RMI
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Executive Director's Update

By Clare Hasler-Lewis

As another calendar year comes to an end, the Robert Mondavi Institute begins another chapter. On November 3, a ceremonial groundbreaking was held for the Jess S. Jackson Sustainable Winery Building. The 8,000-square-foot facility, made possible by a $3 million pledge from the late Jess Jackson and his wife, Barbara Banke, will enable the adjacent LEED Platinum winery, brewery and food-processing complex dedicated in January to become the first self-sustainable, zero-carbon teaching and research facility in the world.

Philanthropic gifts have been critical to the new state-of-the-art facilities at the Robert Mondavi Institute. They are also critical to our outreach and education programs. I am so pleased that Paul and Sandra Montrone have pledged $100,000 through their private foundation, the Penates Foundation, to support the fundraising challenge launched by the College of Agricultural and Environmental Sciences for the Robert Mondavi Institute. Paul Montrone has served on the honorary board of the institute since its inception in 2005.

The success of any organization depends on the excellence of its employees. Dan Flynn, executive director of the UC Davis Olive Center at the Robert Mondavi Institute was recognized

for his excellence with an Award of Distinction from the College of Agricultural and Environmental Sciences at its 24th annual College Celebration in October. He is truly fulfilling the center's vision: "to do for table olives and olive oil what UC Davis did for wine." Board of executives member Margaret Lawson, was also recognized with an Award of Distinction.

I'm certain Robert Mondavi would be very proud that UC Davis has so successfully implemented his vision of a prestigious forum for collaboration for the departments of Viticulture and Enology and Food Science and Technology. September 19 marked the 10-year anniversary of Mr. Mondavi's $25 million gift to establish the Robert Mondavi Institute for Wine and Food Science at UC Davis. Here's to the next 10 years!

Clare

Robert Mondavi Institute Celebrates 10-year Anniversary of the Mondavi Gift to UC Davis

By Clare Hasler-Lewis

On September 19, 2001, Robert Mondavi and his wife, Margrit, announced a gift of $25 million to the University of California, Davis, to establish the Robert Mondavi Institute for Wine and Food Science. Credited with bringing California's Napa Valley wine region to world prominence, Mr. Mondavi said that "90 percent of what I know about wine I got from UC Davis."

On September 16, 2011, faculty, staff, and students gathered to celebrate this auspicious occasion and honor Mr. Mondavi's memory and incredible generosity to the campus.

From left: Jim Wolpert, Linda Bisson, Andy Waterhouse, and David Block.

Mondavi's vision was to provide UC Davis "a prestigious forum for collaboration between the Department of Viticulture and Enology and the Department of Food Science and Technology." With approximately $100 million in new state-of-the-art facilities, that vision is becoming a reality.

Sustainable Winery Building to be Hub of Environmental Technology

(Adapted from a November 3, 2011, press release by Pat Bailey, UC Davis News Service)

Ground was ceremonially broken today at the University of California, Davis, for the 8,000-square-foot Jess S. Jackson Sustainable Winery Building, which will enable the adjacent winery, brewery, and food-processing complex to become the first self-sustainable, zero-carbon teaching and research facility in the world.

The $4 million, one-story building, slated for completion in 2013, was made possible by a $3 million pledge from the late Jess Jackson and his wife, Barbara Banke, proprietor of Jackson Family Wines.

"UC Davis is a leader in sustainability in many different areas -- energy, transportation, housing and work environments, and water reduction -- and certainly interest in sustainable wine and food production is developing rapidly," said UC Davis Chancellor Linda P.B. Katehi.

From left: Chancellor Linda Katehi, Jenny Hartford, Laura Giron, Katie Jackson, Dean Neal Van Alfen, Chris Jackson, Barbara Banke, Professor Roger Boulton. Photo by: TJ Ushing

"This building will be used to explore new research areas, including ways to maximize water conservation in wine production and sequester carbon dioxide during fermentation," she said. "With the technology that this building will house, we plan to produce wine with a net-zero carbon footprint and to develop models that are workable for the wine industry."

"This new research facility fulfills a vision of sustainability that will allow UC Davis and the wine and food industries to reach a new level in conservation of water, energy, and natural resources," said Neal Van Alfen, dean of the College of Agricultural and Environmental Sciences. "We are very grateful to Barbara Banke and Jess Jackson for sharing this vision of sustainability and partnering with us on this new building."

"My family and I are committed to the advancement of sustainable winemaking, and sustainable agriculture," says Barbara Banke, Jackson Family Wines chairman, co-founder, and proprietor.

"We are so proud that the Jess S. Jackson Sustainable Winery Building, named for my late husband and founder of Jackson Family Wines, will support research and innovation in sustainable viticulture and winemaking," she said. "Our next generation of winemakers and environmental scientists will be better prepared to further the sustainability of our already green industry."

The building will be located on the south side of UC Davis' one-year-old Teaching and Research Winery and August A. Busch III Brewing and Food Science Laboratory at the Robert Mondavi Institute for Wine and Food Science.

It will include 10 dedicated, modular spaces that will contain equipment for various processes including high-purity filtration of rainwater that can be used for cleaning fermentors and barrels in the winery. Ninety percent of the water and chemicals from each winery cleaning cycle will be captured and processed for future use in the complex, eventually being used as many as 10 times.

In addition, the building will sequester carbon dioxide captured from all fermentations in the winery and convert it into calcium carbonate, or chalk, which will be given to a plasterboard company. The building also will produce chilled water using an icemaker powered by electricity from solar panels and will be equipped to generate hydrogen gas by electrolysis and produce nighttime energy using a hydrogen fuel cell.

One room in the new building will house the control system and data hub for the many processing systems, and two rooms will be held for future research projects and equipment trials related to any aspect of water and energy use or sustainable systems.

"The building is designed so that each of these systems can be removed and replaced with a newer model, making it an evolving test-bed and demonstration site," said Professor Roger Boulton, a winery engineering expert and the Stephen Sinclair Scott Endowed Chair in Enology at UC Davis. He noted that the building's control and data system will be designed to monitor and display the water, energy, carbon and chemistry footprints in real time, and manage the operation of all utilities and the building environment.

In December 2010, UC Davis' Teaching and Research Winery became the first winery in the world to receive LEED platinum certification, the highest rating for environmental design and construction awarded by the U.S. Green Building Council. (LEED stands for Leadership in Energy and Environmental Design.) Located in the same building, the August A. Busch III Brewing and Food Science Laboratory also became the first such facility to achieve LEED platinum certification.

$100,000 Donation Pledge to the Robert Mondavi Institute

By Clare Hasler-Lewis

Paul and Sandra Montrone have pledged $100,000 through their private foundation, the Penates Foundation, to support the matching fundraising challenge for the Robert Mondavi Institute launched by the College of Agricultural and Environmental Sciences.

Mr. Montrone has been a founding member of the Institute's Honorary Board since 2005. He also serves on the UC Davis Campaign Cabinet. Montrone was president and CEO of Fisher Scientific for 15 years until its 2006 merger with Thermo Electron, now known as Thermo Fisher Scientific.

Consistent endowment support will allow the institute to continue hosting the excellent outreach and education programs it has become recognized for as well as support graduate student education.

We are very grateful to Paul and Sandra for their generous gift!

For more information about giving to the RMI Endowment and matching challenge, please contact Kathy Barrientes, director of major gifts, (530) 752-1602, ksbarrientes@ucdavis.edu.

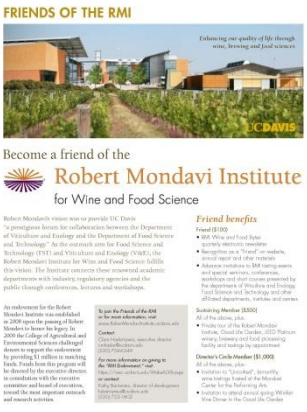
"Friends of the RMI" Program Welcomes New Members

By Clare Hasler-Lewis

A warm welcome to the newest members of the "Friends of the RMI" program:

Friends
Bob and Barbara Leidigh
Terone Preston and Jenneth Furukawa
Bob and Susan Silva

Director's Circle Members
Craig and Karen Senders



We greatly appreciate your support of our outreach and education programs! For more information about the benefits associated with the Friends of the RMI Program and how to join, please visit: http://rmi.ucdavis.edu/friends

Award of Distinction Honors Leadership of Dan Flynn and Margaret Lawson

By Clare Hasler-Lewis

The College of Agricultural and Environmental Sciences "College Celebration" is held each year at harvest time to celebrate the advancement and accomplishments of the college and its impact on agriculture and the environment. The Award of Distinction is the highest recognition presented by the college to individuals whose contributions and achievements enrich the image and reputation of the college and enhance its ability to provide public service. This year, both Dan Flynn, executive director of the UC Davis Olive Center at the Robert Mondavi Institute and Margaret Lawson, a member of the RMI board of executives and UC Davis alum, were honored with Awards of Distinction.

Dan Flynn, executive director of the UC Davis Olive Center, has overseen the rapid growth and development of the center into an internationally known program for olive research and education. He was honored as "Outstanding Staff" with a 2011 CA&ES Award of Distinction.

Flynn established the center in 2008. It is the only one of its kind in North America. As administrator for the center, he oversees strategy, industry networking, revenue generation, the UC Davis olive oil program, and public education programs. The center's core assets are the 30 expert faculty members, extension specialists, and farm advisors who provide an interdisciplinary resource for olive growers and processors.

The center has delivered or secured funding for 38 projects valued at more than $1.4 million. Under Flynn's leadership, the center has tripled the number of UC Davis educational events for olive growers and processors, established an internationally accredited olive oil sensory panel and a chemistry research laboratory, planted campus olive orchards, and consulted on three successful industry-sponsored legislative measures. The center's work has been reported internationally in more than 1,000 media outlets. It funds operations through research and education activities, as well as from sales of olive oil, table olives, and skin-care products. Flynn says the mission of the olive center is "to do for olives what UC Davis did for California wine."

Flynn earned a bachelor's degree in sociology at UC Santa Barbara and a master's degree from Rutgers University. He draws on many years' experience working in government in leading the UC Davis Olive Center. Flynn worked as a consultant for the California legislature (1985–2004), as an analyst with the Little Hoover Commission and the California Department of Social Services, and as executive director for a senate committee on cost control in state government. In 2004, Flynn began managing a certified organic five-acre cherry and apple farm in the Sierra Nevada foothills. That year he also wrote the feasibility study for the UC Davis Olive Center. In 2005 the program got under way and Flynn began managing the harvest, overseeing the extra virgin olive oil production, and developing marketing strategy.

Margaret A. Lawson, chief science officer for food-industry leader D.D. Williamson, has excelled as an industry professional, a mentor to aspiring food science students, and a loyal ambassador for UC Davis. She was honored among "Outstanding Alumni" with a 2011 CA&ES Award of Distinction.

Lawson developed a love of chemistry at an early age and quickly became enchanted with the multidisciplinary food science and technology program at UC Davis. She earned her bachelor's degree with highest honors and her master's degree, both in food science and technology. After graduation she strategically selected companies and positions with global responsibilities to allow her the opportunity to see the world, get to know different cultures, and experience nature through adventure travel. She has enjoyed assignments in China, Latin America, Europe, Ireland, and New Zealand.

In the early years of her career in product development and as a research chemist, Lawson developed an expertise in food ingredient technology. She has co-authored several patents. Lawson later entered management and took on responsibilities for research, quality assurance, customer interface, and manufacturing. With D.D. Williamson, a provider of caramel and natural colors for foods and beverages, she interacts with global customers on technical, quality, and regulatory subjects. She also directs technical efforts in science and innovation and leads product development projects for custom color solutions, food product stabilization, authentic flavor perception, food safety, and regulatory compliance.

Lawson's enthusiasm for food science has made her a dynamic communicator and champion of the profession worldwide. Since her days as a UC Davis student, she has been active with the Institute of Food Technologists (IFT), a professional organization promoting standards of quality, safety, and supply of food and food ingredients. Lawson served as IFT president (2005–2006) and was named a fellow of the organization. Her philanthropic support has helped UC Davis students attend IFT's annual meeting and provided funding for the food science and technology department's student lounge. She serves on leadership boards for the Department of Food Science and Technology, and on the board of executives for the Robert Mondavi Institute for Wine and Food Science.

We are very proud of Dan and Margaret for their achievements and look forward to their continued leadership.

Brew the World's Best Beer at the University of California at Davis's Pilot Plant

(Adapted from an August 3, 2011, article by Andrew Rosenblum, Popular Science)

Many students pass through the beer lab of Professor Charles Bamforth, who for eight years worked as senior manager at Bass Brewers. But the ones he most enjoys instructing come from the University of California Davis's distinguished department of viticulture. "I like to convert one winemaker into a brewer every year," he says. "I consider beer a superior beverage, and I know it's a lot harder to make."

His students face a long list of complicated questions about beer: How should a lager brewer wield the flavoring ingredient dimethyl sulfide? Does silicon in beer contribute to healthy bones? Twenty-two-year-old chemical-engineering major Francine Jaramillo spent a year studying how beer foam samples absorb light at 230 nanometers in order to develop a better standard to measure foam "lacing" against the side of the glass.

Undergrads first make beer in the Practical Malting and Brewing course at the 1.5 barrel pilot brewery. The course culminates in an Iron Brew competition judged by professional brewmasters. The school ranks first among national universities in publishing peer-reviewed articles on food science, and every year, 10 or so brewing students go into the business, either at small breweries or such multinationals as Anheuser-Busch InBev.

University of California, Davis: Pilot Brewery. Photo by: John B. Carnett

Although the work is demanding, the students say the atmosphere is low-key. On Jaramillo's first day working at the brewery, she accidentally hit an emergency steam-release button. "All of a sudden, I hear this cloud of steam hissing from the pipes," she recalls, "and I was like, 'Oh my goodness, I broke the brewery.' The lab manager just said, 'Now you know what the button's for.'"

U.S. Farmers and Ranchers Alliance Host Food Dialogues at the RMI

(Adapted from a September 9, 2011 press release by USFRA)

Moderator Jane Wells of CNBC and panelist Dr. Neal Van Alfen, dean of the College of Agricultural and Environmental Sciences at the University of California, Davis, discuss the future of agriculture.

On September 22, the U.S. Farmers & Ranch Alliance (USFRA) hosted The Food Dialogues, a town hall-style discussion to address American's questions about how their food is grown and raised and the long-term impact of the food they are eating — on their own health and the health of the planet. These topics, as well as findings from recent surveys of farmers, ranchers and consumers conducted by USFRA, were discussed during this interactive event taking place at four locations across the U.S. and online.

"Americans want to know where their food comes from, how it was raised and if it is good for their health long-term," said Bob Stallman, chairman of USFRA and president of the American Farm Bureau Federation. "We realize farmers and ranchers haven't always done the best job answering Americans' questions about how food is grown and raised, and hope The Food Dialogues event will be the start of an ongoing dialogue that addresses these questions and more."

The Food Dialogues included four panel discussions, featuring leaders in food, food service, media and policy, farmers of all types and business leaders, who will share different viewpoints about the current and future stats of food, and how food is grown and raised. These discussions took place at four U.S. locations including Washington, D.C., New York, the Midwest and California (Robert Mondavi Institute at UC Davis), as well as online via Facebook and USFRA's new website, www.fooddialogues.com.

USFRA secured several high-profile participants including Claire Shipman, television journalist and senior national correspondent at ABC's "Good Morning America," who moderated the event

from Washington, D.C. and Chef John Besh, who moderated from New York. Additional participants included Max Armstrong of Farm Progress Companies and Jane Wells of CNBC.

Survey findings released during the event indicate Americans constantly think about food production, yet have little connection to farming or ranching; respondents were split on whether agriculture is improving or heading in the wrong direction.

For more information about USFRA, The Food Dialogues and nationwide survey, visit www.fooddialogues.com.

Olive Center Specialty Crops Grants

By Dan Flynn

I am pleased to announce that the UC Davis Olive Center is 3-for-3 on our grant proposals for the 2011 federal Specialty Crop Block Grant program (administrated by CDFA), totaling more than $300,000:

- Best practices ($105,023): This project, proposed by Dan Flynn, will develop "best practices" for olive orchard management, processing, storage, transportation, and sensory evaluation to (1) help olive growers and processors increase production efficiency; (2) expand food industry knowledge of the qualitative differences between California and imported olives and olive oil; and (3) improve USDA enforcement of quality standards.
- Standards and quality ($111,997): This project, proposed by Dan Flynn, will develop innovative methods to assess olive oil and table olive quality and facilitate the adoption of improved quality standards for the United States. Inadequate standards and analytical methods are hindering the long-term sales and competitiveness of olives grown and processed in California.
- Sicilian-style table olives ($90,851): This project, proposed by Maria Marco, will provide a scientific guide to the Sicilian-style process of fermented olive curing. This process has traditionally been guided by tradition but is lacking in scientific guidance to control fermentations and potential spoilage issues.

This is our first successful attempt at securing funding through this program.

Honey! A Sweet Partnership Between the Robert Mondavi Institute and the Co-sponsors

By Kathy Keatley Garvey

Nearly 150 enthusiastic honey fans celebrated honey at the first-ever "Honey!" event sponsored by the Robert Mondavi Institute for Wine and Food Science. The daylong celebration, which took place Friday, Oct. 21 in the UC Davis Conference Center, drew co-sponsorships from the UC Davis Department of Entomology, the Julia Child Foundation of Gastronomy and the Culinary Arts, and Cooperative Extension apiculturist Eric Mussen of the UC Davis Department of Entomology.

The event included talks by five former or current UC Davis faculty members, a honey-themed lunch, a guided honey tasting, a "best honey" contest and a reception featuring the Honeybee Trio of Vacaville and Jazz Nuances of Davis.

Eric Mussen discussed “The Wonder of Honey Bees”; assistant professor/bee biologist Brian Johnson, “Honey Bee Communication: How Bees Use Teamwork to Make Honey”; emeritus professor/bee scientist Norman Gary, an author and professional bee wrangler, “Hobby Beekeeping in Urban Environments”; Louis Grivetti, professor emeritus in the nutrition department, “Historical Uses of Honey as Food”; and Liz Applegate, nutrition lecturer and director of the Sports Nutrition Program, “Honey for Better Health and Performance.”

Young and old delighted in the variety of displays, including the bee observation hives provided by Brian Fishback. Photo by: Kathy Keatley Garvey

Entomology professor James Carey videotaped the lectures. The videos and audios are online on UCTV.

Mussen told the crowd that “Honey bees are truly marvelous.” Unlike what happens in the human society, honey bees work together for the good of the colony, he said. Honey bees all have certain duties. The foragers collect water, nectar, and propolis (plant resin) and fly up to four miles, covering a 50-square mile area.

A typical hive includes 45,000 to 60,000 in the summer and about 10,000 to 15,000 in the winter, he said. A worker bee lives only about six weeks in the summer and six months in the winter. During peak season, a queen bee can lay as many as 2,000 eggs a day, he said. Mussen related that the pheromone released by a bee during a stinging incident “smells like bananas, because it’s the same chemical.” A European honey bee can follow an odor or pheromone for up to 50 feet, but the more aggressive Africanized honey bee can “follow the odor up to one-fourth of a mile or 1,320 feet,” Mussen said.

Brian Johnson said there are four castes: newly emerged, nurses, middle-age, and foragers. “Bees go through puberty four times,” he said.

“Only foragers talk; middle-age bees listen,” Johnson said. The foragers share information on food sources with their dances, such as the waggle dance. The other bees learn the distance and direction. And this all happens in the dark, he said.

Johnson mentioned that a returning bee will “head butt” when she encounters danger at a recommended foraging spot. It’s like telling her colony “I got beat up so don’t go there.”
The take-home message: “Bees have small brains but can solve big problems,” Johnson said. Among the books he recommended: Thomas Seeley’s “Honeybee Democracy” and “Wisdom of the Hive,” and Karl von Frish’s “The Dance Language and Orientation of Bees.”

Norman Gary said he began keeping bees 64 years ago. “Beekeeping is a lot cheaper than golf, gambling or collecting some types of collectibles,” he said. “And, it’s just plain fun. Bees are more fun than African violets; African violets have no personality.”

Advocating beekeeping in the urban environment, Gary said that “bees provide a tremendous public service”—pollination. Neighborhoods that have bees are much better off, he said. Gary said that “the fear of stings is greatly exaggerated. Only 1 percent of the population is hypersensitive to bee stings and can go into anaphylactic shock.”

Lou Grivetti traced the history of bees to a 20-million-year-old fossil. From the earliest times, people have been fascinated by bees, he said. Ancient Israel was considered “the land of milk and honey.” Ancient Egypt used honey to treat wounds, headaches and as a mouthwash. Artists and poets continue to keep the images of bees alive—from the German fairy tale about “Queen Bee” by the Grimm Brothers to the anonymous poet who penned, *“*I eat my peas with honey / I've done it all my life / It makes the peas taste funny / But it keeps them on the knife.”

Liz Applegate said many athletes use honey to gain quick energy. Olympic medalist/swimmer Catherine Carr of Davis said honey helped her prepare for and compete in the 1972 Olympic Games in Munich, where she won two gold medals (breaststroke and medley relay).

Attendees select their favorite honey. Photo by: Kathy Keatley Garvey.

During the honey-themed lunch, participants had the opportunity to vote on their favorite honey, view the dozen displays, including observation hives loaned by beekeeper Brian Fishback of Wilton, and purchase a copy of Norman Gary’s new book, “Honey Bee Hobbyist: The Care and Keeping of Bees.”

In his talk about honey, Mussen said the color of the honey can be anything from nearly clear to as dark as molasses. He himself prefers starthistle honey, made from an exotic and invasive weed.

The Sacramento Beekeeping Supplies won first place in the best honey competition. Second place went to Alan Pryor of Alameda, and third place, Diane Kriletich of Paloma, Calaveras County. Prizes included gift baskets from the Robert Mondavi Institute, and a “Show Me the Honey” t-shirt and macro photos of honey bees donated by Kathy Keatley Garvey of the UC Davis Department of Entomology.

The day concluded with a reception featuring music by the Honeybee Trio of Vacaville and Jazz Nuances of Davis. The Honeybee Trio is comprised of three teenage girls: Karli Bosler, 16, Sarah McElwain, 15, and Natalie Angst, 16, all students at Will C. Wood High School who specialize in classics from the 1930s and beyond in three-part harmony. Among their toe-tapping hits: “Sugartime” and “Don’t Sit Under the Apple Tree With Anyone Else but Me.”

“It was a sweet day all in all,” said coordinator Clare Hasler-Lewis, executive director of RMI.

To watch the videos or listen to the audios:

Louis Grivetti: “Historical Uses of Honey as Food”
http://www.uctv.tv/search-details.aspx?showID=23102

Norm Gary: “Hobby Beekeeping in Urban Environments”
http://www.uctv.tv/search-details.aspx?showID=23103

Eric Mussen: “The Wonder of Honey Bees”
http://www.uctv.tv/search-details.aspx?showID=23105

Brian Johnson: “How Bees Use Teamwork to Make Honey”
http://www.uctv.tv/search-details.aspx?showID=23104

Liz Applegate: “Sweet Success: Honey for Better Health and Performance”
http://www.uctv.tv/search-details.aspx?showID=23101

Eric Mussen: “Honey Tasting”
http://www.uctv.tv/search-details.aspx?showID=23100

Honey! Event photos, by Kathy Keatley Garvey
http://www.flickr.com/photos/pho-tog/sets/72157627830271361/

Robert Mondavi Institute Hosts Second Annual Graduate Student Research Poster Competition

By Clare Hasler-Lewis

The Robert Mondavi Institute for Wine and Food Science hosted the second annual graduate student research poster competition on September 23 during the fall welcome reception for incoming graduate students in the departments of Viticulture and Enology (VEN) and Food Science and Technology (FST).

A special thanks to this year’s judges for their thoughtful evaluation of the research posters: Sharon Shoemaker (California Institute of Food and Agricultural Research, CIFAR), and three members of the CIFAR advisory board: Sam Cunningham (Cunningham Consulting), Zachary Wochok (president and CEO, PGP International, Inc.) and Wally Yokoyama (research chemist in the Processed Foods Research Department of the USDA).

Graduate students in the departments of FST and VEN and related graduate groups were invited to participate in the competition. Winners received a monetary award ($750, $500, $250 for first, second, and third place respectively) and an engraved plaque. This year’s winners are:

First Place – **Anne Slisz**, M.S. student in Carolyn Slupsky’s lab: “1H-NMR metabolomics of citrus affected by huanglongbng disease reveals distinction from non-affected citrus”

Second Place – **Laura K. Fischer**, Ph.D. candidate in Bruce German’s lab: “The effect of whey protein on the immune response to vaccine: a randomized placebo-controlled clinical trial”

Third Place – **Gordon Walker**, Ph.D. candidate in Linda Bisson's lab: "*S. cerevisiae* wine isolates bypassing glucose-associated repression via a novel prion mechanism"

Congratulations on your achievements, students!

Olive Oil: Mining a Liquid Gold
(Originally aired on November 20, 2011, CBS News Sunday Morning)

Of all the traditions being followed this Thanksgiving, there's one ingredient that's been a part of family feasts for thousands of years: olive oil. The Greeks and Romans considered it a gift of the gods. And while olives from the Mediterranean remain some of the world's finest, our Lee Cowan reports this morning that olive groves in California are keeping fans in THIS country well oiled, too!

We've been sopping it up for centuries — drizzling it over our finest dishes. And yet, olive oil's virtuous qualities remain, for many, a culinary mystery.

"I personally like really pungent, really bitter oil," said Mike Madison. "I mean, maybe it's the condition of my life. Bitterness appeals to me!"

Madison tends his olive grove the way it's been done for thousands of years — by hand. Not under Italy's Tuscan sun, but in the sun-drenched valleys of California.

"The best oil from Italy or Spain is great," he said. "But most of what winds up in the stores is not the best oil."

He's among a growing chorus of California growers who worry the international olive oil market isn't as virginal as the labels might hint . . .

"Extra virgin means that the oil must have zero defects such as rancidity," said Dan Flynn, the executive director of the UC Davis Olive Center. "Rancidity tastes kind of like crayons or a catcher's mitt."

Extra virgin doesn't only taste better, he says: It retains the olive's natural compounds.

But when Flynn did tests on some of the most popular overseas brands, the results were bitter.

"We found that 70 percent of the imported oil did not meet the international standards for extra virgin" said Flynn.

Low-end oil being sold at high-end prices — part of an industry author Tom Mueller calls "scandalous" in his new book, "Extra Virginity."

"Nobody's watching the quality, so it's kind of a paradise for fraud," Mueller said. "Most people in America haven't tasted a good oil. And until the consumer gets a little bit more aware, there won't be this intense pressure to make sure that people are playing by the rules."

More than 98 percent of the olive oil consumed in this country is imported. But California growers are seeing an opening in the market.

Gregg Kelly is CEO of the California Olive Ranch, the nation's biggest extra virgin olive oil producer. He showed Cowan his facility which can hold two million gallons of olive oil. "We're trying to make this available to the masses," Kelly said.

His mission? To harvest an ancient crop in a very modern way, called high-density farming — getting olives directly from the branches to the mill, faster than ever before.

The advantage, Kelly said, is "the speed with which you get that fruit into a mill, turned into olive oil and put into a controlled environment has a lot to do with the quality of the oil you end up with."

If you're not a foodie, this may all be a bit confusing — what's the big deal about extra virgin olive oil if it takes a trained tasting panel and lab tests to know for sure? Well, the answer may be your health.

"There have been many studies that show that it helps as an anti-inflammatory and with heart disease and even breast cancer," said Deborah Rogers, who has spent more than 15 years making and selling her own brand of olive oil.

Her tasting room is often filled with those with curious palates. If you can't taste the extra virgin difference, they're told, their body will likely FEEL it.

"Demystifying extra virgin is something that we've been trying to do since we opened our doors," said Rogers.

No wonder the poet Homer called olive oil "liquid gold."

Sometimes bitter, sometimes buttery; pungent, as well as peppery. It's an oil with a thousand faces, enough for every palate.

To watch the Lee Cowan's report, please visit: http://www.cbsnews.com/8301-3445_162-57328308/olive-oil-mining-a-liquid-gold/

International Collaboration Efforts
By Clare Hasler-Lewis

Clare Hasler-Lewis was the plenary speaker at the 2012 International Symposium on Fermentation Fusion Science and Technology at Kookmin University in Seoul Korea on October 27. UC Davis and the Robert Mondavi Institute have an agreement of cooperation with Kookmin University and are hoping to extend this collaboration in the area of fermentation science. Hasler also visited Electronics and Telecommunications Research Institute (ETRI) to initiate an agreement of cooperation and memorandum of understanding as a first step in what we hope will be a productive partnership.

President of ETRI Dr. Heung Nam Kim and Dr. Clare Hasler-Lewis shake hands on the mutually beneficial agreement of cooperation

Beeronomics: The Economics of Beer and Brewing
By Jonathan Barker and Kabir Tumber

Carol Tremblay speaks on the economics of beer and brewing

On November 3, 2011, taking advantage of the availability of Professor Jo Swinnen, founder and president of the Beeronomics Society (http://www.beeronomics.org/about.htm), a half-day symposium was held at the University of California, Davis.

The title of the Symposium was borrowed from the new book, *Beeronomics: The Economics of Beer and Brewing*, edited by Jo Swinnen, which was launched at the symposium.

The symposium brought together leading scholars from around the world who study the economics of beer and brewing, to discuss current topics and issues in the international and domestic beer industry.

- Jo Swinnen, from the University of Leuven, presented a broad picture of the long history of beer and its role in society, with some detail on recent global market developments, their causes and consequences.
- Vi Tremblay, from Oregon State University, discussed the beer industry in the United States, focusing primarily on the evolution of market structure and market power and its implications.
- Charlie Bamforth, from UC Davis, discussed beer from a social standpoint, the changing face of beer production and how society and government are influencing this change, drawing on evidence from a range of places around the world.
- Jill McCluskey, from Washington State University, and Sara Savastano, from the University of Rome, discussed the emerging markets for craft beers versus macro beers, and consumer preferences between them, from U.S. and European perspectives, respectively.

The presentations included a great mix of facts and factoids, anecdotes and analysis, that was both entertaining and informative. The engaging presentations were followed by a lively panel discussion closing with a short reception, which offered tastes of a range of local and imported beers.

Available presentations from the symposium can be found here:
http://aic.ucdavis.edu/cwe/beeronomics.html

The symposium was presented by the Robert Mondavi Institute's Center for Wine Economics, together with the Department of Agricultural and Resource Economics, Department of Food Science and Technology, and the University of California Agricultural Issues Center.

In Brief

Davis Chancellor Club Visits RMI
Over 100 UC Davis Chancellor's Club members and guests enjoyed a tour of the Robert Mondavi Institute LEED Platinum brewery, food-processing lab, and winery teaching facility on November 5. The event, held during UC Davis Parent and Family weekend, allowed a number of UC Davis parents and their students to tour the facility, as well. Visitors heard from tour hosts executive director Clare Hasler-Lewis and professors Roger Boulton and Charles Bamforth on the world-class facility. For more information on the UC Davis Chancellor's Club, please visit: http://giving.ucdavis.edu/annual_fund_dcc.html

Put up a Mug
Malt, hops, yeast, and a little of world-renowned Charlie Bamforth are all you need to create some tasty Aggie suds, brewed in celebration of Oktoberfest at the only public university in the U.S. with a Brew Master Program. One of the most popular beers, the Aggie Lager, is brewed by UC Davis alumni Jay Prahl, Sudwerks Master Brewer. The annual Oktoberfest fundraiser supports Aggie athletic scholarships. To view the full video: http://iseedavis.com/put-up-a-mug/

Climate Change Has California Vintners Rethinking Grapes
Prime California wine-country areas like the Napa Valley could soon be facing rising temperatures, according to climate change studies. So some wineries are thinking of switching to grapes that are better suited to warmer climates. But when vineyards have staked their reputations on certain wines, adapting to climate change is a tough sell. To learn more: http://www.npr.org/2011/11/02/141932301/climate-change-has-calif-vintners-rethinking-grapes

Professor Andy Waterhouse Learns How to Fully Utilize Metabolomic Tools
Professor Andy Waterhouse, a chemist in viticulture and enology and former department chair, is visiting the prestigious Istituto Agrario San Michele all'Adige near Trento, Italy. This institute was one of the institutions that published the grape genome a few years ago. He is being hosted by Fulvio Mattivi and Urska Vrhosek in the Department of Food Quality and Nutrition, who run the metabolomics platform for the institute.

This is the only metabolomics lab that is focusing on grapes and wine, although their mandate covers all crops of interest to the Trentino region, so they also do work on apples and berries. Waterhouse is learning how to fully utilize metabolomics tools for future experiments as well as to teach students the concepts important in metabolomics. He commented, "analytical research will have to be informed by this approach in just a few years or be considered second rate, so it is important for me to be familiar with this technology."

The Trentine region is in the center of the beautiful Dolomite Valley, carved by glaciers, much like Yosemite.

Edwin Frankel Publishes, "A Critical Literature Review on the Processing of Table Olives"

About 20 percent of the fruits of olive trees are used for producing table olives, but the literature on the lipid composition of extracted table olives is limited and controversial. Although the composition of olive oils extracted from various sources has been extensively reported, excessive efforts have been devoted on the use of undefined chemometric methods requiring sophisticated statistical techniques. More-reliable and sensitive chemical methods are required to analyze oils from different olive preparations, including widely ranging polyunsaturated fatty acids that affect significantly the oxidative stability of the extracted oil. To read the full article: http://onlinelibrary.wiley.com/doi/10.1002/lite.201100145/abstract

Upcoming Events

- Uncorked at the Mondavi Center, 2011–2012
- Robert Mondavi Institute / Mondavi Center Gala, March 17, 2012
- Cheese Loves Beer IV, April 14, 2012
- Terroir 2012: It's Not Just About Wine, May 2-4, 2012

Contributors to "RMI Wine and Food Bytes"

- Patricia Bailey, public information representative, UC Davis News Service, (530) 752-9843, pjbailey@ucdavis.edu
- Kim Bannister, program representative, Robert Mondavi Institute for Wine and Food Science, UC Davis, (530) 752-5171, kbannister@ucdavis.edu
- Jonathan Barker, UC Agricultural Issues Center and Center for Wine Economics, UC Davis, (530) 752-2320, jbarker@ucdavis.edu
- Ann Filmer, director of communications, College of Agricultural and Environmental Sciences, UC Davis, (530) 754-6788, afilmer@ucdavis.edu
- Dan Flynn, executive director, Olive Center, UC Davis, (530) 752-5170, jdflynn@ucdavis.edu
- Kathy Keatley Garvey, senior writer, Department of Entomology, UC Davis, (530) 754-6894, kegarvey@ucdavis.edu
- Clare Hasler-Lewis, executive director, Robert Mondavi Institute for Wine and Food Science, UC Davis, (530) 754-6349, cmhasler@ucdavis.edu
- Andrew Rosenblum, writer, Popular Science, andrewrosenblum@gmail.com
- Kabir Tumber, research associate, Agricultural and Resource Economics, UC Davis, kabir.tumber@gmail.com