

**RMI****UC DAVIS** Robert Mondavi Institute for Wine and Food Science  
[HTTP://WWW.ROBERTMONDAVINSTITUTE.UCDAVIS.EDU](http://www.RobertMondaviInstitute.ucdavis.edu)

# E-news #025: Winter 2011

## In This Issue

- [Executive Director's Update](#)
- [Robert Mondavi Institute Dedicates New Sustainable Winery, Brewery and Food Processing Facility](#)
- [Jess Jackson and Barbara R. Banke to Support a New Sustainable Winery Building](#)
- [Future Teaching and Research Secured Through Generous Gifts](#)
- ["Slippery Business" Journalist Tom Mueller Speaks to UC Davis](#)
- [Dr. Bamforth Discusses His New Books, Beer, Life, and Family](#)
- [Institute Hosts Conference on Sweet, Dessert and Dried Fruit Wines](#)
- [Darrell Corti Leads Tasting of Rare Spanish Brandies](#)
- [Women, Wine and Chocolate: a Sublime Combination](#)
- [Robert Mondavi Institute Recognizes Graduate Student Research](#)
- [General Library Purchases Rare Book on Brewing](#)
- ["Bad Merlot" Parody for Roger Boulton Brings the House Down](#)
- [Margrit Mondavi Honored by Cal Aggie Alumni Association](#)
- ["Uncorked" Events Grow in Popularity](#)
- [Welcome Amy Barnett – New Administrative Assistant](#)
- [In Brief](#)
- [Upcoming Events](#)
- [Contributors to "RMI Wine and Food Bytes"](#)

## Executive Director's Update

By Clare Hasler-Lewis



Another major milestone has been achieved at the Robert Mondavi Institute for Wine and Food Science at UC Davis. On January 28, we celebrated the public [Grand Opening of the Teaching and Research Winery and the August A. Busch III Brewing and Food Science Laboratory](#). More than 800 donors, alumni, faculty, staff, students, dignitaries and other friends of the Institute braved the foggy 41 degree temperature (yes you heard correctly!) to participate in the formal dedication of this extraordinary facility. Despite the weather, it was a very special day which included lectures, tastings, tours, book signings, a [rare book display](#), a [Lady Gaga tribute to Roger Boulton](#) (its true!) and of course, the appearance of the Budweiser Clydesdales! And, to make the day even more special, "Phase 3" of the Robert Mondavi Institute was announced:

The Jess S. Jackson Sustainable Winery Building Jess Jackson and his wife Barbara Banke have [pledge \\$3 million](#), for a third facility that will elevate the sustainable features of our newest facility, already certified as LEED Platinum certification, to an even higher level of excellence: completely self-sustainable in water and energy. Read more about this very special day in the stories below.

As you'll see from reading this issue of the E-news, the Robert Mondavi Institute has facilitated many other programmatic activities since we published our fall issue in November but the Grand Opening of our new sustainable winery, brewery and food processing facility is clearly the highlight

For a review of the Institute's highlights last year, I invite you to read the [2010 Annual Report](#). Thank you for your continued support and enabling the Robert Mondavi Institute to continue its excellence in public outreach and support of Robert and Margrit Mondavi's vision, "*Enhancing the quality of life through wine, brewing and food sciences.*"

Thank you for your continued support of the Robert Mondavi Institute, enabling us to begin our 8<sup>th</sup> year of excellence in public outreach and support of Robert and Margrit Mondavi's vision, "*Enhancing the quality of life through wine, brewing and food sciences.*"



Clare

## **Robert Mondavi Institute Dedicates New Sustainable Winery, Brewery and Food Processing Facility**

*(Adapted from a January 28, 2011, press release by Pat Bailey, UC Davis News Service)*



On January 28, 2011, more than 800 friends, supporters and alumni of the University of California, Davis, officially opened the doors to the world's most environmentally sophisticated and technologically advanced facility for making wine, brewing beer, and processing foods at the Robert Mondavi Institute for Wine and Food Science. The new 34,000-square-foot teaching and research complex was financed entirely by private philanthropy — no state or federal funds were used.

The campus received more than \$20 million in private support to construct and equip the complex. In all, more than 150 individuals, alumni, corporations and foundations contributed funds to make the new winery, brewery and food-processing complex a reality.

This is the first such building to receive LEED (Leadership in Energy and Environmental Design) Platinum certification, the highest rating for environmental design and construction awarded by the U.S. Green Building Council.

The south wing of the complex is home to the August A. Busch III Brewing and Food Science Laboratory, which includes the Anheuser-Busch InBev Brewery; the California Processing Tomato Industry Pilot Plant for processing a variety of foods; and the Milk Processing Laboratory. The complex's north wing houses the new Department of Viticulture and Enology Teaching and Research Winery. The new winery, brewery and food-processing complex was designed to serve as a test bed for production processes and techniques that conserve water, energy and other vital resources. Its environmentally friendly features include onsite solar power generation and a large-capacity system for capturing rainwater and conserving processing water. The stored rainwater will be used for landscaping and toilets.

The new winery also has been designed to capture carbon dioxide, a natural byproduct of fermentation, from a port in each of the new fermentors. The new sustainable winery building will make it possible to sequester the captured carbon dioxide so that it will not contribute to global warming. The facility also includes what is believed to be the world's first wireless wine-fermentation system, a multimillion dollar assembly of 152 wireless grape fermentors, designed, fabricated and

donated by a team of research engineers led by T.J. Rodgers, the founder, president and chief executive officer of San Jose, Calif.-based Cypress Semiconductor. Each of the 200-liter, electro-polished, stainless steel fermentors is individually equipped for automated control of temperature and the "pump-over" process. The new fermentor sensors frequently and precisely extract and transmit sugar-concentration data from white and red fermentations across a wireless network. Data from the sensors can be generated every 15 minutes with a precision of 0.25 Brix, a measure of sugar content. It is one of the largest wireless networks in any fermentation facility in the world.



From left, Clare Hasler-Lewis, Margrit Mondavi, and Chancellor Emeritus Larry Vanderhoef

Other environmentally responsible features of the facility include maximum use of natural light, rooftop photovoltaic cells to provide all of the facility's power at peak load, use of recycled glass in the flooring, interior paneling recycled from a 1928 wooden aqueduct, and use of lumber harvested from sustainably certified forest operations.

The new brewery will provide a showcase for the latest in brewing technology, as well as a sophisticated laboratory for conducting research and training students in the science of brewing. It also is intended to provide commercial brewers and suppliers with a small-scale facility in which they can test new recipes or processes.

The California Processing Tomato Industry Pilot Plant and the Milk Processing Laboratory were designed and built to meet state and federal food- and dairy-grade standards. This important feature means that products processed there are fit for human consumption during sensory and nutritional evaluations. The food-processing pilot plant will facilitate research on a variety of topics including alternative food-processing methods and their nutritional effects, nutritional quality and shelf life of fresh-cut fruits and vegetables, nutritional enhancements from food-processing "waste" products and improved food formulations. The milk-processing laboratory will support research in a variety of areas including separation of milk components into

functional ingredients, processing of milk that has been modified by the type of feed provided to the cows, and processing of milk from cows that were bred for specific characteristics.

## **Jess Jackson and Barbara R. Banke to Support a New Sustainable Winery Building**

By Kathy Barrientes

Jess Jackson and Barbara R. Banke of Jackson Family Wines have pledged \$3 million to construct the Jess S. Jackson Sustainable Winery building within the Robert Mondavi Institute for Wine and Food Science. The announcement was made at the opening ceremony of the new Teaching and Research Winery and August A. Busch III Brewing and Food Science Laboratory on January 28, 2011.



From left, Barbara R. Banke and Jess Jackson

Slated for completion in 2013, the building will include technology that aims to make the adjacent new winery, brewery and food-processing complex self-sustainable in water and energy. The Jess S. Jackson Sustainable Winery building will allow instructors and researchers to demonstrate how a winery can operate on rainwater when it captures, filters, and reuses its cleaning water multiple times. According to Roger Boulton, professor, chemical engineer, and the Stephen Sinclair Scott Endowed Chair in Enology in the UC Davis Department of Viticulture and Enology, "The system will make it possible to reuse 90 percent of its cleaning water (and 90 percent of its cleaning chemistry), so that after 10 cycles only a fifth of the water is needed. This will serve as a global demonstration of how businesses with limited water can become self-sufficient."

The building will also include additional rooftop photovoltaic cells to provide power for its own hot and cold water needs and the energy for the cleaning solution recovery. The planned building also will house equipment needed to sequester the carbon dioxide captured from the winery's fermentation system, making it the world's first truly zero-carbon footprint winery.

Future plans call for an onsite, photovoltaic, hydrogen generation system and a hydrogen-powered fuel cell which will form a self-sustainable energy hybrid with the existing solar panels. One novel concept in the Jackson sustainability building is rooms that will allow skid-based systems to be delivered and easily installed. These systems will be replaced with newer models or versions every two years, making it an evolving, web-based demonstration center for sustainable technologies.

## **Future Teaching and Research Secured Through Generous Gifts**

By Melissa Haworth

In 2010, Hilmar Cheese Company made a generous financial gift to support construction of the Milk Processing Laboratory within the recently opened August A. Busch III Brewing and Food Science Laboratory, and now, with a gift of time and expertise, the company is making certain we can use the space to its full potential. Funds set aside from the Shields Endowed Chair in Dairy Food Science were used to purchase state-of-the-art research equipment which arrived just this month after being held up in snowstorms on the East Coast. Hilmar engineers and





From left, Jim Mellem and Andrew Baldonado of Anheuser-Busch InBev

technicians have offered to install the equipment free of charge for UC Davis. “Having Hilmar’s technical expertise throughout this process has been invaluable,” said Shields Endowed Chair and Professor John Krochta. “Their staff has advised us on many aspects of the construction and now equipping of this space which will serve the dairy industry for decades to come.”

In the California Processing Tomato Industry Pilot Plant, installation of existing and new equipment is also complete. Funding for the equipment installation was provided by gifts from many donors, including several from the processing tomato industry. The facility also

received an unexpected and wonderful gift of art to cover the otherwise industrial stainless steel covers that surround the utility drops. Precision Canning Equipment which had been hired to do the installation went above and beyond their contract, donating eight original paintings by artist Sergio Chavez, depicting the wide variety of fruit and vegetable crops that may be processed in the new facility. From peaches to tomatoes to corn, the bounty of California agriculture is writ large as soon as you walk into the space, thanks to Chavez’s talent and Precision Canning Equipment’s generosity.

Finally, CIFAR member JM Equipment Company fulfilled a longstanding need of both the food science and viticulture and enology programs in the form of a forklift. The new, modern electric forklift and associated charging station were provided by JM Equipment Company as a gift-in-kind. It will certainly be put to constant use, moving equipment and keeping with the theme of flexibility which epitomizes the new building.

The Department of Food Science and Technology is grateful to all the donors who have given financial gifts, time, and resources to create a space that makes us all proud to be associated with UC Davis.

### **“Slippery Business” Journalist Tom Mueller Speaks at UC Davis**

*(Adapted from a November 18, 2010, article by Alexandra Kicenik Devarenne, Olive Oil Times Contributor)*

Free-lance journalist Tom Mueller spoke to an audience of 85 people at a UC Davis event hosted by the UC Davis Olive Center on November 17. His 2007 article in *The New Yorker* magazine, “Slippery Business,” was an exposé of a dark side of the international olive oil industry. His investigation of adulteration and unethical practices helped to advance the cause of advocates of olive oil standards reform in the U.S.

Mueller, an American who lives in Italy, was in California to do research on the olive oil industry for his upcoming book; described as a cultural, industrial and culinary history of olive oil, the book is due next November.

Mueller's audience included California olive oil producers and industry supporters as well as members of the UC Davis community. UC Davis Professor Ed Frankel, one of the world's leading authorities on lipid oxidation, joined the gathering. There was also a panel discussion with industry notables Mike Bradley (president, Veronica Foods), Bill Briwa (chef-instructor, Culinary Institute of America), [Dan Flynn](#) (executive director, The UC Davis Olive Center at the Robert Mondavi Institute), Bruce Golino (president, Santa Cruz Olive Nursery), Gregg Kelley (president, California Olive Ranch), Ed Stolman (founding partner, The Olive Press) and Liz Tagami (president, Tagami International).



Tom Mueller

When he was researching his *The New Yorker* article, Mr. Mueller was struck by three key themes in the world of olive oil. The first is the continuing relationship of olive oil and crime. The history of olive oil fraud is as old as the story of olive oil itself. Regarding labeling law, he said, "The label needs to tell you something reliable about what is in the bottle — as it does with wine, where the people who enforce the laws carry guns." He pointed out that there was stricter attention to enforcement of olive oil laws in Ancient Rome than there is today; ancient amphorae bore not just the name of the producer, but the names and seals of the multiple inspectors. Mueller reported that the FDA has said it is unable to enforce olive oil quality standards because olive oil is not making people sick.

The second theme is the resonance of olive oil throughout history. He recounted a revelation of the profound importance of olive oil in the ancient Mediterranean while standing atop a 115-ft tall mound of broken oil amphorae called Monte Testaccio (Mount Potshard) in Rome. It was analogous to petroleum in today's world, literally shaping the economic, military and social history of the world.

The third theme is the provincialism that surrounds olive oil. The production and use of olive oil tends to be profoundly bound, even suffocated, by tradition. Where Mueller's neighbor in Liguria follows modern advances in his winemaking, he continues to produce his olive oil exactly as his grandfather did. "There is something about olive oil that makes people irrational," said Mueller. Olive oil is associated with transformation in the church; from conversion to extreme unction it is a catalyst for change. Mueller sees this as something the [New World](#) olive oil industry is well positioned to do: effect change. The "can-do" attitude and freedom from the weight of tradition can be a big advantage, encouraging innovation and real progress.

He cautioned against falling into the trap of pernicious provincialism, lack of transparency and animosity that burdens the Mediterranean olive oil industry. During the panel discussion, Gregg Kelley pointed to the importance of the good quality, affordable olive oil produced by the super-[high-density](#) system in California as the first step in introducing people to world of real extra virgin olive oil. Ed Stolman of The Olive Press underlined this by emphasizing that the small artisan producer is not a competitor but a complement to the large-scale producer. In a message that was echoed during the panel discussion, Mueller said, "Whatever advances the cause of excellent olive oil is good for all ethical producers, all around the world."

## Charles Bamforth Discusses His New Book, Beer, Life, and Family

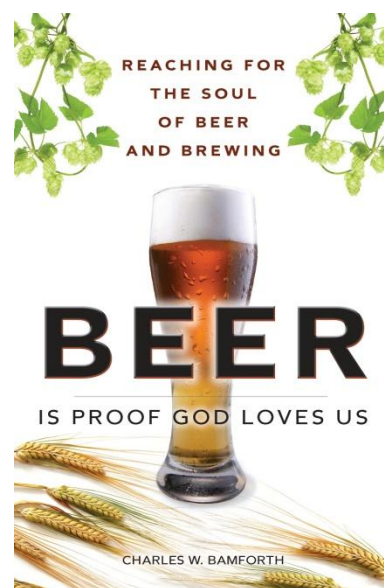
By Gordon Walker

On December 6, UC Davis' own distinguished faculty member and brewing expert extraordinaire, Dr. Charlie Bamforth gave a lively and engaging overview of his new book, "Beer is Proof God Loves Us" at the Robert Mondavi Institute for Wine and Food Science. As the Anheuser-Busch Endowed Professor of Malting and Brewing Sciences, Bamforth is one of the world's foremost experts on commercial beer production and the intricacies of beer brewing. In his book Bamforth provides an overview of the major actors in the international brewing scene, the economics of beer production, the rise of indigenous microbreweries, and the home brew movement, as well as the spiritual side of the ebullient beverage known as beer.

Bamforth began his talk by admitting "the truth" that the title of his new book (one of Ben Franklin's most famous quotes), is actually about wine, but that the sentiment stands. Throughout his talk, Bamforth shared his passion, humor, and spirit with the audience and espoused his amazing philosophy of acceptance, tolerance, moderation and mindfulness.

Bamforth led the audience through the unfortunate story of how Margaret Thatcher doomed the British brewpub. While Prime Minister, Thatcher instituted legislation that disallowed breweries from owning more than a finite number of pubs, which were responsible for a majority of brewery profits. Losing these pubs meant that it was actually more profitable for brew companies to sell out, or contract brew their beer and own the pubs instead. Bamforth lamented that this loss of vertical integration led to poorer quality beers, and the deterioration of the social brewpub experience. This gave rise instead to canned beers and the solitary experience of drinking at home, which Bamforth believes leads to excessive drinking of lower-quality beers.

True to form, Dr. Bamforth touched on the differences between wine and beer. He was incensed that wine is ritualistically presented with much pomp and circumstance, while often enough one is lucky just to get a glass when beer is ordered. He then talked about attitudes toward alcohol in society, and some of the ridiculously high ABV beers (like Tactical Nuclear Penguin 32 percent ABV) that have come onto the market in the past few years.



From left, J-E Paino and Charlie Bamforth

He raged against sugary alcoholic beverages, made from bland decolorized beers and sold as liquor spirits. Bamforth was particularly critical of this class of beverages because it is not a "mindful" way of presenting alcohol and detracts from beer as a simple sustainable historical beverage centered in moderation. Bamforth also noted that despite some of the potential health drawbacks, when consumed in moderation beer is the healthiest of all alcoholic beverages.

Lastly, the audience was treated to an intimate look at the life and family of Dr. Bamforth. He shared old photographs and revealing experiences from his childhood that helped to shape his unique

character and inextinguishable spirit. Bamforth left the audience with a few important take-away messages about his personal philosophy: it is okay to be different, live your own dreams and let others live theirs; we are all created equal; use God's gifts in moderation; and most importantly adhere to the concepts of moderation and mindful acceptance/understanding of the world around us.

Overall it was an exciting, enlightening, entertaining and educational evening with Dr. Charlie Bamforth.

## **Institute Hosts Conference on Sweet, Dessert and Dried Fruit Wines**

*(Adapted from an article by Jon Tourney which appeared in Wines & Vines on January 14, 2011)*

Consumption and sales of sweet and dessert wines in the United States are at a historical low point as a percentage of overall wine sales, but some industry experts believe there is potential for expanding market share in this category by re-educating and re-introducing consumers to high-quality products that are well balanced and properly marketed.

The Robert Mondavi Institute for Wine and Food Science explored these and other issues in January, during "Sweet, Dessert and Dried Fruit Wines: A World View," a one-day event which provided a historical overview of sweet and dessert wines, presented styles and production methods, and examined consumer issues along with potential opportunities for new products and markets.

With a lineup of international authorities and California producers as presenters, the symposium was organized and moderated by UC Davis viticulture extension specialist Dr. Matthew Fidelibus, with assistance from Mendocino and Lake County Cooperative Extension viticulture specialist and *Wines & Vines* columnist Glenn McGourty, and wine retailer and authority (and Vintners Hall of Fame inductee) Darrell Corti of Corti Brothers Market in Sacramento.



**Darrell Corti**

### **Domination and decline**

Providing perspective, Corti explained, "Historically, sweet wines have been considered to be among the finest wines in the world because they were stable, had good longevity, they often required more processing and aging, and they were produced in locations with a history of tradition and practices in place."

Before modern technology and refrigeration, the best way to increase wine stability was to increase the sugar content in the must. Sun-drying grapes after harvest to increase sugar content is one of the oldest methods of making sweet and dessert wines. Corti noted that Italy continues to make about 43 types of "passito"-style dessert wines from dried grapes. Vin Santo, for instance, is made in Tuscany from harvested grapes hung in attics or rafters to concentrate sugar and flavors.

Corti said the symposium should give California growers and winemakers "a reason to look at



potentially new types of products that can be produced here with something we have an abundance of — the sun."

Other methods of dessert winemaking include: production with later harvest botrytis-infected grapes; addition of high-alcohol grape spirits for fortified wines that retain sweetness such as Port, Madeira, Malaga, and Sherry; and ice wines produced with late-harvested grapes frozen on the vine to concentrate sugar and flavor.

UC Davis adjunct professor in the Department of Viticulture and Enology Dr. Jim Lapsley, a former commercial winemaker, discussed the history of dessert wine production and consumption in California. U.S. tax laws in the late 1800s favored fortified wine production, and it became the cheapest form of alcohol. Dessert wines accounted for about 40 to 50 percent of total California production from 1900 until Prohibition. These included many California products that used European names, such as Sherry, Port, Muscatel, Madeira, Tokay, and Malaga.

Dessert and fortified wines dominated wine production even more after Prohibition ended, and in 1951 accounted for nearly 90 percent of the tonnage and dollar value of California wines. They also dominated U.S. consumption from the repeal of Prohibition into the 1960s, peaking about 1950 when the category accounted for 70 percent of all wine consumption, but dropped to 24 percent in 1970 and to 2 percent in 2000.

Dessert wine consumption decreased as table wine quality improved in the late 1960s and 1970s with better technology and winemaking, and the introduction of new varietals and plant material. At the same time, dessert wine production, which was generally not high quality, remained the same and gained a poor reputation. Dessert and fortified wines were associated with "skid row" wines, and lost popularity.

Master of Wine Tim Hanni echoed comments about the past importance and consumption of sweet wines. He believes there is a significant market of sweet-wine drinkers who have been turned off by wine education and marketing that emphasizes dry wines as superior quality and looks down upon consumers of White Zinfandel and other sweet wines.

These consumers have migrated to other beverages such as soft drinks, lighter beers, and mixed drinks. "Sweet-wine drinkers are not dead, they are alive and well and sipping sweet cocktails," Hanni said. He added, "There are people out there who would love to drink wine, but we won't let them." He suggested "a massive re-education."

Lapsley and Hanni noted that consumers like sweetness. It is a natural physiological preference for many. The number of sweet food and beverage products on the market indicates a potentially huge market. People with sweet taste preferences generally do not like dry, tannic wines. Lapsley summarized, "There is a market for sweet wines, but they have to be high quality, they need to display personality, they need to captivate and they need to have soul."

### **Challenges and opportunities**

Speakers throughout the day discussed the challenges in producing and selling dessert wines. Production of quality wines in the styles of Port and Sherry by traditional methods can be labor intensive and time consuming, with inventory tied up for years in aging cellars. In general, table wine production is completed faster, and gets to market sooner; it allows better efficiencies of scale for larger volume production, and better economics. Corti pointed out, "It's the age of these wines that makes the quality, not the grape, not the location, and that's harder for corporate wine production operations to justify. We have too many bean counters in the wine

business."

Master of Wine and Master Sommelier Doug Frost discussed the Vinsanto wines produced on the Greek island of Santorini, where winemaking dates back nearly 5,000 years. The primary grape in Vinsanto is Assyrtiko (minimum 51 percent) along with Athiri and Aidani, all ancient white grape varieties native to Greece.

Harvested grapes are sun-dried on mats for up to 14 days, and wine is aged a minimum of 24 months in oak. Santorini is a warm, dry climate. Grapes retain high acidity that remains in the wine, with pH as low as 2.8, well balanced with sweetness. "These wines are probably close to what was consumed 2,000 to 3,000 years ago," Frost said.



From left, Bartholomew Broadbent and Vasco Magalhaes

He noted that Vinsanto can be rich and intense, like other types of sweet wines, and is usually consumed in small quantities. While small quantity consumption challenges sweet-wine sales, Frost pointed out a positive factor: "Wine bars and restaurants should embrace these

wines for sales by the glass, because they remain stable once the bottle is opened." Another challenge to Santorini vineyards is that real estate values for development and tourist facilities on the island threaten the long-term future of grape growing.

Vasco Magalhaes, a Portuguese wine educator with Porto producer Sogrape Vinhos, provided an overview of Porto production history, regulations and practices in the Douro region of Portugal, one of the oldest delineated wine regions. Douro producers have made changes to improve operational efficiency and quality, such as robotic lagar equipment to replace the traditional human-foot grape-stomping.

Newer vineyards are planted in varietal blocks in locations best suited to quality production of each individual variety, rather than intermixed as in the past. The Porto Wine Institute approved a new Porto category in 2009, a Rosé Porto, which will go to market sooner. Magalhaes said, "In Portugal, we're trying to introduce more young people to Porto, encouraging its use in cocktails, and promoting it with cheese and chocolate."

Bartholomew Broadbent, son of Michael Broadbent and CEO of Broadbent Selections, Inc., imports Porto and Madeira into the U.S. and also produces wines from Portugal under the Broadbent brand. He discussed how Madeira is the most traditional American wine, invented by Americans in the 1700s.

Ships sailing from Europe to America would stop at the island of Madeira off the coast of Portugal and load up wine to sell in America. During the voyage, the wines would heat up and obtain the "madeirized" character now associated with the wine. Today, this is obtained by production methods that heat up the wine in tanks to 115°F for a minimum of three months. Broadbent said Prohibition wiped out the Madeira market in the U.S. His job in 1987 was to reintroduce the wine to America.

Broadbent said, "You can open a bottle of Madeira and keep it as long as you like without losing quality." He also noted, "Although they are sweet wines, they have a dry finish, so you can have Madeira with any dessert, even those with citrus components."

Broadbent said that the market for Port today is flat. "I think Port suffers today due to the higher alcohol content of today's table wines. With many table wines at 15 percent being consumed during dinner, consumers don't want to drink higher alcohol wines at dessert," he said.

### **California products and challenges**

Much of the quality sweet/dessert wine production in California is done in small quantities as special projects by winemakers for tasting room and direct sales. These include port-style fortified wines (sometimes blends of Portuguese varieties or single varieties such as Zinfandel), Muscat dessert wines, and late-harvest wines.

Quady Winery in Madera specializes in sweet and dessert wines that include port-style wines, Orange and Black Muscats, Vermouth, infused sweet wines, and proprietary blends. With annual production of 50,000 cases, it is also one of the few U.S. wineries producing dessert wines in quantities for national distribution. Winemaker Michael Blaylock said some of the winery's products have come about by accident, and many other products have been attempted and never made it to market.

He emphasized quality: "Sweet wines in the past have been too sweet and not balanced." He said "the cocktail craze" has helped Quady, as some of its products can be mixed into cocktails. To expand market, he suggested educating restaurant staffs about dessert wines and getting them to present dessert and dessert wine menus simultaneously with suggestions. Many sweet wines can be successfully paired with main courses, and they are not all high in alcohol. Quady's Electra wines are as low as 4 percent alcohol.

Quady recently released a new product called "Purple" made from the grape variety Sunbelt, a cross bred at the University of Arkansas with Concord parentage. It is only sold at the tasting room currently; Blaylock said it is most popular with consumers under 35. He described the flavor as "Jolly Rancher grape candy." Blaylock advised, "If you're doing something new or unusual, accentuate the interesting and unique things about it."

Winemaker Greg Graziano produces four brands at 30,000-case Graziano Family of Wines in Mendocino County. He has made late-harvest botrytised wines from Chenin Blanc, Riesling, and other varieties. He said, "In Mendocino County, we grow a lot of varieties prone to botrytis. Many of these vineyards are near rivers and creeks that give the needed humidity to produce wines similar to Loire Valley late-harvest wines."

But he said botrytis growth cannot be depended upon every year. He also produces Moscato as a sweet table wine under his Enotria label, and said this variety is now very popular, in part due to its mention in a popular rap music song.

Another Mendocino County winemaker, Brad Holstine at 40,000-case Husch Vineyards, described how the winery had started a new vineyard practice to produce late-harvest Gewürztraminer. Holstine explained, "To hedge our bets, we're experimenting with cane cutting when the grapes reach peak sugars, but before the rains. We identify late-harvest blocks, cut canes so the fruit is no longer tied to the vine, but leave it to hang on the trellis to retain sugar and get botrytis growth." In 2009, the canes were cut October 10 and the fruit picked on October

29. The finished wine had 11.6 percent alcohol and 12.6 percent residual sugar.

Bonny Doon Vineyard president and winemaker Randall Grahm has experimented with many dessert wine projects, including with fruit other than grapes, with varying success. Two current releases are from the Beeswax Vineyard in Arroyo Seco, Monterey County: "Vinferno," made from Roussanne and Grenache Blanc harvested and then air-dried in the vineyard to concentrate sugar and flavor; and "Le Val Des Anges" made from 100 percent botrytised Roussanne. Grahm believes botrytis brings "an element of complexity" to make a higher quality dessert wine. Bonny Doon (20,000 cases) has experimented with ways to introduce botrytis to vineyards, but none have succeeded as well as natural conditions.

### **Canada embraces ice wine**

Dr. Debbie Inglis, director and researcher at the Cool Climate Oenology and Viticulture Institute at Brock University in Ontario, Canada, discussed the challenges of "extreme winemaking" with ice wine production and recent work and research to improve production and quality. Canada has embraced ice wine with regulations and quality standards from the Vintners Quality Alliance of Ontario. Canada has produced ice wines since the 1980s, and is now the world's largest producer.

About 80 percent of Ontario ice wines are made with the hybrid grape Vidal, 15 percent with Riesling, and 5 percent with Cabernet Franc. Grapes must be frozen at a minimum of minus 8°C in the vineyard, and kept at this temperature during pressing. Juice must be a minimum of 35° Brix.

Inglis said, "Pressing grapes while frozen is a challenge. The berries are as hard as marbles, and we need really high-pressure presses." Most producers use hydraulic basket presses operating at maximum pressure of 350 bar for the first hour, and press cycles are usually two hours. In most cases, the frozen cake must be broken up and pressed a second time."

Fermentation is a challenge because yeasts do not grow well due to high sugar levels, and stress can lead to unwanted levels of acetic acid. A focus of Inglis' research has been on yeast stress during ice wine fermentation.



From left, Mathew Fidelibus and Debbie Inglis

She advised: Keep juice sugar levels below 42° Brix; use enough yeast (about 2 to 2.5 times the amount used in table wine fermentations); add micronutrients to rehydration water for yeast and allow the yeasts time to get used to the concentrated sugar levels in the juice. Inglis said fermentations typically last six to eight weeks, but can last up to four months. The final alcohol can range from 7 to 14.9 percent, but is typically from 10 to 11 percent.

Research studies indicate that different harvest times, and allowing the grapes to hang through multiple freeze and thaw cycles, will affect the flavor profile. There are more than 20 odor-active compounds in Riesling and Vidal ice wines; many increase in concentration with later harvest dates.



## **Darrell Corti Leads Tasting of Rare Spanish Brandies**

By Greg Hirson



On February 4, the Department of Viticulture and Enology's student group, DEVO, and the Robert Mondavi Institute hosted a tasting of old and young Spanish brandies. Led by Darrell Corti of Corti Brothers in Sacramento, Calif., 50 students and guests tasted through 12 Brandies de Jerez – 9 old brandies from the Enology Cellar at UC Davis and 3 current releases brought from Corti Brothers. The old brandies were likely produced around the time of the Spanish Civil War (1936–1939). Additionally, Corti brought a bottle of pre-Prohibition California brandy from the cellars of Hotel Del Coronado.

Over the course of two hours, the attendees tasted the brandies while discussing the history of Spanish brandy production and consumption and how they have changed from the time of the Spanish Civil War to today. Many of the older products were produced using pot stills in small batches, while today most (or all) Spanish brandies are produced on continuous column stills. Included in the tasting were brandies from the houses of Gonzalez-Byass, Lustau, Domecq, Valdespino, Pemartin, and Larios.

At the outset of the tasting, Mr. Corti relayed an anecdote about Professor James Guymon, the first professor of wine distillation at UC Davis, who is remembered as having said: "I believe that all spirits improve in the bottle. I just can't prove it." The students and guests were challenged to form an opinion on Guymon's conjecture. Though no single brandy was found to be the consensus favorite, many judged the old brandies as or more enjoyable than the younger counterparts, anecdotally validating Guymon's claim.

## **Women, Wine and Chocolate: a Sublime Combination**

By Clare Hasler-Lewis

Women, Wine and Chocolate proved to be a sublime combination on Saturday, February 12 when leading California women winemakers, a confectionary expert and the inventor of the Wine Aroma Wheel came together at the Robert Mondavi Institute to inform, enlighten and delight a sold-out audience during a pre-Valentine's Day celebration entitled, "Women, Wine and Chocolate".



Margrit Mondavi's welcoming remarks were, as always, delightful, including her recollection of one of her grandmother's favorite recipes, chocolate pudding with wine sauce (yum!) in her native Switzerland. Mrs. Mondavi's remarks were followed by presentations from three leading California women winemakers — all UC Davis alumni: Kathy Joseph, proprietor and winemaker of Fiddlehead Cellars ([www.fiddleheadcellars.com](http://www.fiddleheadcellars.com)); Tondi Bolkan,

associate winemaker at Francis Coppola Winery (<http://www.franciscoppolawinery.com/>); and Melissa Stackhouse, Pinot Noir winemaker for Jackson Family Wines who brought wines from La Crema (<http://www.lacrema.com/>) for tasting. These very accomplished women discussed their love of the winemaking profession as well as how they have overcome various challenges during their careers.

Kathy Joseph shared her five keys to becoming the “HeadFiddle”: getting the nose, developing the palate, learning to become social, learning the tricks of the trade, and thinking outside the box. Kathy’s wine was voted “best Sauvignon Blanc in a supporting role” for the 2004 movie, *Sideways*, and her Pinot Noir was mentioned in the 2010 film, *The Kids Are All Right*.

Tondi Bolkan discussed the challenges and similarities of working with Zinfandel and being a full-time mom: they both take a village, express individuality, and require change management but enjoying the fruits of labor are well worth the efforts!

Melissa Stackhouse recounted the tough lessons she learned after losing a significant percentage of her first harvest of Pinot Noir grapes to bad weather. On a more positive note about Women, Wine and Chocolate, Melissa said “...not a bad way to spend a Saturday...presenting wines to be paired with chocolate, hearing Margit Mondavi tell stories, and listening to a sensory presentation by Ann Noble....Sorta makes me want to go back to school again. Well...then again...maybe not!”

Following the presentations on wine, the focus shifted to chocolate. Grace Erickson, formerly of Ghirardelli Chocolate and now of American Licorice Co., gave a fascinating presentation on how chocolate is made, the differences between single-sourced and blended products, as well as the challenges facing the confections industry.

After a lively panel discussion led by Clare Hasler-Lewis, the group was treated to a guided wine and chocolate pairing led by Professor Emerita Ann Noble of UC Davis' Department of Viticulture and Enology. Noble is a sensory scientist who developed the wine aroma wheel, a tool designed to provide standard terminology that helps inexperienced wine-tasters train their brains and noses to connect aromas with the appropriate terms.

A reception with additional wine and chocolate tastings capped off a sumptuous afternoon.



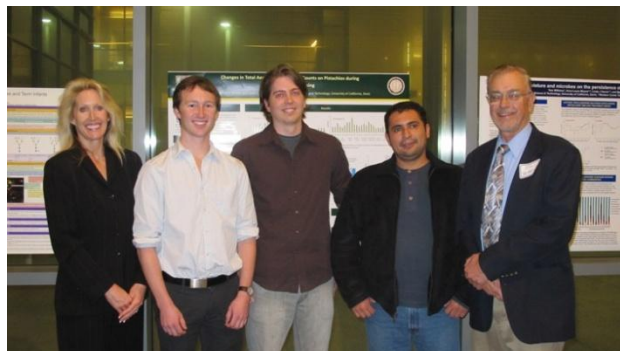
## **Robert Mondavi Institute Recognizes Graduate Student Research**

By Clare Hasler-Lewis

There were many activities associated with the grand opening of the new Teaching and Research Winery and August A. Busch III Brewing and Food Science Laboratory, including special recognition of graduate student research at the Robert Mondavi Institute inaugural graduate student poster competition.

Many thanks to our judges for their thoughtful assessment of the research posters: Paul Coletta (RMI board of executives), Katie Feicht (Asta Food Research and Department of Food Science and Technology leadership board), Margaret Lawson (DD Williamson and RMI board of executives), Tara McHugh (USDA, Albany and FST leadership board) and Herbert Stone (Tragon and FST leadership board).

All graduate students in the departments of Food Science and Technology and Viticulture and Enology were invited to participate in the competition. Posters were judged on the following criteria: Objective(s), Methodology, Results, Significance and Implications of Research, and Conclusions. Winners were announced at the joint reception for the RMI board of executives, the Food Science and Technology leadership board and the CIFAR board. The winners, their faculty advisors and poster titles were:



From left, Clare Hasler-Lewis, David Dallas, Thomas Williams, Daniel Garrido and James Seiber

First place (\$750): David Dallas (Bruce German; FST), "Towards comparative glycopeptidomics of human milk over digestion in preterm and term infants: Determining glycan composition"

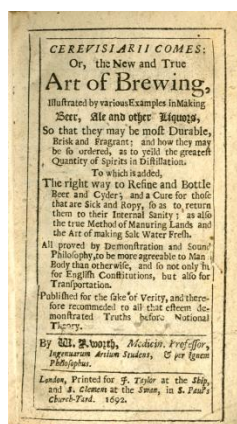
Second place (\$500): Thomas Williams (Maria Marco; FST), "Effects of moisture and microbes on the persistence of *E. coli* O157:H7 on lettuce"

Third place (\$250): Daniel Garrido (Bruce German; FST), "Oligosaccharide binding proteins in *Bifidobacterium infantis* reveal a preference for host oligosaccharides"

Congratulations!

## General Library Purchases Rare Book on Brewing

By Axel Borg and Daryl Morrison



In honor of the grand opening of the Teaching and Research Winery and the August A. Busch III Brewing and Food Science Laboratory, the general library at the University of California, Davis, reflected on how it, too, could celebrate the momentous event and showcase the wonderful collections that the library holds. Axel Borg, wine and food librarian, and Daryl Morrison, head of special collections, selected a rare book for purchase: William Y-worth's (Yarworth's) *Cerevisiarii comes; or, the new and true art of brewing illustrated by various examples in making beer, ale, and other liquors, so that they may be most durable, brisk and fragrant; and how they may be so ordered as to yield the greatest quantity of spirits in distillation....* London: J. Taylor & S. Clement, 1692.

This book is a rare first edition of Y-Worth's early study of English beer, providing an account of the "right way" to refine and bottle beer and cider. The book was not previously held by the University of California system and is to be found only in a few libraries in the country. The purchase and cataloging of the book was rushed so that it could make its

appearance in the RMI Sensory Building during the grand opening along with other rare 16<sup>th</sup>- and 17<sup>th</sup>-century books from the Department of Special Collections.

Daryl Morrison and rare book librarian John Sherlock provided the display and responded to questions as well as featured bibliographies on selected rare books on wine, beer, and distillation held by Special Collections. Questions about the library's holdings in rare books and a request for the bibliographies may be made by contacting: [speccoll@ucdavis.edu](mailto:speccoll@ucdavis.edu)



From left, John Sherlock and Daryl Morrison

## **“Bad Merlot” Parody for Roger Boulton Brings the House Down**

By Linda Bisson

One definite highlight of the grand opening ceremony was a parody, “Bad Merlot,” of the Lady Gaga hit “Bad Romance” performed by undergraduate students in the viticulture and enology major as a tribute to Professor Roger Boulton.

Lead singer Joanna Lanford was fabulous in her rendition of the song. Lyrics were written by professors Linda Bisson and Ann Noble. Bisson said this was done to recognize the past efforts of Dr. Boulton in helping winemakers with problematic wines but also to be a lighthearted “let’s get this party started” moment.



During the song the back-up dancers, Sonoe Hirabayashi, Oliva Hallet, Rebecca Perry, Brittany Dibb, and Juliet Hartford held up the August issue of *Vineyard and Winery Management* that featured a photo of Boulton on the cover. Bisson said she picked the Lady Gaga song for the parody because the lyrics were easy to change to fit the bad Merlot theme. “I was inspired by the SF MOMA exhibit on wine that features a wall of wine aromas. They have featured “acquired taste” aromas such as hamster, band-aid, and chemical characters with a qualifier that wine experts say these aromas belong in wine. When I visited the exhibit I watched people smelling these odors and enjoyed eavesdropping on the responses of other visitors to these scents. Rarely was it positive,” said Bisson.

Bisson said it was easy to work these real wine descriptors into the lyrics as part of the plea to Roger Boulton for help with a bad Merlot. The parody was captured by graduate student Ilan Tokayer and is available on YouTube: <http://www.youtube.com/watch?v=ZvETrA5CbrQ> This hilarious parody is well worth the watch. It was a bright moment on a cold and foggy day and a well-deserved tribute to Boulton.



## Margrit Mondavi Honored by Cal Aggie Alumni Association

By Clare Hasler-Lewis



Philanthropist Margrit Mondavi was among a diverse group of alumni and friends of the University of California, Davis — including an African conservationist, an expert in medical chemistry, an investment adviser, a plastic surgeon, a political consultant, and the host of National Geographic Channel's "Monster Fish" show — who were honored at a banquet in downtown Sacramento in February.

The 2011 Alumni Awards Gala began with an alumni winemaker reception at the Tsakopoulos Library Galleria followed by a dinner and awards ceremony at the Sacramento Grand Ballroom. For the first time, the alumni reception included a Sacramento tribute to The Campaign for UC Davis, a university-wide initiative to raise \$1 billion in philanthropic support from 100,000 donors.

Margrit Mondavi, vice president of cultural affairs at the Robert Mondavi Winery, was honored as the inaugural recipient of the Distinguished Friend of the University Award. The award recognizes extraordinary service that has advanced the university and made significant and lasting contributions to the campus.

With her late husband, Robert, Margrit Mondavi has been one of UC Davis' most generous benefactors. In 2001, the couple gave \$25 million to UC Davis to establish the Robert Mondavi Institute for Wine and Food Science and \$10 million to name the Center for the Performing Arts. In early 2010, Mrs. Mondavi pledged \$2 million for the design and construction of the planned UC Davis Museum of Art. She is a dedicated volunteer, an honorary co-chair of the university fundraising campaign, and a founding member of the honorary board of the Robert Mondavi Institute.

## “Uncorked” Events Grow in Popularity

By Clare Hasler-Lewis



The monthly “Uncorked” collaboration between the Robert Mondavi Institute and the Robert and Margrit Mondavi Center for the Performing Arts has been a great success and has featured some wonderful wineries over the last three months. In November, Tony Biagi, director of winemaking for PlumpJack and Cade wines (and UC Davis alum), poured two wines from Cade Winery

(<http://www.cadewinery.com/cade/>): a 2009

Sauvignon Blanc and a 2006 Cabernet Sauvignon Howell Mountain. Hagafen Winery (<http://www.hagafen.com/>) presented a variety of red and white wines for the January tastings. Owner Ernie Weir is also a UC Davis grad. In February, Stuart and Christy Spoto’s wines were featured (<http://shop.spotowines.com/>).

Future dates for “Uncorked” are: March 12 and 26 and will feature C.G. Di’Arie wines (<http://www.cgdiarie.com/>), with owner Chaim Gur-Arieh pouring. On April 8 and 22, Boeger Wines will be featured (<http://www.boegerwinery.com/>).

Friends of the RMI who wish to attend an “Uncorked” event should contact Kim Bannister, [kbannister@ucdavis.edu](mailto:kbannister@ucdavis.edu), for more information.

## **The RMI Welcomes Amy Barnett — New Administrative Assistant**

By Kim Bannister



Amy Barnett is officially the new Robert Mondavi Institute administrative assistant, after working several months as a temporary employee. As an Aggie, Amy is a perfect addition to the RMI team. During her undergraduate studies at UC Davis, Amy worked as a student intern in the Education Abroad Center and was a resident advisor for both the COSMOS program (California State Summer School for Mathematics and Science) and UC Davis Student Housing. Recently she obtained her bachelor’s degree in

Religious Studies and has plans to continue her education.

From leading tours of the Robert Mondavi Institute to expertly assisting with events, Amy is a welcome addition to the team and a perfect fit. To meet Amy, stop by the administrative offices in the Sensory Building. You will be greeted with a smile!

## **In Brief**

### **Edwin Frankel: Taking California Olive Oil to Higher Standards**

Among the world’s most distinguished chemists, Dr. Edwin Frankel is an esteemed icon and a formidable force among his peers. An established expert on lipid oxidation, Frankel has turned his focus to extra virgin olive oil, working to improve standards based on better analytical methods. His recently published findings have gripped the attention of the industry as they pave the way toward scientific strides for California olive oil. To read more about Frankel’s recent accomplishment, please visit: <http://www.foodsci.ucdavis.edu/olive-oil-times-publishes-edwin-frankel-taking-california-olive-oil-to-higher-standards/>

## Upcoming Events

- Food Quality Traits Sustaining Agriculture. A John E. Kinsella Chairs Conference, March 14, 2011
- Walt Klenz Lectureship, April, 2011
- [Winkler Vine Dinner](#), May 14, 2011
- [Wine Law Conference](#), June 2-4, 2011
- Dairy Technology Day II – California Dairy Industry Sustainability, June 7, 2011
- Taste the Good Life — a Fundraiser for the Good Life Garden, September 17, 2011

## Contributors to "RMI Wine and Food Bytes"

- Pat Bailey, public information representative, UC Davis News Service, (530) 752-9843, [pjbailey@ucdavis.edu](mailto:pjbailey@ucdavis.edu)
- Kim Bannister, program representative, Robert Mondavi Institute for Wine and Food Science, UC Davis, (530) 752-5171, [kbannister@ucdavis.edu](mailto:kbannister@ucdavis.edu)
- Kathy Sachs-Barrientes, director of major gifts, College of Agricultural and Environmental Sciences, UC Davis, (530) 752-1602, [ksbarrientes@ucdavis.edu](mailto:ksbarrientes@ucdavis.edu)
- Linda Bisson, professor, Department of Viticulture and Enology, UC Davis, (530) 752-3835, [lfbisson@ucdavis.edu](mailto:lfbisson@ucdavis.edu)
- Axel E. Borg, Wine and Food Science Bibliographer, Shields Library, UC Davis, (530) 752-6176, [aeborg@ucdavis.edu](mailto:aeborg@ucdavis.edu)
- Alexandra Kicenik Devarenne, consultant to the olive oil industry, (707) 981-7723, [adevarenne@yahoo.com](mailto:adevarenne@yahoo.com)
- Ann Filmer, director of communications, College of Agricultural and Environmental Sciences, UC Davis, (530) 754-6788, [afilmer@ucdavis.edu](mailto:afilmer@ucdavis.edu)
- Clare Hasler-Lewis, executive director, Robert Mondavi Institute for Wine and Food Science, UC Davis, (530) 754-6349, [cmhasler@ucdavis.edu](mailto:cmhasler@ucdavis.edu)
- Melissa Haworth, director of major gifts, College of Agricultural and Environmental Sciences, UC Davis, (530) 979-1440, [mdhaworth@ucdavis.edu](mailto:mdhaworth@ucdavis.edu)
- Greg Hirson, graduate student, Department of Viticulture and Enology, UC Davis, (949) 274-8812, [greg.hirson@gmail.com](mailto:greg.hirson@gmail.com)
- Daryl Morrison, head of special collections, Shields Library, UC Davis, (530) 752-2112, [dmorrison@ucdavis.edu](mailto:dmorrison@ucdavis.edu)
- Jon Tournay, writer, *Wines & Vines*, (415) 453-9700, [info@winesandvines.com](mailto:info@winesandvines.com)
- Gordon A. Walker, graduate student, Department of Viticulture and Enology, UC Davis, (857) 829-1948, [gawalker@ucdavis.edu](mailto:gawalker@ucdavis.edu)