultural factors influencing food preferences and choices including how the meanings and values that people

associate with foods vary tremendously from culture to culture. The afternoon concluded with a lively panel discussion and Q&A session led by Charlotte Biltekoff, assistant professor in the departments of Food Science and Technology, and American Studies.



From left, Susan Ebeler, Melissa Caldwell, Harold McGee, Jean-Xavier Guinard, and Charlotte Biltekoff.

Recent Gifts Help Food Science and Technology Department Equip the Pilot Plant

By Melissa Haworth



As we look ahead to the opening of the August A. Busch III Brewing and Food Science Laboratory later this year, the Department of Food Science and Technology is working hard to ensure the facility will be filled with relevant equipment for teaching, research, and industry collaboration. Building on a generous gift-in-kind of equipment from ConAgra Foods and a commitment of funding for dairy equipment by Professor John

Krochta through the Peter J. Shields Endowment, the department is pleased to announce several recent contributions.

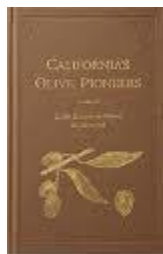
Recognizing the need for well-trained food technologists throughout California, the Southern California Institute of Food Technologists Section (SCIFTS) made another contribution to the project in February, this time to purchase equipment. This is in addition to SCIFTS' commitment in 2005 to help build the facility. With this new gift, SCIFTS members are challenging the food industry to match the campus in securing additional gifts.

Building on the incredible support of The Morning Star Packing Company and many other leaders in tomato processing, Pacific Coast Producers gave a gift in April to support equipping the California Processing Tomato Industry Pilot Plant. In May, an anonymous industry donor contributed several critical pieces of equipment for the facility including a conveyer line and a dicer. Broad support from the processing tomato industry has been critical in making this entire facility a reality for the department. Finally, another contribution to support the equipping and moving of the pilot plant was given in honor of Ron McNiel Sr. the "godfather" of the used-equipment business and a man who believed strongly in higher education.

The Department of Food Science and Technology is working to raise an additional \$350,000 to purchase immediately critical equipment and move and install existing pieces from Cruess Hall. Those interested in supporting the department in this effort should contact Melissa Haworth mdhaworth@ucdavis.edu or (530) 979-1440.

California Olive Pioneer is Finalist for Ben Franklin Book Award

By Axel E. Borg



"California's Olive Pioneers: Early Essays on Olives & Olive Oil" has been named as one of three finalists in the 2010 Benjamin Franklin Awards in two categories: Science and Gardening/Agriculture. This beautiful compilation of 13 essays from the late 1800s was also recognized last year as a "National Best Books 2009" award finalist in the History: United States category by USABookNews.com.

These awards recognize outstanding examples of publishing and are a remarkable achievement for the Robert Mondavi Institute. California's Olive Pioneers is the second in a series of historical agricultural works published by the

Robert Mondavi Institute through the generous gift of an anonymous donor. The first book in this series is "The Wine Press and the Cellar. Both of these books are available for purchase with the proceeds benefiting the Robert Mondavi Institute. You can obtain copies by contacting Tammy Heath at (530) 754-6349, or tmheath@ucdavis.edu. Copies are also available at the UC Davis Bookstore.

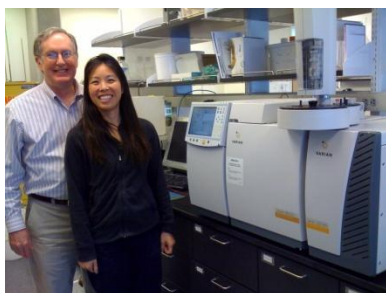
The third book in the series will be released in June.

Olive Oil Chemistry Lab Established

By Dan Flynn

The UC Davis Olive Center has added another resource that positions the Robert Mondavi Institute to become a leader in olive oil chemistry research.

The Olive Center has established an olive oil chemistry laboratory on the third floor of the RMI South Building. Dr. Charles Shoemaker, professor of food chemistry and co- of the Olive



From left, Charlie Shoemaker and Selena Wang.

Center, is leading the lab's operation. Dr. Shoemaker is assisted by Dr. Selena Wang, a native of Taiwan who received her Ph.D. from the Department of Chemistry. Also assisting with the center is Dr. Edwin Frankel, adjunct professor of food chemistry. Dr. Frankel is among the world's most cited authors in agricultural science and will soon have a perspective on olive oil chemistry published in the Journal of Agricultural Food Chemistry.

The new UC Davis olive oil laboratory will work with other laboratories internationally to examine adulteration, anti-oxidants and oxidative stability of olive oil. The laboratory is a major asset to California olive oil producers and enhances the international reputation of the Robert Mondavi Institute.

Riccardo LoCascio Awarded Prestigious Fellowship

By David Mills



The Ewing Marion Kauffman Foundation (www.kauffman.org) recently selected 13 leading scientific postdoctoral researchers to become the first class of Kauffman Postdoctoral Fellows. The yearlong program will use entrepreneurship education and mentorship to equip the Fellows to commercialize their scientific discoveries. Riccardo LoCascio, who received his Ph.D. in microbiology at UC Davis under the guidance of David Mills, Brice German and Carlito Lebrilla, was a recipient of one of these prestigious awards which will enable him to continue his work on milk oligosaccharides as part of the [Functional Glycobiology Program](#). Way to go Ricky!

With support from the California Dairy Research Foundation, Riccardo serves as manager of industry partnerships and commercial development for the Functional Glycobiology Program at UC Davis. Riccardo's in the Functional Glycobiology Program focused on understanding the functional role of human milk oligosaccharides (HMOs), and spanned across analytical chemistry, microbial biochemistry and genomics. Riccardo worked on the metabolism of HMOs by bifidobacteria, a group of probiotic bacteria abundant in the distal gut of infants. Using comparative genomics and NanoLC-MS-FTICR analytical methods, Riccardo described the genetic and molecular mechanism underlying the metabolism of HMOs in bifidobacteria. In 2005, Riccardo received his MS in agricultural chemistry from UC Davis and in 2002 a BS in biochemistry from New York University.

Fresno Orchard Management Class Sold Out

By Kiley Athanasiou



Due to the high demand from olive growers in the San Joaquin Valley, the UC Davis Olive Center held its first olive production short course in Fresno on February 12, 2010. Attended by over 100 olive growers, olive oil producers and industry professionals, the short course addressed agricultural issues for cost effectively establishing an orchard, irrigating and controlling pests. Presenters included Vito Polito, UC Davis professor of plant sciences; Tom Lanini, weed ecologist with UC Extension; Bill Krueger, farm advisor with UC Extension; Marshall Johnson

from the UC Kearny Agricultural Center; Louise Ferguson, UC Davis Fruit and Nut Research Information Center and Karen Klonsky with the UC Davis department of Agricultural and Resource Economics. Paul Vossen, farm advisor with UC Cooperative Extension, gave an industry overview addressing why orchard practices matter to sensory quality, the milling process and U.S. acreage statistics. Alan Green, an agricultural consultant with A Greene Idea, instructed the group on "Selling the Crop."

Industry expert, John Post, discussed various agricultural practices as they relate to super-high-density (SHD) planting of olive trees. SHD orchards are the most common new type of olive orchard currently being planted in California. SHD orchards are planted with limited spacing between the trees in a hedge-row type system often on a trellis. The main advantage to SHD orchards is the ease and cost effective nature of mechanical harvesting.

Due to the great interest in SHD farming of olives, the UC Davis Olive Center along with the California Olive Oil Council will be holding the first ever olive production symposium focusing entirely on SHD. The SHD Olive Production Symposium will be held at the UC Davis Conference Center on June 29 and 30.

Upcoming Publication of "Chemistry of Extra Virgin Olive Oil: Adulteration, Oxidative Stability, and Antioxidants"

By Edwin Frankel



I am pleased and proud to provide an advanced abstract to the publication of my perspective paper in the Journal of Agricultural and Food Chemistry titled "Chemistry of Extra Virgin Olive Oil: Adulteration, Oxidative Stability, and Antioxidants."

Much analytical work has been published on the chemistry of extra virgin olive oil (EVOO) as a basis for the detection and quantitative analyses of the type and amount of adulteration with cheaper vegetable oils and deodorized olive oils. The analysis and authentication of EVOO represent very challenging analytical chemical problems. A significant amount of literature on EVOO adulteration has depended on sophisticated statistical approaches that require analyses of large numbers of samples. More effort is needed to exploit reliable chemical and instrumental methods that may not require so much statistical interpretations.

Large assortments of methods have been used to determine lipid oxidation, oxidative stability and to evaluate the activity of the complex mixtures of phenolic antioxidants found in EVOO. More reliable chemical methods are required in this field to obviate excessive dependence on rapid antiradical methods that provide no information on protective properties of antioxidants. The extensive literature on olive oil sensory tests, using many descriptors varying in different countries, should be supplemented by more precise gas chromatographic analyses of volatile compounds influencing odor and flavors of EVOO.

Dr. Frankel is an adjunct professor in the Department of Food Science and Technology. James Seiber, chair of the department, shared the following thoughts about professor Frankel's paper, "You continue to set very high standards for quality research in the lipid and oil chemistry fields, and in applying this knowledge to real world problems. It is a pleasure to associate with you in the food science and technology department and Robert Mondavi Institute."

Media Spotlight Shines on UC Davis Olive Center

By Nicole Sturzenberger



Media attention has been growing around the UC Davis Olive Center over the past year. The center has been referenced in the *California Farmer*, *Edible Sacramento*, and *Via Magazine*, amongst others. In the May issue of *Saveur*, the magazine noted that much of the excitement from the olive oil industry focuses around the olive center. After the release of a new survey focusing on super-high-density production in the state, the Associated Press also featured the Olive Center in a nationally circulated article.

As California increases the number of acres planted for olive oil, so increases the country's interest in this burgeoning industry. Consumers want to learn new ways to use this product that is being noted more and more for its health benefits, as well as investors seeing a potential for growth in California. Through increased media attention the center continues to promote quality and economic viability of the state's table olive and olive oil industry.

Upcoming Events

- [Dairy Technology: California Leading the Way through Strong University-Industry Partnerships](#), June 10
- [Outlook and Issues for the World Wine Market](#), June 25
- [AAWE Conference](#), June 25–28
- [Super-High-Density Olive Production Symposium](#), June 29-30

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