



CURRENT AND FUTURE EXCELLENCE

2012–2013 ANNUAL REPORT

UCDAVIS

Robert Mondavi Institute

for Wine and Food Science

Enhancing our quality of life through wine, brewing and food sciences

A MESSAGE FROM THE EXECUTIVE DIRECTOR

The Future of Excellence

JUNE 18, 2013 marked the 100th anniversary of the birthday of Robert Mondavi—the iconic California vintner who donated \$25 million to UC Davis in 2001 to establish the Robert Mondavi Institute for Wine and Food Science.

Although Mr. Mondavi passed away before he was able to see the completion of our +\$100 million state-of-the-art facility that now bears his name, faculty, students, industry and members of the public will benefit from his generosity for decades to come. I think Bob would have been very pleased with the institute's myriad accomplishments during the 2012–2013 academic year!

Last year, we forged stronger links with industry that immediately strengthened our graduate programs. In May, Pentair became the third member of our Industry Partnership Program. Membership fees generated from partners enabled us to award two \$40,000 graduate fellowships in the name of our member companies Roll Global (Founding Member), and Del Monte Foods. The Pentair Fellow will be announced fall 2013.

Last October we launched the Honey and Pollination Center, a joint effort with the UC Davis Department of Entomology and Nematology and with support from Whole Foods. The center will focus its efforts on two main initiatives: the importance of honey and pollination to the well-being of consumers, and to spearhead and nucleate efforts to gain support and assemble teams for research, education and outreach programs. The center already produces honey, now on sale in the campus bookstores, and has launched many new initiatives, including the first-ever Mead-Making Short Course, scheduled in February 2014.

The Olive Center, now in its sixth year, continues to garner national and international attention, setting the standards for the evaluation of quality in olive oil and table olives. In addition to a trained sensory analysis panel, the center established an olive oil testing program—the only analytical facility in the United States that provides tests for two important quality indicators.

These “Centers of Excellence” have been the most effective way to meet our outreach, education and research mission and engage industry stakeholders. That was the consensus reached in a recent two-day retreat that brought together 17 members of our board of executives, executive committee, faculty, center directors, and development staff. The goal of the retreat was to vision the Robert Mondavi Institute of the future. Over the next few months, that vision will emerge and shape the Future of Excellence for the Robert Mondavi Institute for Wine and Food Science at UC Davis.



Clare Hasler-Lewis
Executive Director,
Robert Mondavi Institute for
Wine and Food Science,
UC Davis

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Cover Photo: The Palate Project, 2013
Abel Barrientes

In October 2012, the Robert Mondavi Institute Launched the Honey and Pollination Center



A crowd gathers at the bread-breaking ceremony at the opening of the Davis, Calif. Whole Foods Market

WHOLE FOODS DONATES \$10,000 TO LAUNCH THE HONEY AND POLLINATION CENTER

At the traditional bread-breaking ceremony at the grand opening of the Whole Foods store in Davis on October 24, the Honey and Pollination Center was presented with a gift of \$10,000 from Whole Foods to help launch the center.



VISION

Establish UC Davis as a global center of excellence and education on bees, honey and pollination.

MISSION

The mission of the Honey and Pollination Center at the Robert Mondavi Institute, in conjunction with the Department of Entomology and Nematology's Harry H. Laidlaw Jr. Honey Bee Research Facility, is to showcase the importance of honey and pollination to the well-being of consumers, industry and stakeholders. The center will spearhead efforts to gain support and assemble teams for research, education and outreach programs for various stakeholder groups including:

1. The beekeeping industry
2. Agricultural interests that depend on pollination
3. The food industry
4. Small-scale beekeepers
5. Urban homesteaders

SPECIFIC GOALS

1. Optimize university resources by coordinating a multidisciplinary team of experts in honey production, pollination and bee health
2. Expand research and education efforts addressing the production, nutritional value, health benefits, economics, quality standards and appreciation of honey
3. Serve the various agricultural stakeholders that depend on pollination services
4. Help the industry develop informative and descriptive labeling guidelines for honey and bee-related products to establish transparency in the marketplace
5. Elevate the perceived value of varietal honey to producers and consumers through education, marketing, and truth-in-labeling with the end goal of increasing the consumption of honey

INDUSTRY RELATIONS

Last year the Robert Mondavi Institute forged links with industry that helped strengthen our esteemed graduate programs. These connections bring UC Davis faculty closer to real industry problems, which they can help solve through a combination of scientific expertise, research support, and funding provided by industry partners for study on key issues. This past year, several industry leaders visited the Robert Mondavi Institute, including: Dupont, ETRI (Electronics and Telecommunications Research Institute), Gentech China, Leprino Foods, Silgan Containers and Sopogoy.

ELIZABETH CHIN VISITS ROLL GLOBAL



On April 12, Elizabeth Chin visited Roll Global, the RMI industry partner that is sponsoring her Ph.D. research over the next year through the Graduate Fellowship Program.

Roll Global headquarters are in Los Angeles, and it was the first stop of the day. From there, Chin and her advisor, Carolyn Slupsky, flew to Delano to tour the processing facility for Cuties, the company's sweet, seedless California clementines.

Chin's research is focused on citrus greening disease (CGD), which is considered the most severe citrus disease worldwide. Though not harmful to humans, it causes bad-tasting fruit and early death of the citrus tree. Chin is examining how the insect that transfers the bacterium that causes CGD affects the plant, and also how the plant itself changes over the course of infection.

Pentair Joins Industry Partnership Program



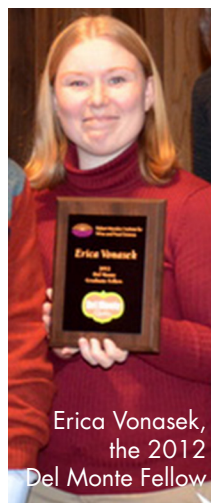
Pentair

Pentair became the third member of the Robert Mondavi Institute Industry Partnership Program in May. With revenues of approximately \$8 billion, Pentair employs 30,000 people worldwide, working with clients on seven continents. The company is a global water, fluid, thermal management, and equipment protection partner with industry-leading products, services, and solutions that fit the changing needs of its customers.

Industry Partnership Program Graduate Fellowships Awarded, Fellows Visit Industry Partners

On January 23, the Robert Mondavi Institute honored the first two Industry Partnership Program graduate fellows: Elizabeth Chin and Erika Vonasek who are Ph.D. students in the laboratories of Drs. Carolyn Slupsky and Nitin Nitin, respectively, both in the Department of Food Science and Technology. These fellowships were made possible by gifts from Del Monte Foods and founding member Roll Global. They each received \$40,000 for one year to support their research.

ERICA VONASEK VISITS DEL MONTE



In June, Erica Vonasek had the opportunity to visit the research and development facility for Del Monte Pet Products in Los Angeles. Her research focuses on the types of material interactions that remove plaque. Much like humans, cats and dogs need regular plaque removal to prevent periodontal disease.

Vonasek's visit started with a tour of the facility headed by Don Barnvos, the lab manager at Del Monte Pet Products. The tour elucidated the progression of how a pet product is first conceived, made at the bench scale, and then produced at a batch run on a plant scale.

Vonasek observed how the initial dough for dog biscuits is prepared and then processed to produce the finished biscuit. The tour ended with a brief overview of how the products are tested for preference by cats and dogs.

BOARD OF EXECUTIVES

ROBERT BOYNTON (Chair) is adjunct professor, applied economics and management, Cornell University and retired senior vice president of Marketing and Sales, Leprino Foods Company.



GREG FOWLER is senior vice president, Operations, Constellation Wines U.S. where he oversees production and winemaking.



MARGARET LAWSON is vice president and chief science officer at D.D. Williamson as well as past-president of the Institute of Food Technologists.



GLENN NEDWIN Ph.D., MoT is a senior executive with 30+ years of scientific and business experience in the pharmaceutical and industrial biotechnologies industries.



SCOTT UNGERMANN is the brewmaster for the Anheuser-Busch Fairfield brewery. He studied brewing at UC Davis.



PAUL COLETTA served as the chief marketing officer for Jamba Juice, Pinkberry and POM Wonderful. He has worked at Disney, Viacom and Hewlett-Packard.



AL GIULIANI (Vice chair) is the retired president and chief operating officer of Ready Pac Produce. He previously worked for Mars, US Foods, United Vintners and Quaker.



HAROLD MCGEE writes about the science of food. His book, *On Food and Cooking: The Science and Lore of the Kitchen*, is a standard reference in culinary schools and restaurant kitchens worldwide.



WARREN QUILLIAM is senior director, Corporate Brewing and Malting, for MillerCoors, where he oversees brewing and malting operations for MillerCoors' domestic and international operations.



JEAN-MICHEL VALETTE is currently chairman of Peet's Coffee & Tea, Inc., as well as chairman of Vinfoлио, Inc., San Francisco.



DARRELL CORTI is president of Corti Brothers, grocers and wine merchants in Sacramento.



CLAY GREGORY is chief executive officer of Visit Napa Valley and former president of Jackson Family Wines. Previously, he was general manager of Robert Mondavi Napa Valley operations.



DOUG AND JULI MUHLEMAN are long-time supporters of UC Davis and the institute. Doug is a UC Davis Foundation trustee, and heads the Dean's Task Force for Development for the College of Agricultural and Environmental Sciences.



JACK JORDAN stepped down from the board of executives due to increasing constraints on his time in his new position as vice president of Business Development of Statco Engineering. He joined the board in early 2012 when he was president of Pentair Südmo North America, a supplier of process and filtration equipment and systems to the brewing, beverage, food, and related industries.



EXECUTIVE COMMITTEE

DAVID BLOCK (Chair)

Ernest Gallo Endowed Chair, and professor and chair, Department of Viticulture and Enology, UC Davis

MICHAEL MCCARTHY

(Vice chair)
Professor and chair, Department of Food Science and Technology; professor, Biological and Agricultural Engineering, UC Davis

DIANE BARRETT

Specialist in Cooperative Extension, Department of Food Science and Technology, UC Davis

CHARLOTTE BILTEKOFF

Assistant professor, American Studies and Department of Food Science and Technology, UC Davis

LINDA BISSON

Professor and Maynard A. Amerine Endowed Chair in Viticulture and Enology, Department of Viticulture and Enology, UC Davis



David Block

"THIS PAST YEAR has brought important developments such as the establishment of the Honey and Pollination Center and events supporting our outreach to potential students of food and wine. Perhaps most importantly, the Industry Partnership Program has enrolled three companies in its inaugural year, increasing our interaction with key food and wine industry companies and providing crucial financial support for our graduate students."

BRUCE GERMAN

Director, Foods for Health Institute; professor, Department of Food Science and Technology, UC Davis

LOVELL (TU) JARVIS

Professor, Department of Agricultural and Resource Economics, UC Davis

SHARON SHOEMAKER

Executive director, California Institute of Food and Agricultural Research, UC Davis

FRANCENE STEINBERG

Professor and chair, Department of Nutrition, UC Davis

ED LEWIS

Professor and vice chair, nematologist, Department of Entomology and Nematology, UC Davis

HONORARY BOARD

Our Honorary Board is composed of a distinguished group of thought-leaders whose expertise and industry leadership will represent, inspire, and honor the institute's vision — Enhancing our quality of life through wine, brewing, and food science — for future generations.

AUGUST A. BUSCH III

FRANCIS FORD COPPOLA

DARRELL CORTI

ANN AND GORDON GETTY

AGUSTIN HUNEEUS

FRITZ MAYTAG

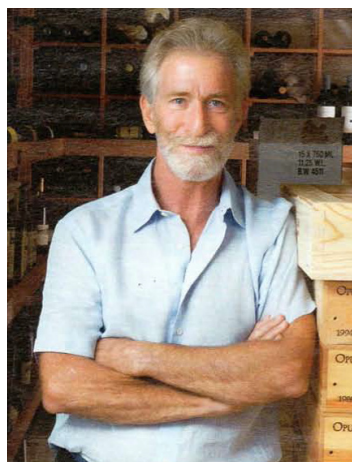
MARGRIT MONDAVI

TIM MONDAVI

PAUL MONTRONE

WOLFGANG PUCK

MARTIN YAN



Tim Mondavi, the youngest son of the late Robert Mondavi, has devoted his life's work and passion to enhancing the art of wine. A graduate of UC Davis with a degree in viticulture and enology, he joined the winemaking team at the

Robert Mondavi Winery in 1974, where for 30 years he guided all winemaking, experimentation and innovation.

In 2005, in partnership with his father and sister Marcia, Tim founded Continuum, a small artisan winery dedicated to producing a single red wine. A 33-acre vineyard on Pritchard Hill above Lake Hennessey was acquired in 2008 to be developed into the new Continuum Estate. Small production, hand-crafted and Cabernet-based, Continuum expresses four generations of Mondavi expertise and passion for wine.

NEWS AND EVENTS

Jess S. Jackson Sustainable Winery Building Dedicated

The Jess S. Jackson Sustainable Winery Building was dedicated on May 29, 2013. The facility is designed to be entirely self-sustaining, using rainwater captured from the roofs of the Robert Mondavi Institute, drawing no water from outside sources.



cell. During the day the building will rely on solar power, and at night it will switch to the hydrogen-powered fuel cell for remaining functions, all without the use of external power, making the first zero-carbon footprint winery in the world.

The winery has highly insulated walls and roofing, designed to remain below 80 degrees even after a heat event of four days of 100-degree temperatures. As such, it is among the most energy-efficient buildings in the UC system.



Photo by TJ Ushing

The one-story, 8,500 square-foot building will eventually house equipment and systems for capturing and sequestering carbon dioxide from wine fermentation, and for filtering and recirculating water for wine, beer and food processing. It is expected to be the first building at any university to be certified Net Zero Energy under the Living Building Challenge and only the second such building in California.

Future plans include the generation of hydrogen, made from water, which will be used to run a fuel



From left:
Barbara Banke, Jess Jackson

The Jess S. Jackson Sustainable Winery Building was made possible by a gift of \$3 million from the Jackson family, in memory of Jess, who passed away in 2011, and was founder of Kendall-Jackson Winery.

The Jess S. Jackson Sustainable Winery Building is the only facility of its kind in the world.



T.J. Rodgers Completes the World's First Wireless Wine Fermentation Network for UC Davis Winery



T.J. Rodgers with the wireless fermentors

Students and faculty at the University of California, Davis, are now processing wine with the world's first wireless fermentation system.

The 200-liter fermentors are individually equipped with automated temperature control, an automated system for pumping juice over grape skins when making red wines, and a sensor that monitors fermentation progress in degrees Brix—a measurement of sugar content. Data from each fermentor is transmitted wirelessly to a nearby computer control room at a programmable ratio of up to once per minute and automatically graphed on a large monitor in the control room.



Rodgers, a wine lover and winery owner, is founder, president and CEO of San Jose-based Cypress Semiconductor. Now in its third generation of refinement, the initial assembly of custom-designed stainless steel fermentors was installed just in time for the winery's first crush in 2010. Since then, Rodgers and his crew of engineers and computer experts from Cypress Semiconductor have continued to fine-tune the innovative fermentation system to meet the needs of the campus's Teaching and Research Winery, known for its environmental and technical sophistication. Rodgers and his wife, Valeta Massey, operate the Clos de la Tech winery in the Santa Cruz Mountains, specializing in Pinot Noir.

Rodgers' donation to the UC Davis winery has equipped the teaching and research facility to process 50 separate grape lots, each fermenting in triplicate. Rodgers' \$3.5 million investment in equipment and engineering is the most significant gift to the Teaching and Research Winery since its construction.

UC Davis Recognized by *Sierra Magazine* as America's "Coolest School"

In bestowing the "Coolest School" ranking, in August 2012, the Sierra Club's official publication praised UC Davis for establishing rigorous green purchasing standards; diverting nearly 70 percent of campus trash from landfills; and offering an extensive transportation system that includes the student-run, natural gas-powered Unitrans bus service, 42 miles of bike paths and 21,000-plus bike parking spaces on its 5,300-acre campus. Other ways that UC Davis has distinguished itself, according to *Sierra* magazine, include a Climate Action Plan to reduce greenhouse gas emissions below 2000 levels; a Smart Lighting Initiative to reduce electrical use by 60 percent by 2012; and buying more local and organic food products for campus dining.



Beer Foam Examined in New Book by UC Davis Brewing Expert



Foam, published by the American Society for Brewing Chemists, is the first in what professor Charlie Bamforth, Anheuser-Busch Endowed Professor of Brewing Science,

plans as a six-volume series. "Anyone who wants to know how to pour the perfect pint will find the answers here," Bamforth says. Bamforth has written numerous books on beer and brewing, including *Beer Is Proof God Loves Us*, published in 2010. (*Foam* is available at www.asbcnet.org.)

Avian Scientist Named Interim Dean of College of Agricultural and Environmental Sciences



Mary Delany, a distinguished avian geneticist who has served as an associate dean of the University of California, Davis, College of Agricultural and Environmental Sciences since 2009,

was named interim dean of the college in September 2012.

Delany first joined UC Davis in 1995 with a joint faculty appointment in the departments of Avian Sciences and Animal Science (the departments merged in 1997). She chaired the Department of Animal Science from 2005 to 2009 and was named

to the John and Joan Fiddymment Endowed Chair in Agriculture in 2009.

Neal Van Alfen Honored With Leadership Award

Professor Neal Van Alfen, who was the dean of the College of Agricultural and Environmental Sciences



(CA&ES) from 1999 to 2012, was recently honored with a leadership award from the California Agricultural Leadership Foundation. Van Alfen was one of two recipients of the 2012 Honorary Fellow Award, which recognizes individuals who have demonstrated consistent

commitment and uncommon excellence in the furtherance of education and leadership in California agriculture. He was named an honorary fellow in recognition of longtime support for the California Agricultural Leadership Program, which helps train leaders in agriculture, communities, business, and education.

Martin Yan Receives Distinguished Achievement Award from Cal Aggie Alumni Association



Celebrity chef Martin Yan, a founding member of the Robert Mondavi Institute Honorary Board, was recognized with a Distinguished Achievement Award from the Cal Aggie Alumni Association (CAAA) on February 1 in San Jose, California. Yan, a native of Guangzhou, China,

earned his bachelor's degree in 1973 and a master's degree in 1977, both in food science, from UC Davis. The master chef is one of UC Davis' most famous graduates, known for his 30 best-selling cookbooks and popular television series *Yan Can Cook*, which is broadcast worldwide.

CEO and Co-Founder of Whole Foods Market, John Mackey, Visits UC Davis



From left: Beth Ruyak, host of Capital Public Radio's Insight, John Mackey, and Craig McMurray, Managing Director, Development at Capital Public Radio

Whole Foods Market pioneer John Mackey attended a private reception in his honor at the Robert Mondavi Institute hosted by Capital Public Radio on February 23. The reception was hosted before his evening lecture in Freeborn Hall on the UC Davis campus as part of the Graduate School of Management Dean's Distinguished Speaker series. The lecture attracted more than 800 attendees.

Actress and Best-Selling Author, Carol Drinkwater, Lectures on Her New Book

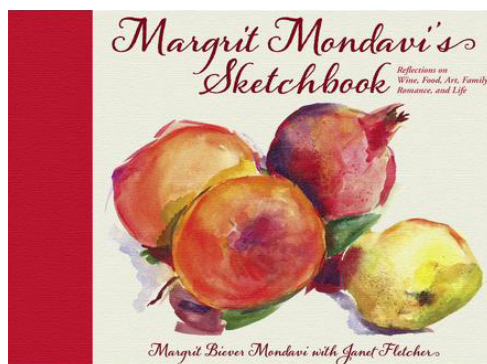
Carol Drinkwater is best known for her role as Helen Herriot in the TV series *All Creatures Great and Small*. Her interest in olive trees started when she and her film director fiancé bought an overgrown plot of land in France. After cutting back a jungle of vegetation, they discovered 68 gnarled olive trees estimated to



From Left: Carol Drinkwater, Dan Flynn, Clare Hasler-Lewis

be 4,000 years old. Her journey is chronicled in her book, *The Olive Route*. In total, she has written six books about her olive adventures with more than one million copies sold worldwide.

Margrit Mondavi Reflects on Her Life in New Book



Margrit Mondavi's *Sketchbook: Reflections on Wine, Food, Art, Family, Romance and Life* is an elegant 147-page hardcover

book that highlights a collection of intriguing personal stories, including reflections on Margrit Mondavi's life with her husband, the late Napa Valley iconic vintner Robert Mondavi, and a foreword by renowned chef Thomas Keller. Written with the help of James Beard Award-winning food columnist and author Janet Fletcher, and enriched with Margrit's own art and watercolor drawings, the book celebrates a lifelong commitment to creating a food and wine culture in Napa Valley through original, innovative programs that have become benchmarks in the culinary and art worlds.

PUBLIC ENGAGEMENT

“Uncorked” at the Mondavi Center

The 2012–13 “Uncorked” season, the third year of this partnership between the Robert Mondavi Institute and the Mondavi Center for the Performing Arts, featured some phenomenal wines paired with world-class performances.

Bonnie Raitt
September 18, 2012
Justin Vineyards & Winery

San Francisco Symphony
September 27, 2012
Chimney Rock Winery

Rising Stars of Opera
October 6, 2012
Casque Wines

From the Top
October 25, 2012
UC Davis, Oakville Station

Philharmonic Baroque
November 7, 2012
Carol Shelton Wines

David Sedaris
November 16, 2012
Senders Wines

Danu
December 5, 2012
Boeger Winery

Monterey Jazz Festival
January 18, 2013
Pine Ridge Winery

Yo-Yo Ma
January 29, 2013
Robert Mondavi Winery

Kodo
February 7, 2013
ZD Wines

Itzhak Perlman
February 16, 2013
Valley of the Moon Winery

Sarah Chang
March 7, 2013
Michael David Winery

Jazz at Lincoln Center
March 19, 2013
Ramey Wine Cellars

Bobby McFerrin
April 5, 2013
Groth Vineyards & Winery

Arlo Guthrie
April 19, 2013
Trefethen Family Wines

Christopher Taylor
May 3, 2013
Flowers Winery

David Lomeli
May 23, 2013
Francis Ford Coppola Winery

Nugget Market Hosts Best of the Barrel at the Institute



As students and faculty returned to campus last fall, so did Nugget Market’s Best of the Barrel with savory foods, and an abundance of wine and beers. The beautiful Good Life Garden at the Robert Mondavi Institute was the perfect location for guests to dine on signature Nugget Market dishes, ranging from meats grilled on site, fresh produce, specialty cheeses and an assortment of baked goods and sweet desserts.

Nugget Market’s Best of the Barrel has raised thousands of dollars for a large number of local nonprofit organizations. Last year’s event supported the UC Davis Food Science Graduate Student Association.



Walt Klenz Lectureship Features Two Esteemed Wine Businessmen

The Walt Klenz Lectureship Series is sponsored by Treasury Wine Estates, in honor of former Beringer CEO Walt Klenz. The lecture series is intended to present business-related topics at UC Davis to familiarize students with the many facets of the wine business.



From Left: Peter Byck and Walt Klenz

Peter Byck, CEO and president of Winery Exchange and graduate of UC Davis, was the featured speaker on November 29, 2012. The theme of Byck's talk was "Entrepreneurship in the Wine Industry—Balancing Risk and Reward in an Ever-Changing Market."



David Pearson in the Sensory Theater

On April 30, Opus One CEO, David Pearson, discussed the luxury brand's new initiatives as well as its objectives to expand international sales volume and increase U.S.

pricing to match higher international prices.

Taste the World Series Wine Tasting and Travelogue



David Block, leading the Australian wine tasting

On February 22, the Robert Mondavi Institute introduced a three-part wine tasting and travelogue series, "Taste the World," hosted in the Silverado Vineyards Sensory Theater.

The series raised funds for Broadening Horizons, an initiative to support historically underserved students within the departments of Viticulture and Enology and Food Science and Technology. During each tasting, guests sampled eight or nine hidden gems from three different continents, while learning about the distinct local varieties, interesting historical facts about the regions, and the terroir of the wines.

On February 22, Dr. David Block, the Ernest Gallo Endowed Chair in Viticulture and Enology, led guests through a tasting of Australian wines.

On March 22, Dr. Andrew Waterhouse led the audience through a tasting of Italian wines.

On April 26, South African native Dr. Anita Oberholster, a Cooperative Extension specialist at UC Davis, finished the series with a wine tasting and travelogue of South African wines.

STUDENT SUPPORT

Margrit Mondavi Student Fellowships



Photo: LA Confidential

It is a long-standing tradition for UC Davis to host Convocation on the first day of the new academic year. The event on September 24, 2012 was followed by a very special luncheon at the Robert Mondavi Institute to thank Margrit Mondavi for her recent gift of \$100,000 to support six

fellows and scholars in the College of Agricultural and Environmental Sciences and eight students in the Division of Humanities, Arts and Cultural Sciences.

Margrit Mondavi Fellows and Scholars in the College of Agricultural and Environmental Sciences

- Laura Cypress, senior, viticulture and enology
- Jean Dodson, Ph.D. student, horticulture and agronomy
- Byron Elmendorf, M.S. student, viticulture and enology
- Maya Hood White, M.S. student, viticulture and enology
- Gordon Walker, Ph.D. student, viticulture and enology
- Shou-Chuang Yang, M.S., student food science and technology

Margrit Mondavi Fellows and Scholars in the Division of Humanities, Arts, and Cultural Science

- Hendel Almetus, Ph.D. student, music theory and composition
- Cutcha Baldy, Ph.D. student, Native American studies
- Emily F. Davidson, Ph.D. student, Spanish and Portuguese
- Susan-Jane Harrison, M.F.A. student, theater and dance
- Sarah Messbauer, M.S. student, music
- Christopher Tong, Ph.D. student, comparative literature, music
- John Tronsor, M.F.A. student, art studio
- Barbara Zimbalist, Ph.D. student, English

Robert Mondavi Institute Hosts Third Annual Graduate Research Poster Competition

The institute hosted the third annual graduate student research poster competition on September 28.

Graduate students in the departments of Food Science and Technology, Viticulture and Enology, and affiliated graduate groups were invited to participate in the competition. Winners received a monetary award (\$1,000, \$500, \$250 for first, second, and third place, respectively) and an engraved plaque.

2012 winners:



First Place:

Daniel Schellenberg, "New primary productivity and greenhouse gas exchange for major California perennial crops"



Second Place:

Lauren Kopit, "Evaluation of the safety of *Enterococcus faecium* NRRL B-2354 used in thermal process validation"



Third Place:

Ying Choy, "Chemopreventive effects of grape seed proanthocyanidins on human colorectal cancer cell lines and in a rat model of colon carcinogenesis"

CENTERS UPDATE

The UC Davis Olive Center

www.olivecenter.ucdavis.edu

Since 2008, the UC Davis Olive Center has been “doing for olives what UC Davis did for wine.” The center has developed 69 research projects in five major areas: managing the orchard, evaluating quality, improving processing, improving methods and standards, and evaluating the olive oil industry. These activities have involved 38 UC Davis faculty and research staff, and have delivered more than \$3 million in benefits to the university and industry. The Olive Center has also yielded 20 journal publications, mentored 10 graduate students, presented 24 short courses, and reached out through dozens of events. It is the only center of its kind in the world.

OLIVE CENTER BRINGS OLIVE OIL EDUCATION TO THE SMITHSONIAN FOLKLIFE FESTIVAL



Dan Flynn

The Smithsonian Folklife Festival is an international, two-week exhibition of cultural heritage presented annually in the summer in Washington, D.C. The UC Davis Olive Center was invited to share information about its products and production process.

Led by the center’s executive director, Dan Flynn, topics of discussion included how olive oil is made, the

attributes of good olive oil and the defects of bad oil. Flynn suggested to the audience that they look for a harvest date on the label; freshness when consumed should be a significant factor to consumers.

Flynn also led several demonstrations aimed at dispelling the myths of olive oil. For instance, when

Flynn fried potatoes in extra virgin olive oil, “the sky didn’t fall.”

OLIVE CENTER LEADS THE WAY FOR OLIVE OIL QUALITY ASSURANCE



Dr. Selina Wang

Selina Wang, the center’s research director, said a separate study found that 70 percent of U.S. consumers prefer rancid oil because it

is the flavor they are used to. “Consumers have to be educated, and start demanding higher quality products,” said Wang, who earned her Ph.D. in organic chemistry at UC Davis and oversees the olive center’s laboratory.

When Flynn and Wang began the 1 1/2-year study of olive oils across California’s

supermarkets, they used a list of top-selling brands and collected oil from grocery stores from the Sacramento region to San



Francisco and Los Angeles. Falsely labeled samples pulled off grocery shelves were described by trained tasters as “musty, waste pond, baby diaper...the kind of things you don’t want to get near your salad,” Flynn said. According to Wang, consumers should avoid purchasing olive oil packaged in clear bottles because even if the oil was good when it was produced, the oil deteriorates quickly when it is exposed to light.

DAN FLYNN APPEARS ON CNN AND THE DR. OZ SHOW TO DISCUSS ECONOMIC ADULTERATION OF OLIVE OIL

Dan Flynn was interviewed on CNN’s *The Situation Room*, January 22, about the economic adulteration of olive oil and, as a result, he appeared on *The Dr.*



From Left: Shaun Kennedy, Dan Flynn, Dr. Mehmet Oz

Oz Show on February 11, to discuss the same topic in more detail. He told over three million viewers that extra virgin olive oil is the top grade of olive oil because it is natural, crushed olive juice, not altered by chemicals, solvents or heat. It was suggested on the broadcast that if olive oil placed in a refrigerator does not solidify, it implies poor quality. Selina Wang later showed this to be inaccurate; some high-quality oils do not solidify.

NEW OLIVE OIL TESTING PROGRAM AIMS TO BOOST QUALITY AND RELIABILITY

The UC Davis Olive Center recently established an olive oil testing program, developed with olive oil retailers and wholesale buyers, processors and importers in mind. The program is conducted in partnership with the UC Davis Analytical Laboratory, which will perform the chemical testing procedures. The laboratory is the only analytical facility in the United States providing tests for the compounds 1,2-diacylglycerol (DAGs) and pyropheophytins (PPPs), both of which are standards for olive oil used in Germany and Australia.

In addition, sensory analysis is conducted at the



Olive Center by a panel of at least eight trained olive oil tasters. The sensory panel, led by Sue Langstaff, owner of Applied Sensory, LLC, examines the olive oil samples for positive attributes such as fruitiness, bitterness and pungency, and defective attributes such as rancid, muddy, musty or vinegary characteristics. The sensory panel provides the standard analysis required by the International Olive Council as well as a full descriptive analysis of each oil sample.

The Honey and Pollination Center

<http://honey.ucdavis.edu>

A SWEET BEGINNING FOR THE HONEY AND POLLINATION CENTER



From left: Executive director Amina Harris, with her family

"The Bounty of Pollination," an afternoon of presentations and tastings, was a fabulous inaugural event for the Honey and Pollination Center, with speakers covering a wide swath of the center's goals, from improving pollination to beginning the foray into understanding and creating the terminology for varietal honeys.

Film director Louie Schwartzberg showed excerpts from his film, *The Beauty of Pollination*, the trailer of which has 25 million hits on YouTube. Schwartzberg eloquently explained how flowers and pollinators are involved in a dance of seduction that brings our world



into glorious color and flower. His slow-motion photography of orchid bees and bats held the audience spellbound.

Professor Neal Williams, Department of Entomology and Nematology, explained the intricacies of his research — integrated pollination strategies — bringing together combinations of native pollinators and honey bees. This model, designed to create a more efficient and sustainable pollination program, is being tested throughout the United States. Vicky Wojcik of Pollinator Partnership explained many of the issues facing natural pollinators, from bees to monkeys, and what the world would look like without the huge assortment of pollinators presently on the planet.

HONEY AND POLLINATION CENTER RELEASES UC DAVIS HONEY ON PICNIC DAY



April 20 had the bees buzzin' over at the Robert Mondavi Institute. A wonderful array of activities greeted visitors to the Honey and Pollination Center on Picnic Day.

Honeys from throughout California were featured. Visitors tried yellow star thistle honey from Northern California, rare buckeye from the foothills, wild buckwheat, pomegranate from Southern California, black button sage from the Coastal Mountains.



The Honey and Pollination Center also premiered a wonderful Northern California wildflower honey. Gathered from throughout Northern California, this light and lovely honey is now available in the bookstore outlets and online. The bookstore also sells the new Pollination Note

Cards. Each features a beautiful photograph of a pollinator at work on lovely flowers or trees. The detailed photographs are by Kathy Keatley Garvey, the communications specialist in the UC Davis Department of Entomology and Nematology. Proceeds from both of these items helps the Honey and Pollination Center continue to grow and develop new programs.

The Center for Wine Economics

<http://vinecon.ucdavis.edu>



The Center for Wine Economics at the Robert Mondavi Institute undertakes and facilitates research and education about the economics of the production and consumption of winegrapes and wine in California and around the world. Under the direction of Julian Alston, professor of agricultural

and resource economics, the center hosts a web page designed to offer comprehensive up-to-date access to information resources related to wine economics. It provides links to various other sources as well as information directly related to the center and its programs.

IS GEORGIA THE NEXT “NEW” WINE EXPORTING COUNTRY?



The former Soviet Republic of Georgia is reputedly the cradle of wine and has produced at least 8,000 vintages. It has also been a major supplier of wine to Russia for at least 200 years, but to few other countries. In 2006, however, Russia imposed a ban on beverage imports from Georgia. Since then, this relatively poor country, in which nearly half the population is rural and most farmers have a vineyard, has been seeking to develop new export markets for its wine.

Kym Anderson, who has been affiliated with the University of Adelaide in Australia since 1984, examined this subject as the featured speaker at the Center for Wine Economics seminar on January 28.



The discussion assessed the potential for growth in Georgia's wine production and exports, and outlined ways to address the challenges involved in trying to realize that potential, drawing on the experience of other countries that have expanded their wine exports in the past two decades.

Event Seeks Solutions to “Economic Adulteration” of Food

On April 23, the Robert Mondavi Institute hosted a conference focused on “Fighting Economic Adulteration in the Marketplace.” The daylong event addressed the issue of economic adulteration, and discussions of potential solutions in sessions on policy, science and media. This unprecedented gathering formed a new coalition to combat food and beverage fraud.



It could be honey cut with corn syrup, pomegranate juice weakened with other juices, or olive oil sold as extra virgin but diluted with lower-cost oil. Speakers at the conference said each is an example of “economic adulteration” of food products. They offered a number of potential solutions, including better communication among government agencies; having the FDA make food-fraud prevention and enforcement a priority; including economic adulteration under the Food Safety Modernization Act; ensuring that the industry is self-regulating; integrating food science into policy; and utilizing media to educate people about the issue in order to bring about change.

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ADMINISTRATION

Clare Hasler-Lewis

Executive director
Robert Mondavi Institute
for Wine and Food Science
(530) 754-6349
cmhasler@ucdavis.edu

Dan Flynn

Executive director
UC Davis Olive Center
(530) 752-5170
jdflynn@ucdavis.edu

Amina Harris

Executive director
Honey and Pollination Center
(530) 754-9301
aharris@ucdavis.edu

STAFF

Kim Bannister

Program coordinator

Kathy Barrientes

Director of development
(530) 752-1602
ksbarrientes@ucdavis.edu

Tracy Diesslin

*Assistant director of outreach and
education*
(530) 752-5233
tdiesslin@ucdavis.edu

Sue Langstaff

Sensory panel leader
UC Davis Olive Center
(707) 344-0254
slangstaff@ucdavis.edu

Debbie Norden

Executive assistant
(530) 754-6349
dlnorden@ucdavis.edu

Morgan Rease

Student assistant
(530) 754-6349
rease@caes.ucdavis.edu

Nicole Sturzenberger

Assistant director
UC Davis Olive Center

Andrea Thompson

Industry relations manager
(530) 752-1049
aethompson@ucdavis.edu

Selina Wang

Research director
UC Davis Olive Center
(530) 752-0612
scwang@ucdavis.edu

Evan White

*Communications
and marketing assistant*
emwhite@ucdavis.edu

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Robert Mondavi Institute

for Wine and Food Science

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CONTACT US

Robert Mondavi Institute for Wine and Food Science
392 Old Davis Road, Sensory Building
University of California, Davis
One Shields Avenue
Davis, CA 95618
(530) 754-6349; (530) 752-7080

www.robertmondaviinstitute.ucdavis.edu