

THE CATCH WIRE

A quarterly newsletter

Jordan College of Agricultural Sciences & Technology
Department of Viticulture & Enology

Vol. 2, Issue 2

May 2014



FRESNO  **STATE**

Viticulture and Enology

In This Issue

Chair's Message: The End of an Academic Year	3
Our Viticulture & Enology Team	4
Presenting our Class of 2014	5
UPDATES	
Raisin Grapes Are In	6
From the Grape to the Bottle	8
Fresno State Winery Earns Gold Medal	8
Collaboration Leads to Creativity and Success	9
CLUB NEWS & EVENTS	
Viticulture Club Springs Into Action	10
Enology Society Supports Wine Education	12
2014 Outstanding Service Awards	13
Reconnecting with Alumni	14
ALUMNI SPOTLIGHTS	
Ten Years Ago—Where Are They Now?	16
ACADEMICS	
Celebrating Academic Success	18
The Importance of ABI989	19
Students Visit Analytical and Research Labs	19
Outstanding Graduate Student Achiever	22
Outstanding Undergraduate Student Achiever	23
Global Wine Industry Internships in Italy	24
New Circulation Policy Supports Academic Success	25
RESEARCH	
Sharing Research Results	26
V. E. PETRUCCI LIBRARY	
Library Development—Planning for the Future	28
FEATURES	
Quality of Tannins in Red Wine	30
Rootstocks for Raisins	32
EVENTS	
Recent Highlights	34
Fresno State Grape Day is August 5	36
2014 Jordan Research Center Groundbreaking	37
2014 Ag One North Bay Alumni & Friends Dinner	38
In Memoriam	38
Calendar—Where You Can Find Us	39

*Graduate student Ralph Yacco working in research lab.
Photo by Cary Edmondson*

Chair's Message

The End of an Academic Year

As our graduating students complete the last of their assignments, take their final exams, and search for careers, I can't help but feel excitement and joy for them. We have just concluded another successful academic year in the [Department of Viticulture and Enology](#), and one of our greatest highlights was this year's graduating students. They have prepared themselves for successful careers in the grape and wine industries, and are now eager to use their new skills. I have had the fortune of spending a considerable amount of time with the students and I feel that we have been so lucky to have them as Fresno Staters!

This year we graduated 33 students, including 24 undergraduate students, 6 certificate students, and 3 graduate students. I am happy to say that just about all students have found positions in the industry, many with multiple offers to consider. Based upon the feedback we have been getting back, our students are well positioned to be successful in the industry. I think that all instructional staff take great pride in the role that they have in preparing their students for careers, and the viticulture and enology instructors are no exception.

I think that the end of the academic year is a great time to reflect on some of our great achievements this past year, and one area seems to stand out for me. As you all know, one of our instructional strengths is that we incorporate our 120 acre vineyard and 10,000 case winery into our lesson plans. From this, students have the opportunity to integrate their lessons into production . . . while at the university. Add to this is the instruction of information literacy by our librarian Britt Foster, and



I believe that we have created a very special instructional approach.

A good example of how our approach to instruction is producing extremely competitive students can be seen in a new course that Sonet Van Zyl offered this year. For this capstone course, our viticulture students spent the semester developing a feasibility plan for a potential vineyard site. Having just looked through the students' final projects, I am thoroughly impressed with their ability to synthesize and integrate complex information sets into a prescription for vineyard establishment. That is cool!

As we move into the summer months, we are as busy as ever. Students and faculty are busy with research projects and the staff are launching into projects that couldn't be accomplished during the school year. It is nice to know that for a bunch of graduating students, their summer plans will be revolving around their new jobs and their future. Congratulations to all of you graduates!

James Kennedy, Chair
Department of Viticulture and Enology

Email: jakennedy@csufresno.edu

Web: <http://fresnostate.edu/jcast/ve>

On the Cover

Graduate student Matthew Revelette working in newly renovated lab. Photo by Cary Edmondson

Join Our E-List

Our Viticulture & Enology Team

Faculty and Instructors

James Kennedy, Faculty Chair
Grape and wine phenolic chemistry, with an emphasis on tannins

William Edinger, Lecturer
Microbial wine spoilage, development of improved and automated detection and enumeration of wine microorganisms

Richard Gahagan, Lecturer
Regulatory issues

John Giannini, Winemaker & Lecturer
Winemaking, winery equipment and operations, production

Sanliang Gu, Faculty
Ricchiuti Chair of Viticulture
Fruit quality improvement, plant nutrition, plant-water relations, cold hardiness, cultivar evaluation, trellis systems and canopy management

Kaan Kurtural, Faculty
Bronco Viticulture Research Chair
Precision viticulture, whole grapevine physiology, mechanization of canopy management practices, vineyard efficiency

Hend Letaief, Faculty
Wine chemistry, quality improvement research, microbial wine spoilage

Susan Rodriguez, Research Fellow & Lecturer
Wine microbiology, wine sensory evaluation, grape rot quantification

Kevin Smith, Winery Marketing & Lecturer
Winery business and marketing

Roy Thornton, Faculty
Wine microbiology, wine yeast genetics and physiology, manipulation of wine flavor, and quantifying microbial rot on wine grapes

Sonet Van Zyl, Faculty
Table and raisin grape production and marketing, industry focused research for California's table grape and raisin industries

Visit our web site for a listing of adjunct faculty.

Staff

Geoffrey Dervishian, Viticulture Associate
Mechanical canopy management, crop load and irrigation stress on yield and fruit quality in the SJV

Britt Foster, Librarian, V. E. Petrucci Library

Ryan Hessler, Assistant Vineyard Manager
Raisin, table, and wine grape production

Carrie Irby, Accounting Technician

Jayne Ramirez, Administrative Assistant to the Chair and Director, and Office Manager

Mark Salwasser, Vineyard Manager
Raisin, table, and wine grape production

Terri Stephenson, Sensory Lab Manager

Shayne Vetter, Winery Intern

Cynthia Wood, Outreach and Event Coordinator

Yi Zang, Postdoctoral Research Associate
Red wine grape quality, cultural practices for red wine grapes in warm climates

Viticulture and Enology Emeriti

Sayed Badr, Professor Emeritus of Viticulture, and former chair, Plant Science Department

Kenneth Fugelsang (FERP), Professor Emeritus of Enology

Barry Gump, Professor Emeritus of Chemistry and former Adjunct Faculty of Enology

Carlos J. Muller, Professor Emeritus of Enology

Vincent E. Petrucci, Professor Emeritus of Viticulture, and former Director, Viticulture & Enology Research Center

Robert L. Wample, Professor & Chair Emeritus of Viticulture, and former Director, Viticulture & Enology Research Center

FRESNO STATE
Viticulture and Enology

Viticulture & Enology Industry Advisory Board

Jim Coleman, IAB Chair, E & J Gallo Winery

John Crossland, Vineyard Professional Services

Nat DiBuduo, Allied Grape Growers

Cathy Ference, Treasury Wine Estates

Fred Franzia, Bronco Wine Company

Glen Goto, Raisin Bargaining Association

Hal Huffsmith, Sutter Home Vineyards

Dianne Nury, Vie-Del Winery

Michael Othites, Constellation Wines, US

Rick Stark, Sun-Maid Raisin Growers

Brian Vos, The Wine Group

Viticulture & Enology Newsletter Editorial Staff

Britt Foster

James Kennedy

Cynthia Wood

Contact: 559.278.2089

<http://fresnostate.edu/jcast/ve>



www.facebook.com/FresnoStateViticultureandEnology

Presenting our Class of 2014

Master of Science

Brodie McCarthy
Xiaofan Zhao **
Sijie Zhu

Bachelor of Science

Andrew Belzer
Alberto Castillo
Colman Dennis ** +
William Guadagni
Hilda Guetierrez
Morgan Huguet
Patrick Jackson
Shaun Jue
Mario Lanza
Sean Lawson
Kristopher Lindemann

Mayra Maldonado
Lianna Martin *
Lauryn Meissner
Myles Nelson
George Olson
Erin Palumbo
Andrew Phillips
Dylan Rahn
Hannah Rahn
Kathryn Rodgers
Katelyn Schafer
Steve Smith
Shai Van Gelder
Certificate Students
Rachael Fishman
Derek Flegal

Doris Michue
Miguel Nevarez
Matt Rule
Michael Staver

** *Summa Cum Laude*

* *Cum Laude*

++ *Outstanding Graduate Student*

+ *Outstanding Undergraduate Student*

May 15, 2014

Department of
Viticulture & Enology
Annual Graduation Dinner

May 16, 2014

Jordan College of Agricultural
Sciences & Technology
Convocation Ceremony

Class of 2014



Updates

Raisin Grapes Are In

Sun-Maid Growers of California Supports New Raisin Block

We are pleased to report that with continued support from industry partners, we are making significant progress on fulfilling our vineyard redevelopment plan objectives.

Earlier this year vineyard manager Mark Salwasser and his vineyard team established the new raisin block on campus by planting approximately 6 1/2 acres of fallow land with Selma Pete vines on Freedom rootstock. This raisin variety, released by the USDA, is named after the late Pete Christensen, a Fresno State viticulture alumnus.

On April 23, raisin and table grape faculty member Sonet Van Zyl and Salwasser met with the [Sun-Maid Growers of California](#) board to share the news of Fresno State's raisin planting and discuss the department's vision for raisin education and research. "We had a great discussion with the board and appreciated the feedback that they provided. Their interest in the raisin grape

program's success at Fresno State is sincerely appreciated," said Van Zyl. Soon after the meeting, Sun-Maid generously committed to providing the necessary funding to establish the open gable trellis system for this new raisin block that will reflect today's industry standards.

"Sun-Maid has been impressed with the new leadership and future of the viticulture department and we are confident that this project will contribute to the progress of the California raisin industry."

***Barry F. Kriebel, President,
Sun-Maid Growers of California***

James Kennedy, chair of the department, is grateful to Sun-Maid for their support. "Our vineyards will expose our students to industry trends such as



Vines in the new raisin block were donated by Duarte Nursery. The irrigation system was donated by Rain Bird Corporation.

Updates

mechanization and dried-on-the-vine (DOV) systems. Having the ability to mirror the real world on our campus will assure us that our students are consistently trained in cutting edge technology and raisin production practices,” he said.

“With this new raisin acreage and trellising system on campus, there will now be so many additional ways to incorporate lessons and raisin projects into our teaching and research programs.”

Sonet Van Zyl, Fresno State

Fresno State Vineyards is a member of Sun-Maid, a cooperative that is owned by raisin growers in the Central Valley of California. Rick Stark, grower relations manager at Sun-Maid, serves on the Industry Advisory Board for the Department of Viticulture and Enology.

“The new raisin vineyard will give students the opportunity to learn the latest raisin production techniques for many years. It is great to be part of bringing raisin production back to the Fresno campus.”

Rick Stark, Sun-Maid

Raisin processing at Fresno State



Fresno State supports raisin education by providing students hands-on experience in our raisin processing plant on campus, donated in 1987 by the Joe Garabedian family and Valley Welding & Machine Works.

Fresno State remains committed to providing hands-on training in all aspects of grape and wine production. We support raisin education through several raisin industry-funded scholarships and assistantships and our students receive practical training in our vineyard and facilities. In addition, we offer our industry partners opportunities to engage with our students through field trips.

For educational purposes, Salwasser said that a portion of the raisins grown at Fresno State will be processed in our raisin plant facilities on campus. The raisin processing plant was donated by the Joe Garabedian family and [Valley Welding & Machine Works](#) and is an important part of Fresno State’s raisin education program.

Updates

From the Grape to the Bottle

The [Fresno State Winery](#) is known by many as the “Home of Tomorrow’s Winemakers.” Each semester, students and visitors who walk through the winery doors can soon see for themselves why our enology program has earned this reputation. As the first commercially bonded winery on any U.S. university campus, Fresno State’s enology facilities provide a first-class, hands-on training ground for students seeking careers in the wine industry.



Students bottle Fresno State wine



we produce is beneficial to our students by providing them with an opportunity to learn about many different varieties and winemaking styles.”

As the end of the bottling season approaches, Giannini and his team of students have bottled nearly 6500 cases with approximately 1000 more to go. “For our students, this is the final stage in their winemaking education. They have followed and participated in the process from grape to bottle,” he said. Many of these students are ready to graduate from the Fresno

“This year, the winery will produce and bottle twenty-two different wines,” said John Giannini, winemaker. “The large number of wines

Photo by Cary Edmondson

State enology program and are well prepared and excited to start their career as productive members of the wine industry.

Fresno State Winery Earns Gold Medal



Photo by Cary Edmondson

Fresno State Winery won a gold medal at this year’s [Pacific Rim Wine Competition](#) for the 2007 Saviez Syrah. The competition includes over 30 professional wine judges who conduct blind tastings of more than 2,000 wines.

The Saviez Syrah is a local wine in every sense. The fruit is sourced from Saviez Vineyards in Fresno County, and the processing and production is handled by Fresno State enology students under the guidance of winemaker John Giannini.

According to Kevin Smith, business and marketing manager, “the Saviez Syrah is a very big wine, with velvety tannins, toasted plum, blackberry and a subtle, smokey, background with hints of vanilla. It is a great stand-alone wine, or can be paired with a simple black peppered steak.”

In addition to the gold medal, the winery also won silver medals for the 2011 California Syrah and the 2010 Zinfandel. All three wines are available at the Gibson Farm Market on campus. The wines are also available for purchase and shipping online at www.fresnostatewines.com.

Updates

Collaboration Leads to Creativity and Success

In our last newsletter, we reported that the winery team had been collaborating with the Fresno State College of Arts and Humanities to create a set of wine labels for the Fresno State Winery's new **Art & Science Series**. Students in a senior graphic design class took on the task of creating a series of unique wine labels with a common theme and entering their designs into a competition hosted by the [Fresno State Winery](#).

Earlier this month, Kevin Smith announced that graphic arts student Lori Elizabeth Kirby's designs had been selected to showcase the winery's new portfolio: **Abstract Theory**,

Pythagorean Serum, and **Depth Perception**. Abstract Theory is a blend of Viognier and Semillon; Pythagorean Serum is a blend of Barbera, Sangiovese, and Syrah; and Depth Perception is a blend of Cabernet Sauvignon, Merlot, Cabernet Franc, Petit Verdot, and Malbec, said winemaker John Giannini. These wines were produced in limited quantities and will be released first to Fresno State Wine Club members in their fall shipment. If quantities remain, the wines will be available in December at the Gibson Farm Market on the Fresno State campus. Join the winery's email [newsletter](#) (<http://bit.ly/1wA8IFt>) to receive more information on the release of these and other student-crafted wines.

Another excellent example of how the winery team collaborates with other creative teams on campus is the recent release of a [YouTube video](#) (<http://bit.ly/1o2jM8A>) that was created by students in Candace Egan's video production class. The "Fresno State Wine Guy" parody will be used by the Fresno State Winery as part of their



The labels for the three wines in the new Art & Science Series were designed by Fresno State graphic artist student Lori Elizabeth Kirby.



public relations campaign. Video team leader Elly Walker said, "Our goal was to target students on our campus and raise awareness of the winery. It was a great opportunity for our team to work with fellow students and faculty members to create a product that would benefit the winery."

Watch this humorous [YouTube video](#) (<http://bit.ly/1o2jM8A>) that features students from the drama and video production programs.

Fresno State Wine Guy



Club News & Events

Viticulture Club Springs Into Action

Viticulture Club members have the distinct privilege of being a part of the oldest student organization on the Fresno State campus and are excellent ambassadors of Fresno State's program and the grape and wine industry.

These students often set themselves apart by engaging with many of our alumni and industry friends year round. "The experience that our members receive by volunteering or organizing events helps them develop essential leadership and team building skills," said faculty advisor Sonet Van Zyl. From road trips to service projects, the following highlights represent their commitment to education and their dedication to serving the viticulture and enology programs at Fresno State.

In March, students provided industry support by volunteering at the [San Joaquin Valley Winegrowers Wine Competition](#) at [Ramos Torres Winery](#) in Kingsburg and the [WiVi Central Coast Wine and Viticulture Symposium and Trade Show](#). Several members also traveled from Fresno to [Cardella Winery](#) for a day trip to meet with winemaker and alumnus Nathan Cardella.

"We toured Cardella's vineyards and learned about how west side area farmers are dealing with the effects of the current water shortage."

Patrick Tachella, club president

Cardella said that many are forced to use poor quality, highly saline well water for irrigation this year because surface deliveries are being withheld by state water management officials. Students also toured the winery and discussed key concepts that are important when starting a small-scale commercial winery and marketing it as an event center.

The club accepted a great networking opportunity by pouring wines for the San Joaquin Valley Winegrowers on April 3 at the [Visalia Wine and Cheese Walk](#), a large public wine tasting. This event put club members face-to-face with typical wine consumers and enabled them to build their skills as they conversed about wine. On April 3, members of the club also represented the student body of the department at one of the Viticulture and Enology Alumni Association's ([VEAA](#)) regional gatherings at [Freemark Abbey](#) in Napa County. "We are glad to be a part of these socials where we can get to know many of our alumni," said Derick Webb, incoming president. "We appreciate all that the alumni group has done to support our library and department and look forward to being a part of this organization when we graduate."

Many of our own alumni will recall being a part of the annual FFA vine pruning or vine judging contests as a student or as an alumni judge. In February and again on April 12, students in the club and industry judges were up early in the morning to greet the high school student competitors at the FFA Vine Pruning and FFA Vine Judging contests on campus. It is the club's responsibility to host and organize several high school teams and industry judges who come from all over California to participate and show their support for agriculture.

Another popular activity is the club's annual educational road trip to various grape growing regions in the state. During spring break in April students blended some fun with a lot of learning as they visited several vineyards and wineries in Amador, El Dorado Hills, and Lodi AVAs. "We want to thank everyone who took the time to meet with us along the way. Your time, knowledge, and hospitality are sincerely appreciated," said Tachella.

Club News & Events

This trip was made possible through funds raised at the Viticulture Club's annual BBQ in November:

April 12-13: We camped in an old vine Zinfandel vineyard at the Lauchland Ranch in Lodi before meeting with Tom Hoffman of Heritage Oak Winery in the morning for a tour of the facility. After having a long talk with Wilbur-Ellis PCA Steve Quaschnick about vineyard pests, management and what it's like to be a pest control advisor in the grape industry, we spent the evening with alumnus Dave Langone of Vino Farms to talk about powdery mildew control. On Sunday night we stayed at the home of club president Patrick Tachella and were treated to a proper Italian dinner....lasagna!

April 14: On Monday morning we toured Michael David Winery and had the opportunity to meet with owners Michael and David Phillips before having lunch with alumnus and assistant winemaker Bryce Willingham of Turner Road Vintners. In the afternoon, we visited Sorelle Winery, the family winery of current student Ron Justice before tasting some wine and talking with Steve Felton, owner of Clinker Brick Winery. Our last stop was at Macchia Winery for some big Zins and Barbera.

April 15 We met with Fresno State alumnus Mike Long and his father at Amador Cellars for an extensive tour of the winery and vineyard. After a tasting at Karmère Vineyards and Winery, we met with winemaker Mark Mackena at Andis Winery for a very informative and down-to-earth discussion about making wine using non-traditional storage containers like cement tanks and portable totes known as Flex tanks. We stayed at Jackson Rancheria Casino Resort on Monday and Tuesday nights before heading back to Fresno.



Presents:

Join us Sunday, April 27, 2014, at the Department of Viticulture & Enology (next door to the Fresno State Winery on the north side of Barlow, between Cedar & Maple)

All proceeds benefit the V. E. Petrucci Library

Register at <http://tinyurl.com/nxhyzfu> or scan the QR code below.

Must register by April 1st to receive an event t-shirt

Check-in & walk-up registration begins at 7:30 a.m.
Race begins at 8:30 a.m.

VINEYARD 5K

run • walk • stroll

13 and under:	High School & College Students:	Non-student:
\$20	\$25	\$35

Walk up registration is an additional \$5

Save the Date Nov. 15, 2014 - Viticulture Club BBQ

Upon return to Fresno, members of the club put the finishing touches on the April 27 Papa Petrucci 5K in the Fresno State Vineyards. At 89, Professor Petrucci was there to kick off the run and congratulate each participant as they crossed the finish line! Proceeds from the 5K will be matched by Bob and Pam Wample's pledge to support the Viticulture and Enology Alumni Association (VEAA) and the V. E. Petrucci Library. "We loved having so many friends and alumni there to support the library," said James Kennedy, department chair.

Plans for the new Jim & Anita Duarte Greenhouse project are also moving forward with the department and university farm. Fundraising efforts will continue into the fall semester or until goals are reached. For more information on how to support this project, contact the club at fresnostatevitclub@gmail.com.

Find the Fresno State Viticulture Club on Facebook at <http://www.facebook.com/FresnoStateViticultureClub>.



Club News & Events

Enology Society Supports Wine Education

Let's have a big round of applause for the 2013-2014 **Enology Society** officers for another successful semester filled with opportunities to learn about different grape varieties and winemaking styles! Under the direction of Andrew Phillips, president, the Society worked together this spring to line up yet another impressive list of guest winemakers each Thursday evening at Fresno State. Among the featured guests were alumni Oren Kaye from the research and development winemaking team at **Constellation**, and Bo Barrett from **Chateau Montelena Winery**. As a member and officer Phillips said, "Our meetings are more than just tastings. We look forward to having a packed room of wine enthusiasts who want to learn and develop their palates." If you missed out this semester, there's no need to worry. Individuals over 21 years of age can become an Enology



Society member this fall when meetings resume in September. Other recent activities included their annual social event of the year, the Bud Break Bash, where members had fun networking with friends and alumni to raise funds to support the Society. In April they also displayed their dedication and teamwork skills by organizing a tri-tip booth for three days at one of Fresno State's largest annual celebrations, Vintage Days. Proceeds from the food booth will be donated to the Viticulture and Enology Alumni Association (VEAA) to support the V. E. Petrucci Library and will be matched by Bob and Pam Wample's pledge (see page 15).

"In my first year, I am very proud to be a part of this hard-working group. They did an excellent job of promoting the wine industry and the education of wine," said Hend Letaief, faculty advisor.



Enology Society officers 2013-2014 (left to right): Bill Guadagni, Roy Oneto, Miles Nelson, Lauryn Meissner, Andrew Phillips, Stephanie Reynolds, Andrew Belzer, Shaun Jue, Randy Gardenhire. Not photographed: Rachael Fishman. Find the **Enology Society of Fresno** on Facebook at <http://www.facebook.com/EnologySocietyofFresno>.

Club News & Events



2014 Outstanding Service Awards

DEDICATION SERVICE LEADERSHIP

On May 15 at the Department of Viticulture and Enology's annual graduation dinner the outgoing presidents of the [Viticulture Club](#) and [Enology Society](#) were asked to come to the stage to be recognized for the leadership they have demonstrated this year. It was then their honor to present awards to outstanding juniors and seniors for their dedication, service, and leadership. Congratulations to all of these fine students for their contributions.

Viticulture Club



Recipient: JACQUELINE CHENOWETH

2014 Richard Hansen Outstanding Junior Award

Recipient: STEVE SMITH

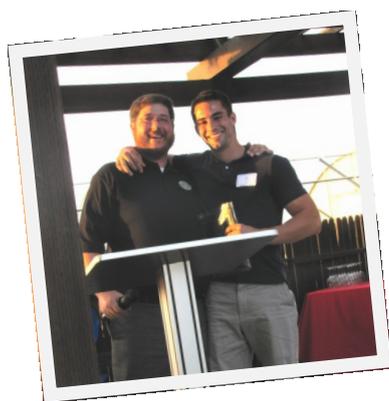
2014 Elmer Snyder Outstanding Senior Award

Viticulture Club awards were presented by Patrick Tachella, outgoing president



Congratulations to the newly elected 2014-2015 Viticulture Club officers: Derick Webb, president; Kelli Williamson, vice president; Sadie Cardiff, treasurer; Jacqueline Chenoweth, secretary; Seamus Cronin, sergeant-at-arms; Rj Wilson, historian.

Enology Society



Recipient: ROY ONETO

2014 Outstanding Junior Award

Recipient: LAURYN MEISSNER

2014 Outstanding Senior Award

Enology Society awards were presented by Andrew Phillips, outgoing president



Congratulations to the newly elected 2014-2015 Enology Society officers: Randy Gardenhire, president; Lauren Barrett, vice president; Seamus Cronin, treasurer; Roy Oneto, secretary; Kelli Williamson, social chair; Stephanie Reynolds, compliance; James Campbell & Derek Sanchez, acquisitions; Horacio Lopez Segura & Ethan Howell, food chairs.

CONGRATULATIONS

Club News & Events

Reconnecting with Alumni

The [Viticulture and Enology Alumni Association](#) (VEAA) has been on the road this spring meeting with former students of the Fresno State viticulture and enology program. Social gatherings were organized in four regions of California where we experienced good wine, food, and conversations with our alumni and friends. In an effort to stay connected, the VEAA made a decision earlier this year to travel to regions where many of our alumni live and work. “We recognize that our alumni are all over the state, country, and world so we want to make it easy for everyone to have a voice and be a part of the VEAA, said Bob Wample, president. “It’s as simple as knowing where our alumni are and keeping in touch,” he added. The regional events focused on coming together as friends. Our common bond is Fresno State’s viticulture and enology program and there certainly was a strong sense of viticulture and enology “Bulldog” pride at the regionals. James Kennedy, chair of the Department of Viticulture and Enology and some of the staff and students also attended the four socials. “One of the most important things the department can do is to listen to and work closely with our former students,” said Kennedy.

The VEAA and department are grateful to our hosts for providing venues, wine, and food for these informal gatherings: [Constellation Brands](#) and Keith Horn at [Simi Winery](#), Sonoma County; [Jackson Family Wines](#) and

SONOMA COUNTY—APRIL 2



Host: [Simi Winery](#), Keith Horn

PASO ROBLES—APRIL 30



Host: [Le Vigne Winery](#), Michael Baretto

NAPA COUNTY—APRIL 3



Host: [Freemark Abbey—Jackson Family Wines](#), Mariano Navarro

LODI—MAY 14



Host: [Michael David Winery](#), Kevin Phillips

Club News & Events

WATCH NEW VIDEO ONLINE AT VEAAFRESNO.ORG

Mariano Navarro at [Freemark Abbey](#), Napa County; Michael Baretto at [Le Vigne Winery](#), and Dan Rodrigues (Vina Quest) in Paso Robles; and Kevin Phillips and Jeff Farthing at [Michael David Winery](#) in Lodi. Based on feedback from these events, the VEAA is making plans for additional regional activities and events in these and other areas. If you are interested in being a part of this exciting project to establish regional alumni groups or if you have ideas for the organization, please email VEAA Secretary Cynthia Wood at cynthiaw@csufresno.edu.

All of our former students are encouraged to join the VEAA and help support the mission and activities of this organization that represents viticulture and enology alumni and friends all over the world. **Join today** and you will be eligible to vote in the upcoming election of officers.

ALUMNI CHALLENGE UPDATE

At the Unified Wine & Grape Symposium in January this year we announced that Bob and Pam Wample had made a \$40,000 personal donation to show their support of the V. E. Petrucci Library. Their gift is conditional upon the receipt of matching gifts up to \$40,000 by December 31, 2014. The VEAA is a 501c3 non-profit organization and all donations are tax deductible.

The [VEAA Alumni Challenge](#) is in full swing and in approximately four months we have raised \$12,305. This includes a recent \$2,000 gift by the Viticulture Club from their Papa Petrucci 5K proceeds. The Enology Society has also generously pledged to match the Viticulture Club's donation. **\$20,000** is needed by June to be on track with our goal of raising \$40,000 by December 31.

The VEAA challenges all viticulture and enology alumni and friends to give what they can to support the V. E. Petrucci Library! Gifts will be matched with the Wample's donation. Your help is needed to sustain this valuable resource within the department at Fresno State that serves our students and the grape and wine industry. Please give online today!

Watch our new video on YouTube: <http://bit.ly/YouTubePetrucciLibrary>



ELECTIONS COMING SOON

With today's technology, the VEAA is making it easy for our alumni and friends to serve on the VEAA Board. Understanding that our alumni live all over the state and country, officers will no longer be required to travel to Fresno for VEAA meetings. Instead, alumni will be able to contribute from their homes or offices by phone or Skype which will help maintain a balance in all of our lives! The Board consists of two components: 1) The Executive Board—President, Vice President, Treasurer, and Secretary, and 2) the slate of Directors-at-Large. We hope that our Board will represent many grape growing regions where our alumni reside.

The VEAA is preparing for their elections to fill the offices of President, Vice President, and several Directors-at-Large this summer. We are seeking nominations on our VEAA website at veaafresno.org. If you are an alumni or friend, we hope you will consider being a part of growing our membership and network. We are committed to bringing everyone together for some fun while we support the V. E. Petrucci Library and department!

NEW VEAA LIFETIME MEMBERS Since 2013

Bryan Anthony, Escalon
Craig Calandra, Fowler
Brian Clements, Windsor
Melissa Costa, Soledad
Anthony Cubre, Fresno
Franz DeKlotz, Rancho Mirage
Linda Glassman, Fresno
James Kennedy, Clovis
Vincent Petrucci, Fresno
Oscar Ramos, Kingsburg
Pat Ricchiuti, Clovis
Jim Spinetta, Plymouth
Bob Wample, Clovis

Alumni Spotlights

Ten Years Ago—Where Are They Now?

Jeff Farthing, is the first person in U.S. history to receive a M.S. in viticulture and enology from the Department of Viticulture and Enology at Fresno State in 2004. A native of Laguna Beach, California, Jeff has made wine from Madera County to Shenandoah Valley, from Amador to Napa Valley, to Lodi. Jeff currently holds the position of winemaker and production manager at [Michael David Winery](#) in Lodi—the 29th largest wine producer in North America, making such brands as the *7 Deadly Zins* and *Freakshow Cabernet Sauvignon*. He is also a partner and the director of winemaking at [Purple Corduroy](#), which niche markets wine into southern California beach communities. Jeff's thesis at Fresno State on high sugar fermentations with commercially available yeast strains was published in scientific journals and presented at the national conference of the American Society for Enology and Viticulture. Other conferences have invited Jeff to share his winemaking knowledge including the Fresno State's International Wine Microbiology Symposium and the San Francisco Zinfandel Advocates and Producers (ZAP) Festival. His strength in the wine business is his hands-on winery experience and extraordinary sensory perception to develop award-winning wines, garnering gold, double gold and best-of-class honors at some of the world's largest and most prestigious wine competitions, as well as 90+ point wines in household name wine periodicals. "Without a doubt, the success that I have enjoyed in the wine industry began with the opportunities that were available at Fresno State," said Jeff. "As a student in the Viticulture & Enology Department, there are so many resources to put all of the building blocks in place to launch a great career. From assistantships to scholarships, academic experience to hands-on experience and the incredible network of industry professionals that stems from a legacy steeped in agriculture, the Bulldog experience is simply AWESOME!"

**JEFF
FARTHING**
1st
Outstanding
Graduate
Student

After receiving her enology degree from Fresno State in 2004, **Gina Oberti Richmond** made "big mountain reds" at Spring Mountain Vineyards where she was mentored by Jac Cole (Fresno State grad) and Leigh Meyering. In 2005, Gina had the opportunity to intern at Trinity Hill Winery in Hawke's Bay, New Zealand where she helped to make award-winning Chardonnay and Syrah from some of the best vineyard land in the country. Upon return to the States in the fall of 2005, Gina began working for Hall Wines in St. Helena, creating and managing their custom crush program for about 2 1/2 years. "I met some great consulting winemakers and worked with consulting winemaker David Ramey and the great team at Hall to make some fantastic wines," she said. In 2008, she accepted a new assistant winemaker position at [X Winery](#) where she was responsible for creating all of the quality control measures and standard operating procedures. She has now been there for six years and has helped grow the business from approx. 20,000 cases to 80,000 cases. "X Winery is primarily a private label business, which has been a learning experience. It is quite different from a standard winery. I taste a lot of bulk wine and do a lot of blending," she said. In 2008 Gina also helped a neighbor in Suisun Valley build his own garage winery, [Mangels Vineyards](#). She still works with him today, tweaking the protocols to improve quality and making sure the wines are stable through aging. "Fresno State benefited me by providing real world experience through the winery on campus. I had never worked a harvest before coming to Fresno State. Being able to know exactly what needed to be done in the cellar, in the lab, and during tastings and blending trials was a real asset. I was ready to work with little training and it freed me to ask better questions than, "How do you do that?" Gina is married and has two daughters.

**GINA
OBERTI**
1st
Outstanding
Undergraduate
Student

A look back in time



In May 2004, the Fresno State Department of Viticulture and Enology proudly presented its first outstanding graduate and undergraduate achiever awards to two students who exemplified meritorious service, leadership, and achievements related to the fields of viticulture and enology. On this tenth anniversary, we are proud to spotlight the careers and achievements of these two deserving recipients, Jeff Farthing and Gina Oberti Richmond.

Academics

Celebrating Academic Success

Each May, there is a little “pomp and circumstance” around the [Department of Viticulture and Enology](#) as the semester ends and we make plans for our annual graduation dinner celebration. The word “pomp” can be defined as a display of magnificence and splendor and the word circumstance has been used to define the “fuss” that is made about an important event. For us, it seems fitting to use these words to describe the excitement that we feel when preparing for such a meaningful event for our graduates.



Guests enjoy a glass of wine and some appetizers before dinner

On May 15 our beautiful lawn and gazebo area came alive with over two-hundred family members, friends, and industry guests for dinner. Many traveled long distances to Fresno State to celebrate with their special graduate. The [San Joaquin Valley Winemakers](#) group generously sponsored the event that was catered by [Pardini's](#) and featured Fresno State ice cream for dessert.

So what makes the viticulture and enology graduation dinner so unique? It's that personal touch that comes with being a part of our department. It's the sincere feeling guests get when department chair James Kennedy personally recognizes each of the members of the class often with cheers and tears of pride from the audience.

“Before the dinner, we ask each graduate to answer three simple questions. I enjoy reading their responses to the crowd as they come to the stage to be recognized,” Kennedy explained. “The students’ words provide some humor and insight into who they are. This portion of the evening has become a tradition that we all look forward to,” he said.

What are your plans after you graduate?

Xiaofan Zhao and Cole Dennis received the department's Outstanding Graduate Student Achiever and Outstanding Undergraduate Achiever awards for 2014, respectively. Zhao and Dennis had the privilege of pouring a celebratory glass of wine to each graduate for the annual toast at the end of the evening.

Patrick Tachella, president of the [Viticulture Club](#) and Andrew Phillips, president of the [Enology Society](#) also presented awards to several students for the leadership roles they have played in these organizations (see page 13 for details).



James Kennedy begins to call the graduates to the stage

What is your favorite Fresno State memory?

Thirty-three students in the class of 2014 will soon make their professional mark on the grape and wine industry. Congratulations to each and every one of them on their academic achievement!

Photos of the 2014 graduation dinner celebration can be found on our department's [Facebook](#) page at <https://www.facebook.com/FresnoStateViticultureandEnology>.

Academics

The Importance of AB1989

The California State Assembly approved a bill on May 15 that would make it legal for underage college students majoring in wine and beer production to taste alcoholic beverages in their classes. The Assembly Bill (AB1989), lead by Democratic Assemblyman Wesley Chesbro of Arcata, is now on its way to the Senate. According to Chesbro, some students are unable to graduate in four years because some of their required classes are restricted to students 21 and older.

If approved by the Senate, several universities who offer winemaking or brewery science degrees, including Fresno State, will be able to permit students 18 years and over to participate in tasting in their classes. This would allow students to develop and identify sensory characteristics including varietals, regions, and flaws that are an important part of winemaking. “If you follow our curriculum—and on paper, students could begin palate development in their second year—currently they’d have to wait until they are 21. What this means for Fresno State as well as the other educational programs in California is that our students are not spending as much time with palate development as they could be,” said James Kennedy, chair of Fresno State’s Department of Viticulture and Enology.

“From our perspective, the desire to have AB1989 passed is to ensure that we are doing our best to prepare our students for successful careers in the wine industry,” said Kennedy.



AB1989 would permit students majoring in enology to taste and spit as part of their academic training

Students Visit Analytical and Research Labs

On March 28 Hend Letaief’s wine analysis class visited the [E & J Gallo Winery](#) Modesto facility and took a tour of their analytical and research labs. The students were impressed by the size of the facility and the number of analytical instruments. It was very rewarding to see how a large company deals with conducting analyses on the grapes and wines they make. Gallo operates some of the largest wineries in the world and careful analysis of their products is important. “Gallo produces hundreds of wine brands as well as spirits and they are very concerned with tracking parameters from grape to bottle to ensure quality standards,” said Letaief.

“After the visit the students expressed an interest in advanced analytical methods and also in exploring other professional areas with more focus on research and development. Many of them found the sensory lab to be one of the most interesting as it stood out from the basic chemistry of wine and put more creativity into the future of wines,” she said. Overall, this trip provided the students with an interesting insight into Gallo’s production process. The advancements and equipment that Gallo has access to is what makes it capable of being one of the world’s largest exporters.

VITICULT
&
ENOLOG



URE
GY

FIRE
EXTINGUISHER
INSIDE



Academics

Outstanding Graduate Student Achiever

Xiaofan Zhao has a lot to be excited about these days. Her dreams of coming to the United States of America to pursue her master's degree and finding a job in the wine industry have come true. On May 17, Xiaofan graduated from Fresno State with a Master of Science degree in viticulture and enology. Just days before, she was named the **Department of Viticulture and Enology's 2014 Outstanding Graduate Student Achiever** and was also recognized for this achievement on May 16 at the Jordan College of Agricultural Sciences and Technology's 45th Annual Convocation ceremony.

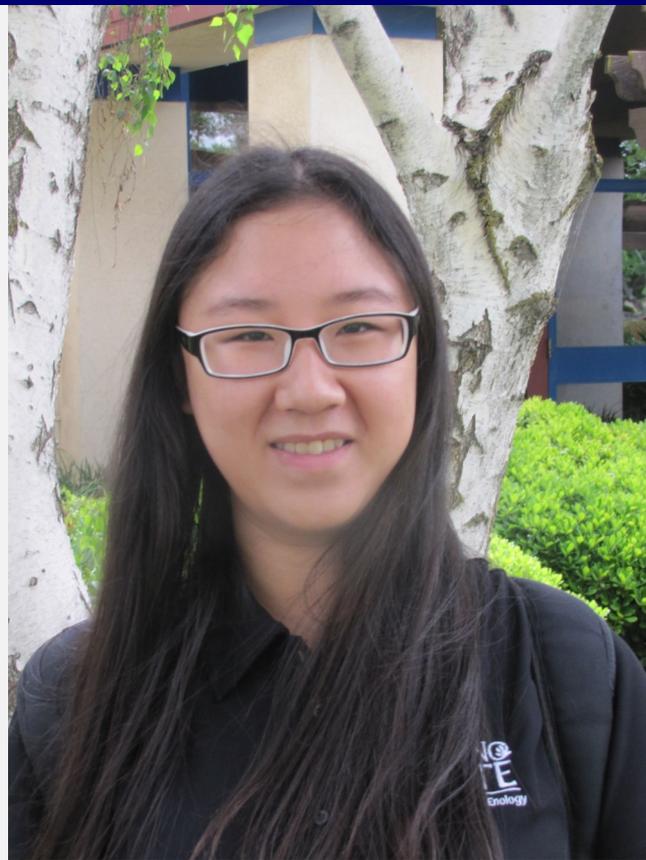
Xiaofan grew up in China and received her B.S degree in viticulture and enology from Northwest

A&F University in Yangling. After completing a two-month internship at a large winery facility in China, she decided to go to Fresno State to continue her education in the fields of viticulture and enology.

While at Fresno State, she worked on two research projects under the direction of viticulture faculty Sonet Van Zyl and adjunct faculty Joe L. Smilanick. Smilanick is a research plant pathologist with the USDA Agricultural Research Service in Parlier, California. The projects focused on pre-harvest or postharvest table grape quality control.



Xiaofan Zhao, Master of Science



[Link to YouTube Video interview with Xiaofan](http://bit.ly/ZhaoVideo)
(<http://bit.ly/ZhaoVideo>)

Her work on “Chlorine Dioxide Sachets for the Control of Postharvest Decay of ‘Crimson Seedless’ Table Grapes” was presented at the 2013 American Society for Horticultural Sciences Annual Conference in Palm Desert, California. She also presented her research “Influence of Cluster-directed Applications with Five Potassium Salts on the Quality of ‘Sweet Scarlet’ and ‘Scarlet Royal’ Table Grapes” at Fresno State’s Graduate Research and Creative Activities Symposium in May of this year.

“I really enjoyed my study and life in the Department of Viticulture and Enology. I have learned a lot and I really appreciate the help I received from the faculty, staff, and other students,” said Xiaofan.

Xiaofan has accepted a position in the grape and wine industry at the Wine Group. We congratulate her on her many accomplishments and wish her continued success in her career!

Academics

Outstanding Undergraduate Student Achiever

We are proud to introduce you to Cole Dennis, the **2014 Department of Viticulture and Enology's Outstanding Undergraduate Student Achiever**. Cole graduated in May 2014 with a Bachelor of Science degree in enology.

Cole grew up in Cincinnati, Ohio where he attended a college preparatory high school and graduated as one of the top in his class. He was also an avid swimmer and was on the swim team for four years. "My love of wine began as a simple science fair project nine years ago and I have been passionate about it ever since," said Cole. "I decided to pursue wine-making once my parents suggested that I follow my dreams."

"My involvement with the Fresno State Winery has been invaluable. It has been the most formative experience that I have been a part of at Fresno State. I believe that it is essential to spend time in the cellar to enhance the learning that occurs within the classroom," said Cole.

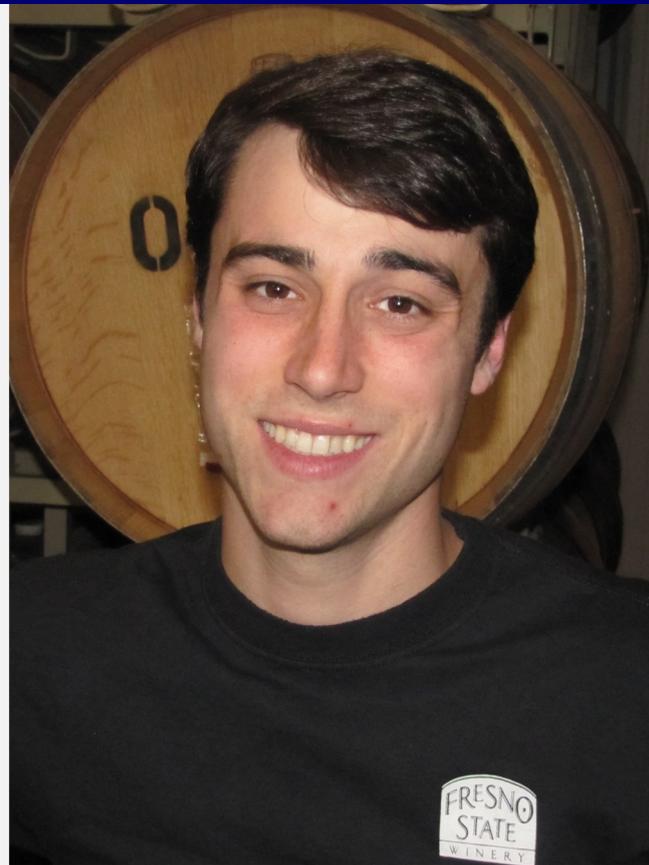
Cole is considering graduate school someday, but for now has accepted a position at a winery in the Finger Lakes region of New York.

Congratulations to Cole on his outstanding academic success!

Colman Dennis, Bachelor of Science

With the honor of receiving the university's prestigious President's Honors Scholarship through the Smittcamp Family Honors College, he and his family deemed Fresno State the best choice of all the universities that he could attend.

"My experience with the Department of Enology and Viticulture has been nothing short of wonderful. The teachers are quite knowledgeable and are more than willing to help the students understand any concept that troubles them," he said. In addition to his classes, Cole has remained involved in many organizations and activities. For three years he was a member of the Viticulture Club where he enjoyed being a part of several industry-related events. He was also a familiar face around the Fresno State Winery, learning as much as he could from winemaker, John Giannini.



[Link to YouTube Video interview with Cole Dennis](http://bit.ly/VideoCDennis)
(<http://bit.ly/VideoCDennis>)

Academics

Global Wine Industry Internships in Italy

The Fresno State Department of Viticulture and Enology is committed to providing students with a global perspective of the grape and wine industry through study abroad programs. On June 15 of this year ten students from several North American colleges and universities, including Fresno State, will embark on a unique seven-week global wine industry internship program in Italy. The program is being offered through the Department of Viticulture and Enology. Students will receive six units of credit through Fresno State's Division of Continuing and Global Education.

“What makes this program unique is that all internship placements are customized based on each student's area of study or interest,” said James Kennedy, chair. Once students arrive in Italy, they will be assigned an individual internship project in a vineyard winery, wine store, tasting room, wine and tourism association, or other related company or organization. “Our program partner has been Catherine Hanley of E.V.E. Abroad,” said Kennedy. For over a year, Hanley has been building grape and wine industry relationships and identifying cooperators in the Puglia region who will ultimately provide a practical internship environment for all of our students. In addition to the internship, students will be required to work effectively as a team, utilize research skills, identify business challenges and make recommendations for a specific region or setting, and prepare written and oral reports.

Students who were selected to participate in this program represent Fresno State, Arizona State, Oregon State, UC Davis, and the state of Virginia's Longwood University. There will be many opportunities for them to share their knowledge and perspectives based on their own academic backgrounds that will include enology, viticulture, ag business and ag education, business administration and management, chemistry, and food science and technology.

In 2013, Kennedy traveled to Puglia to develop the course content and expected learning outcomes for the program. He will also serve as the course instructor, responsible for all assignments and grading. The Puglia region will be perfect place for students to experience the historical and cultural context of Italy, while gaining a hands-on, global understanding of the grape and wine industry.



For details, visit the [Department of Viticulture and Enology](http://fresnostate.edu/jcast/ve) website at <http://fresnostate.edu/jcast/ve>.

FRESNO STATE
Continuing and Global Education

Academics

New Circulation Policy Supports Academic Success

The [V.E. Petrucci Library](#), located in the Department of Viticulture and Enology at Fresno State, announced earlier this spring that beginning April 1, they would be checking out books from the library collection. Students, faculty, staff, and community members are now able to borrow books from the wines and vines-focused library using their Fresno State ID card or [community borrower's card](http://bit.ly/1rqPYYS) (<http://bit.ly/1rqPYYS>).

Librarian Britt Foster said this improved service is a convenient feature for students. "People lead busy lives. Students juggle classes, jobs, homework, friends and family. This is one way the Petrucci Library can support their academic success-- by making it easier for them to access and use resources."

Foster also expects circulation will increase the use of the collection by the grape, wine, and raisin industry. "We get book borrowing requests from local growers and brokers, and until now, haven't had the structure in place to offer that service to industry. The ability to have a great resource in hand at their desk or in the field is something we're very excited to make possible."

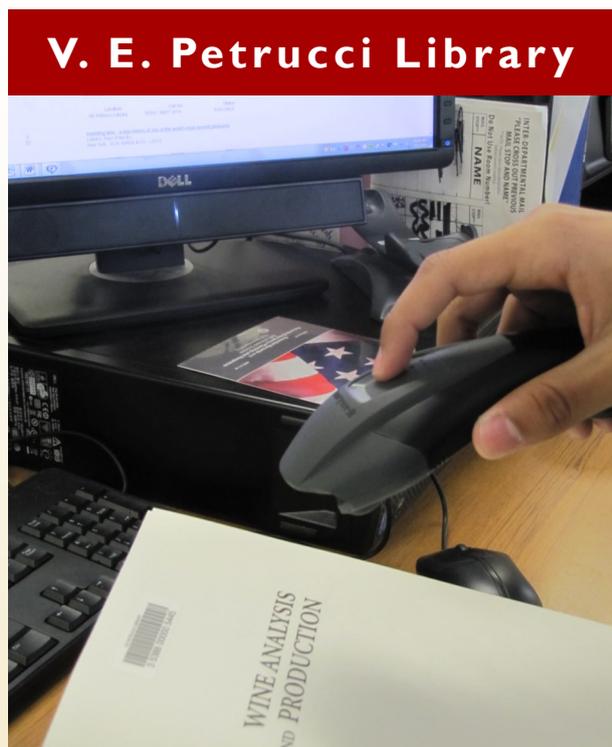
Members of the community are able to check out books using a community borrower's card, a service offered by the Fresno State campus library, Henry Madden Library. Madden Library has been a key partner in circulating the Petrucci collection. Henry Madden Library faculty and staff worked with Foster to add Petrucci Library collection records to the Madden Library catalog, making Petrucci Library records searchable internationally in addition to providing the infrastructure necessary to make book borrowing possible.



Library patrons may now check out books from the Petrucci Library

For more information on how to search the catalog and borrow books from the V.E. Petrucci Library, please visit <http://www.fresnostate.edu/jcast/petruccilibrary/collection>.

To learn more about the V.E. Petrucci Library and its services, please contact Britt Foster by email brfoster@csufresno.edu or phone 559.278.5388.



Research

Sharing Research Results

A big part of the success of the viticulture and enology program at Fresno State is its research component. Established many decades ago under the direction of Vincent Petrucci, former director of the Viticulture and Enology Research Center, our grape and wine research and our faculty research scientists remain focused on important issues facing today's growers and winemakers. "It is critical that we are responsive to our industry's needs so we can conduct research and produce results that will be beneficial," said James Kennedy, chair of the [Department of Viticulture and Enology](#). "Having the ability to provide our graduate students with the challenge and opportunity to be a part of our research program is among the top reasons why they choose Fresno State," he said. Undergraduate students can also be found working year-round on research teams in the labs and vineyards.

This summer, many of our faculty and graduate students including Drs. Gu, Kennedy, Kurtural, and Van Zyl will be among the country's leading researchers who will present their findings at two professional meetings hosted by the [American Society of Enology and Viticulture](#) (www.asev.org) in Austin, Texas and the [American Society of Horticultural Sciences](#) (www.ashs.org) in Orlando, Florida. The ASEV national conference will be held on June 23-27 and the ASHS conference will be held on July 27—August 1, 2014. Kennedy will also complete his term as president to the ASEV organization at the ASEV national conference in June.

65th American Society of Enology & Viticulture National Conference—Hyatt Regency Austin, Austin, Texas

Kaan Kurtural's Lab

Andrew L. Beebe, Viticulture Poster: Trellis Conversion of Traditional Systems and Irrigation Stress Effects on a Procumbent Grapevine in Warm Climate. *Flash Talk: June 25, 4:02 pm*

Michael J. Cook, Viticulture Poster: Interactive Effects of Mechanical Leaf Removal and Regulated Deficit Irrigation on Merlot Grapevines in Warm Climate. *Flash Talk: June 25, 4:10 pm*

Clinton C. Nelson, Viticulture Poster: Effects of Pruning Systems and Irrigation Stress on Yield and Phenolic Composition of Zinfandel in Hot Climate

Clinton C. Nelson, Viticulture Poster: Effects of Rootstock Selection and Irrigation Stress on Yield and Phenolic Composition of Zinfandel in Hot Climate. *Flash Talk: June 26, 4:56 pm*

Alumnus **Lydia Wessner**, from Grape Creek Vineyards in Texas, will also be giving a presentation at the ASEV conference on Vegetative Compensation Response of a Procumbent Grapevine Cultivar Under Mechanical Canopy Management during the Viticulture—Vineyard Practices II Session.

James Kennedy's Lab

James Kennedy, Moderator. Enology—Wine Tannins Session, *June 26, 3:20-4:20 pm*

James Kennedy, Welcome. Winemaking for Challenging Environments Symposium, *June 27*

Matthew R. Revelette, Enology-Sensory/Chemistry Session: HPLC Determination of Red Wine Tannin Concentration and Prediction of "Grippiness" Following Direct Injection, *June 25*

Matthew R. Revelette, Viticulture Poster: Effect of Early Lag-Phase Thinning on Low-Vigor Zinfandel

Matthew R. Revelette, Enology Poster: Effect of Cofermentation of Red Grapes on Tannin Extraction and Composition

*2014 American Society for Horticultural Science Conference
Orlando, Florida*

Sanliang Gu's Lab

Sanliang Gu, Viticulture & Small Fruits Oral Session: Comparison of Growing Degree Hours Based on Hourly Average Temperatures with Growing Degree Days Based on Daily Minimum and Maximum or Average Temperatures to Interpret Heat Summation #18544

Tian Tian, Viticulture & Small Fruits 2 Oral Session: Chemical Removal of Primary Inflorescence and Mature Leaves to Force Vine Regrowth and Fruiting in a Warmer Region for Winegrape Production #17854

Kaan Kurtural's Lab

Kaan Kurtural, Crop Physiology Oral Session: Flavonol and Anthocyanin Biosynthesis in Grapevine Berry is Ameliorated by Early Season Light Quantity, Not Irrigation Restriction in Warm Climate #20217

Kaan Kurtural, Viticulture & Small Fruits 2 Oral Session: Vegetative Compensation Response of a Procumbent Grapevine (*Vitis vinifera* cv. Syrah) Cultivar Under Mechanical Canopy Management #18478

Sonet Van Zyl's Lab

Victoria Towers, Viticulture & Small Fruits 1 Poster Session: The Use of Different Plant Growth Regulators in 'Scarlet Royal' Table Grape Production to Determine Post-Harvest Quality #19587

Sonet Van Zyl, Viticulture & Small Fruits 1 Oral Session: The Effects of Foliar Potassium Applications on Table Grape Quality #19597

2014 American Chemical Society Division of Agricultural & Food Chemistry, San Francisco

In August of this year, Kennedy will give a presentation at the fall meeting of the [American Chemical Society](http://www.acs.org) (www.acs.org) in San Francisco.

James Kennedy, Advances in Wine Research Session: Exploring the Role of Oxidation on the Development of Tannin Stickiness in Red Wine

Vintage Report Innovation Award to Kennedy's Team and Ridge Vineyards

Graduate student Matthew Revelette traveled to St. Helena to receive the [Fruition Sciences](#) 2013 [Vintage Report Innovation Award](#).

This recognition represents the research study that he and Kennedy have conducted with [Ridge Vineyards](#) on "The Effects of Lag Phase Thinning on Dry Creek Valley Zinfandel." As the award recipient, they were invited to present their results at the 2013 Fruition Sciences conference.



Matt Revelette, Fresno State and Will Thomas, Ridge Vineyards accept award in St. Helena

Research Briefs

Kaan Kurtural Lab

Kurtural conducted weekly irrigation tailgate meetings this spring with [Bronco Wine Company](#) in the Lodi region and is now an academic editor for [PLOS ONE](#), a peer-reviewed journal that disseminates scientific research to the public online.

Hend Letaief's Lab

Two international scholars from France will work with Letaief on a research project funded by [Nomacorc](#) that focuses on oxygen management in the winery—Bertille Goyard from AgroSup Dijon (March 22—August 31) and Pauline Martinaggi from ESA Angers (June 9—September 5).

James Kennedy's Lab

Publication: Bindon KA, Madani SH, Pendleton P, Smith PA, Kennedy JA. 2014. "Factors affecting skin tannin extractability in ripening grapes." *Journal of Agricultural and Food Chemistry* 62: 1130-1141.

Presentation: Kennedy JA. 2014. "The ripeness of tannins in grapes and insight into wine quality." *Presented* – Michigan State University – Spring Seminar Series. March 13, East Lansing, Michigan.

Presentation: Kennedy JA. 2014. "The development of quality compounds in wine grapes." *Presented* – WiVi Central Coast Wine and Viticulture Symposium and Tradeshow, March 20, Paso Robles, California.

Presentation: Kennedy JA, Cave J, Waterhouse AL. 2014. "Improvement of wine quality: Tannin and polymeric pigment chemistry." *Presented* - Wine and Wine Grape Research Conference 2014, February 12, Davis, California.

Presentation: Kennedy JA. 2014. "Influence of grape and wine production practices on tannin extractability and activity." *Presented* - Wine and Wine Grape Research Conference 2014, February 12, Davis, California.

V. E. Petrucci Library

Library Development—Planning for the Future

Britt Foster, MLIS

Librarian —V. E. Petrucci Library

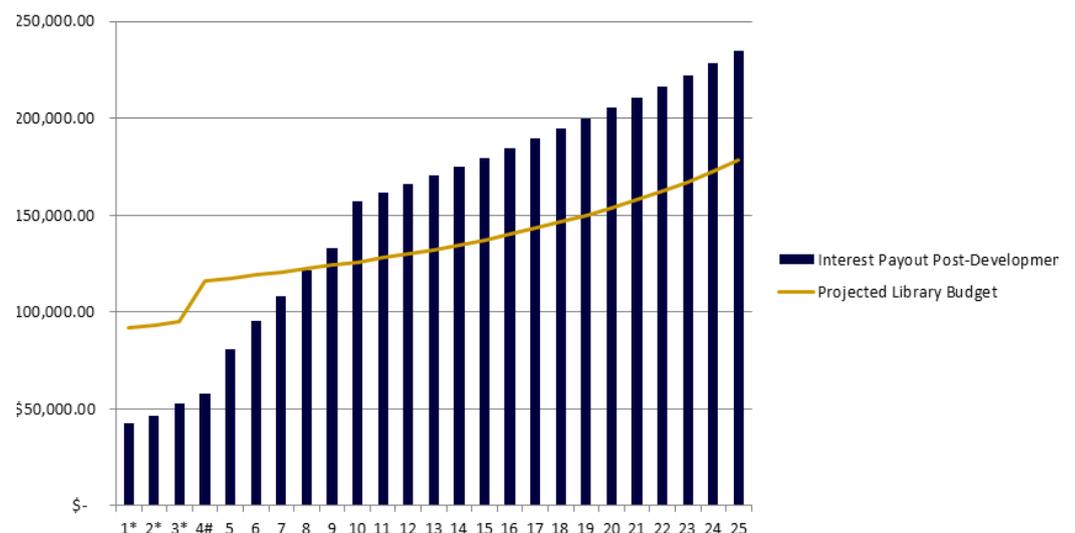
As students are finishing finals and planning for graduation or summer internships, we in the [V.E. Petrucci Library](#) are already thinking about August, and when we can eagerly welcome our (perhaps not quite as eager!) students back into the library—we're thinking about lesson plans, textbooks, and new materials to support our students and faculty when they return to the classroom.

This kind of thinking-- looking forward to the next thing, to future trends and information needs-- is one of the hallmarks of librarianship. It's one of the most exciting things we do, and also, one of the most challenging. In this time of rapid technological change, predicting the future of libraries is a particular challenge. Despite what you may have heard, the future of libraries is not bleak-- we're in high demand as our patrons look to us for help in navigating the increasingly complex information landscape. Demand, however, doesn't necessarily line up with supply: demand for services often outstrips the supply of monetary resources available for libraries.

When we look to the future of the V.E. Petrucci Library, the largest challenge we face is sustainable funding for the library. In 1996, the [Viticulture and Enology Alumni Association \(VEAA\)](#) (www.veaafresno.org) established an endowment with a gift of \$350,000. Over the years, the proceeds of *A Celebration of Wine*, an annual winetasting event hosted by the VEAA, grew the endowment to its current level of just under \$1 million dollars. The payout from the endowment only covers a portion of the library's budget, so the additional dollars are a direct annual contribution from the VEAA.

With a stable funding source as a main library goal, this model isn't sustainable, and taxes the resources of the VEAA. In the short term, the library is strong: looking towards the future, an alternative must be developed.

In response, the V.E. Petrucci Library, working with the VEAA, the Department of Viticulture and Enology, and Fresno State has outlined a ten-year development plan that will provide a stable financial future for the library. The ultimate goal of this plan



Library Budget and Income Projections Post-Development Campaign

With the current endowment payout, the V.E. Petrucci Library faces a gap between budget needs and income. With the ten-year development campaign, the library expects to fully meet budget needs by year 8, and in years following will have opportunities for development of services and resources while being able to absorb any market slow-downs/low returns.

is to increase the V.E. Petrucci Library Fund Endowment to \$3 million, the interest of which will meet the needs of the library for decades to come.

The plan centers around key needs of the library, including funding for general operations, as well as funding to support the maintenance and development of various collections in the library. Periodicals, or journals and magazines, are some of the key resources in the library and are one of the most expensive line items in our budget: with inflation rates for periodicals in the ag sciences averaging 8% annually, ensuring the funding for this collection for decades requires careful planning.

Of course, planning for the future financial needs of the library also means predicting the future resource and service needs of patrons. The library’s development campaign is also based on ideas of how we will be serving our patrons in the next five, ten, twenty, fifty years. As the information landscape will undoubtedly change in incredible and unpredictable ways, we’re focusing on what we’ll need to provide core areas of service: access to quality information in the disciplines of viticulture and enology for students, faculty and industry; extension of the information generated by the Department of Viticulture and Enology through in-person and digital services; and the ways that we can contribute to the academic and professional excellence of our students in the classroom and in their future industry positions.

V.E. PETRUCCI LIBRARY RESOURCE/SERVICE	APPROXIMATE OUT-OF-POCKET EXPENSE FOR DAILY STUDENT LIBRARY USE
Books	\$660
Periodicals	\$220
Wi-Fi	\$75
Computers	\$60
Study room	\$200
Reference question	\$35
Research consultation	\$476
TOTAL SAVINGS:	\$1726

Out-of-pocket library expense

Based on the University of Hawai’i at Mānoa Library Library Use Calculator at http://library.manoa.hawaii.edu/about/calculator/library_calculator.html

Since the reopening of the V.E. Petrucci Library in 2012, patron traffic has increased by an average of 43% each year. With this kind of demand for library services, it is essential that we take a long-range view on how to continue providing this necessary resource.

For information on how to contribute to the library campaign, please visit the V.E. Petrucci Library website at <http://www.fresnostate.edu/jcast/petruccilibrary/support.html>.

All individual donations currently go to match the \$40,000 challenge donated by Bob and Pam Wample.

Feature

Quality of Tannins in Red Wine

When a wine judge or writer evaluates a red wine, mouthfeel quality is a component of assessment. Tannins, which contribute astringency to red wine, are generally considered to be the core of mouthfeel. Astringency is often described using qualitative descriptive terms (e.g.: soft and hard). Because of the economic consequence associated with these terms, tannin management makes up an important part of red wine production, from grape growing, wine production practices and subsequent aging. While wine reviews rarely discuss the astringency of a red wine per se, the role of tannin is vital to the concept of mouthfeel.

Recent advances in tannin research have begun to shed light on the specific changes that tannins undergo during fruit ripening and wine production. Some salient points regarding tannins and their sensory properties include the following:

- Tannins vary in composition and size
- Tannins have two sensory properties: astringency and bitterness.
 - ◇ Smallest tannins are dominated by bitterness and are essentially seed-derived.
 - ◇ Astringency dominates tannins with more than 3-4 subunits.
- Tannin perception in wine is affected by many components (e.g.: acidity, ethanol, sugar, macromolecules).
- Tannins are reactive compounds.
 - ◇ They are reactive under acidic conditions (wine is acidic).
 - ◇ They are reactive under oxidative conditions.
 - ◇ Tannin reaction begins with berry development and continues through wine production, aging and consumption.
 - ◇ Products of reaction have modified astringency

Because mouthfeel quality is an important component in overall wine quality, there is keen interest in understanding tannin structure-activity relationships so that mouthfeel quality can be more effectively managed.

The modifications that tannins undergo from fruit ripening through wine production and aging, in addition to their interactions with other grape and wine components provide us with three potential explanations for astringency quality in wine where differences in astringency/mouthfeel quality are due to:

James A. Kennedy, Ph.D.

Department Chair—Director

1. **Tannin concentration.** If tannins are in balance with other components they are deemed to be higher in mouthfeel quality.

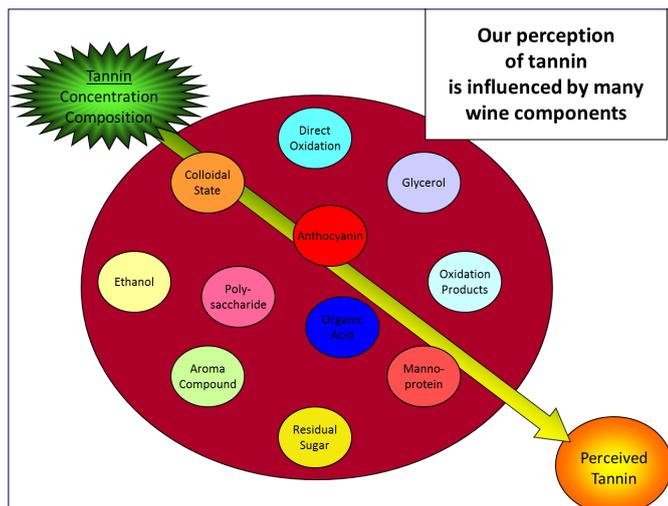
2. **Tannin bitterness.** Based upon size, the smallest sized tannins are responsible for bitterness. Wine with a low proportion of tannin bitterness would be deemed to be higher in mouthfeel quality.

3. **Tannin stickiness.** Here, tannin structure modification leads to a modification in ability to interact with salivary protein (i.e.: the astringency response). Tannins with a high degree of structure modification would be less sticky and higher in mouthfeel quality.

Based upon research conducted to date, it is likely that all of these explanations play a role in astringency quality, and help to explain observations seen in the vineyard as well as the winery.

With regard to managing mouthfeel quality and given the above explanations, discerning and thus developing management strategies for mouthfeel description is a primary goal.

With regard to the first explanation, tannin concentration is ultimately under winemaker control and therefore issues are generally correctible in the winery. In the vineyard, fruit maturity is associated with a decline



in overall tannin extractability and the production of astringency “attenuating” components. Because of this, winemakers would be less inclined to over-extract tannins with riper fruit. Over-extraction issues are easily dealt with using protein fining agents and under-extraction issues can utilize exogenous tannin additions. There are numerous analytical methods available for measuring tannin concentration and these are accessible to the industry. Overall and with regard to issue number one above, tannin concentration and its relation to other wine components is the most manageable tannin-related mouthfeel issue.

The second explanation is often vineyard driven. Riper fruit has a lower proportion of the most bitter component of tannin (the lowest molecular weight tannin). The perception of bitterness in wine is associated with too much seed tannin and so in the winery, practices that reduce seed tannin relative to skin tannin extraction would be encouraged.

The third explanation is affected by both vineyard and winery practices. Tannin structure modification is observed in the vineyard (oxidation, pigment incorporation) and there is the ability to manage skin tannin independent of seed tannin (fruit exposure). In the winery, oxygen management, color relative to tannin extraction, and time are all associated with tannin structure modification. In this regard, the

stickiest tannins are generally considered to be tannins as they were newly produced in the grape.

As tannin research continues, additional knowledge will develop and with that, our ability to manage mouthfeel quality will increase. The references below are a great resource for work that has been conducted in this area and recent research results from our research efforts.

Further reading

Reviews

1. Kennedy JA, Robinson S, Walker M. 2007. “Grape and wine tannins: Production, perfection and perception.” *Practical Winery and Vineyard* May/June: 57-67.
2. Aron PM, Kennedy JA. 2008 “Flavan-3-ols: Nature, occurrence and biological activity.” *Molecular Nutrition and Food Research* no. 52: 79-104.
3. Kennedy JA. 2008. “Grape and wine phenolics: Observations and recent findings.” *Ciencia e Investigación Agraria* no. 35: 77-90.
4. Cohen SD, Kennedy JA. 2010. “Plant metabolism and the environment: Implications for managing phenolics.” *Critical Reviews in Food Science and Nutrition* 50: 620-643.
5. McRae JM, Kennedy JA. 2011. “Wine and grape tannin interactions with salivary proteins and impact on astringency: A review of current research.” *Molecules* 16: 2348-2364.

Some Recent Research

6. Kassara S, Kennedy JA. 2011. “Relationship between red wine grades and phenolics: Tannin composition and size.” *Journal of Agricultural and Food Chemistry* 59: 8409-8412.
7. Barak JA, Kennedy JA. 2013. “HPLC retention thermodynamics of grape and wine tannins.” *Journal of Agricultural and Food Chemistry* 61: 4270-4277.
8. Bindon KA, Madani SH, Pendleton P, Smith PA, Kennedy JA. 2014. “Factors affecting skin tannin extractability in ripening grapes.” *Journal of Agricultural and Food Chemistry* 62: 1130-1141.

Feature

Rootstocks for Raisins

Background

Raisin production is estimated to be about 7.6% of the world grape production. The USA leads the world's raisin production with 36% with Turkey, China, Iran and Chile following. Over 90% of all raisins produced in the USA come from the central San Joaquin Valley in California.

In 1873 Francis T. Eisen planted 25 acres of Muscat of Alexandria grapes just east of Fresno. This vineyard produced its first crop in 1877 and a year later the first packaged raisins were shipped out of state. Muscat of Alexandria grapes were the first commercial raisin variety grown in California and remained the industry standard until Thompson Seedless.



Figure 1: Grapes are dried on paper trays in the vineyard

Thompson Seedless grapes are picked late in August and tray dried (Figure 1). The drying time is typically 2-3 weeks and depends on weather conditions. Rain and cloudy conditions during the drying time can have a detrimental effect on raisin quality. These conditions bring increased mold incidence that reduces the marketability of raisins. Raisin production is also very labor intensive. Due to these factors, interest developed in dried-on-vine (DOV) raisin production.

Dried-on-vine production is a method for drying raisins in which canes are cut to induce grape drying, and is especially good for early maturing raisin varieties like Selma Pete and Fiesta. These varieties are also adapted for training onto high capacity trellis systems like overhead and open gable systems. These trellis systems can accommodate mechanical harvesting and tray-laying practices to reduce labor costs.

Sonet Van Zyl, Ph.D.

Professor of Viticulture

Selma Pete is a newer raisin variety developed by the USDA and ripens on average three weeks earlier than Thompson Seedless. To maximize the production potential of new varieties, they have to be evaluated for rootstock, scion and trellis system interactions. Although DOV systems have many benefits like better crop quality and reduced labor cost, cane severing reduces the canopy which can lead to a reduction in production over time. High vigor is key to overcome this problem and can be achieved by using high vigor rootstocks.

Rootstock Evaluation

Working with Matthew Fidelibus from the Kearney Agricultural Research & Extension Center and with support from the California Raisin Marketing Board, the rootstocks listed in Table 1 were evaluated for their DOV viability. A Selma Pete vineyard was established in 2009 on six different rootstocks, with vines trained to a bilateral cordon on an open gable trellis system. The first data was collected in 2012. Freedom and 1103 Paulsen are high vigor commercial rootstocks and are being used as controls in this study. The rootstocks all show some resistance to nematodes.

Rootstock	Origin	Parentage
Freedom	USDA, Fresno	1613 C (<i>V. solonis</i> x <i>V. Othello</i>) x Dogridge
Matador (PC0188-151)	USDA, Geneva NY	101-14 Mgt x 3-1A (<i>V. mustangensis</i> x <i>V. rupestris</i>)
PC00106-47	USDA, Geneva NY	Dogridge x (<i>V. doaniana</i> x <i>V. vulpina</i>)
PC001112-39	USDA, Geneva NY	<i>V. rupestris</i> x (<i>V. novae-angliae</i> x <i>V. mustangensis</i>)
Illinois 547-1	Univ. of Illinois	<i>V. rupestris</i> x 38 x B9 <i>V. cinerea</i>
1103 Paulsen	Sicily, Italy	<i>V. berlandieri</i> x <i>V. rupestris</i>

Table 1. The rootstocks used in this study and their background.

The parameters measured for the fresh berries included average berry weight, total soluble solids, pH and titratable acid. Petioles were collected during bloom, veraison and harvest to analyze nutritional values (Figure 2). Pruning weight and trunk diameter was measured during winter. Raisins were analyzed for moisture percentage and graded for the percentages B or Better and Substandard raisins.



Figure 2: Petiole samples are collected during harvest

No differences were found between the different rootstocks for titratable acid content. Berry weight was significantly higher in 2012 and 2013 for both controls. In both years Illinois 547-1 had the lowest berry weight. The total soluble solid content was significantly higher in both seasons for

PC001112-39 and Illinois 547-1. Petiole analysis showed high nitrogen levels for the controls in both seasons.

Pruning weights, trunk diameter results and raisin grading results are not available yet.

This project is a long-term effort to test newer rootstocks for their affinity to scions and their impact on soil borne pests. By evaluating the fruitfulness of the vine and the quality of the raisins, future results will help growers choose the best rootstock for their area that will produce high quality raisins at optimum yield.

This project is done in collaboration with Matthew Fidelibus at UC Cooperative Extension. This is an ongoing project and results are communicated to the industry on an annual basis. Rootstock projects are usually long-term and the results will show the best practices only after several years. This project is funded by the California Raisin Marketing Board.

Acknowledgements

Matthew Fidelibus and his team

California Raisin Marketing Board

Events

Recent Highlights

The spring semester at Fresno State's Department of Viticulture and Enology was filled with many opportunities for us to network with our alumni and colleagues and provide learning activities for our students. A few highlights are below.



Students learning how to prune



Students at 2014 Unified Symposium

Just days after classes began in January, our faculty and staff attended the **Unified Wine & Grape Symposium** in Sacramento where an entourage of students helped represent our program in the exhibit hall.

On February 19 employers from the grape and wine industry networked with students at our **Viticulture and Enology Career Fair**, held in the heart of the department. Our students arrived with their resumes in hand and were appreciative of this career-building opportunity.



Students attend our career fair

In March, as budbreak season began, the **San Joaquin Valley Winemakers** (SJVV) held one of their monthly meetings at Fresno State. Winemaker John Giannini spoke to the group before they toured the winery and attended the Enology Society's meeting which featured wines made by our students.



Student winemaker night

According to Shirley Price of the SJVV, their members were impressed with the caliber of students they met and the wines they tasted.

On March 22, raisin instructor Sonet Van Zyl and many other faculty, staff, and friends supported the **Raisin Wives** by attending their annual luncheon and fundraiser at Pardini's in Fresno. The San Joaquin Valley Winemakers and the Raisin Wives support our program through student scholarships.

In April, the department was honored to have **Fresno State President Joseph Castro** attend its Industry Advisory Board meeting where he met many of the grape and wine industry leaders who help guide our program. Castro spoke to them about the establishment of his commission on agriculture and his commitment to Fresno State's agriculture.



President Castro addresses our Industry Advisory Board

In addition to their academic and research responsibilities, our faculty remain engaged with colleagues from other institutions and organizations. In April, faculty member Hend Letaief hosted representatives from the **Ecole Supérieure d'Agriculture d'Angers** and FESIA, a renowned engineering institute in agriculture, environment, and food science. The purpose of their visit was to foster research collaborations with Fresno State in the fields of viticulture, enology, and food science.

In May, Sonet Van Zyl and adjunct faculty member Joseph Smilanek also coordinated a visit and guest lecturer by **Amnon Lichter** from the Volcani Center in Bet Dagan, Israel.



Visitors tour the campus vineyards

The **renovation project** that began in one of our enology research labs about five months ago was recently completed. The new facilities are now being used to conduct research by faculty members James Kennedy and Henda Letaief.



New cabinets are installed in lab

This spring, some of our other research teams relocated their laboratories within the viticulture and enology building to increase efficiency and space requirements for their research. With the renovation



Kurtural's team in their lab

and relocation projects complete, researchers are ready for the busy summer season.

On April 24, the department's very own Kevin Smith and Britt Foster were in the KSEE24 television studio to promote Fresno State Winery's **Vino Italiano** event (April 24) and the Viticulture Club's **Papa Petrucci 5K** (April 27) fundraiser for the V. E. Petrucci Library (page 11).

On April 28, several students attended an informative presentation by James Ewart and Brad Walters on career and internship opportunities at **Delicato Vineyards**. Faculty and students alike enjoyed learning about the Delicato team and their wines.



An enjoyable evening at Vino Italiano



Students learn about Delicato wines

Each semester, our viticulture and enology faculty take advantage of the many learning opportunities that are available in the Fresno State vineyards and winery. These unique facilities are just steps away from the traditional classroom setting and serve as an extension of what students

are taught in the classroom. This spring, our students could be found bottling wine in the winery or attending class in the vineyards.



This **hands-on learning** *Students being taught in the vineyard* style prepares our students for the real world of grape growing and winemaking.

Earlier this year, Professor Emeritus **Vincent Petrucci** was also back in the Fresno State vineyards with some of our students filming a clip for the V. E. Petrucci Library (Visit www.veafresno.org to view the video). The video also features industry leaders, faculty, and students.



V. E. Petrucci and students

Just before the semester concluded, Fresno State's viticulture and enology program was represented again this year at **Duarte Nursery Friends Day** in Hughson. Many of our faculty, staff, and classes attended this event and toured their impressive facilities.

On May 9 several industry leaders, faculty, and staff from the viticulture and enology program attended the **President's Commission on the Future of Agriculture** forum where Fresno State President Castro presented his preliminary findings and recommendations. This report is also available in its entirety in the V. E. Petrucci Library.



At Duarte Friends Day on May 2

As we begin another summer harvest season full of research and activities, we want to thank our alumni and friends for their continued interest and support of the grape and wine programs at Fresno State. We hope to see many of you at Fresno State Grape Day on August 5 (page 36).

In the meantime, stay in touch with us on **Facebook** at www.facebook.com/FresnoStateViticultureandEnology.

Events

Fresno State Grape Day is August 5

- ◆ Early morning presentations and equipment demos in the Fresno State Vineyards
- ◆ Indoor oral and poster presentations by faculty researchers and graduate students on current grower and winemaker topics
- ◆ Special guest Jamal Rayyis is an internationally noted wine critic and lecturer who has authored seven editions of *Food Wine Magazine's Wine Guide* (2002-2008)
- ◆ Wine evaluation session (21 and over)
- ◆ Refreshments and lunch included

Presented by

Fresno State Department of Viticulture & Enology

SAVE THE DATE

Fresno State Grape Day

AUGUST 5, 2014

Online Registration Opens in mid-June



Lunch sponsored by the *American Vineyard* magazine

Sponsorship inquiries should be directed to cynthiaw@csufresno.edu

Program details will soon be available at fresnostate.edu/jcast/ve

Dr. Charles Boyer,
Dean of the Jordan College of
Agricultural Sciences and Technology

invites you to join him and

Fresno State President
Dr. Joseph I. Castro

*for the ground breaking of the new Jordan Research
Center, a collaboration between the Jordan College of
Agricultural Sciences and Technology, the College of
Science and Mathematics and Lyles College of Engineering*

JORDAN RESEARCH CENTER

**Groundbreaking Ceremony
JUNE 13, 2014**

9:30 a.m.

**Construction site at Woodrow
and Barstow Avenues**

California State University, Fresno

**Parking is available at the Animal Science
Pavilion on the north side of Barstow
(parking lot P11 - formerly Y).**

For more information, please visit
www.fresnostate.edu/jordanresearchcenter

**Ceremony is open to the public and
the campus community**



Save The Date!

Mark your calendars for the 2014 North Bay Alumni & Friends dinner at Rodney Strong Vineyards on Tuesday, July 15! Join us for dinner featuring Fresno State Farm products, silent auction and wine tasting.

July 15, 2014

Social begins at 5 p.m. • followed by dinner at 6:30 p.m.



Rodney Strong Vineyards
11455 Old Redwood Highway
Healdsburg, CA 95448



BRING A FAVORITE WINE TO SHARE!

Invitation to follow

Contact Ag One • 559.278.4266 • shemsath@csufresno.edu • agonefoundation.org

In Memoriam—Dr. Justin Morris (1937-2014)

Our friend and colleague Dr. Justin R. Morris passed away on May 19, 2014 at his home in Arkansas. Dr. Morris was a professor emeritus at the University of Arkansas in Fayetteville. Prior to his retirement in 2009, Dr. Morris was a distinguished professor in the Department of Food Science and the Director of the Institute of Food Science and Engineering where he provided research, teaching, leadership, and service to the grape and wine industries for over 40 years.

As an industry colleague and friend, he worked closely with Fresno State's Viticulture and Enology Research Center during the leadership of professor emeritus Vincent Petrucci and former director and research scientist Keith Striegler.



Dr. Morris will be remembered by his friends and loved ones for his friendly nature and his contributions to the fields of enology and viticulture. He leaves behind his wife, Ruby, and many family and friends all over the country and world. A memorial service will be held on June 6 in Fayetteville, Arkansas.

Events

Calendar—Where You Can Find Us

- This Summer—VEAA Election of Officers
- June 13—Jordan Research Center Groundbreaking, Fresno State
- June 23-27—ASEV Annual Meeting, Austin, TX
- July 15—Ag One & Jordan College of Agricultural Sciences North Bay Alumni & Friends Dinner, Healdsburg
- July 22-25—ASHS Annual Meeting, Orlando, Florida
- August 5—Fresno State Grape Day
- August 10-14—American Chemical Society Conference, San Francisco
- August 21—Fall semester courses begin
- Fall 2014—VEAA Tailgate and Fresno State Football Game (date and details pending)
- September 7—Ag One Ag Boosters BBQ, Rancho Vista del Rio, Madera
- November 13—Napa Valley Winegrowers Rootstock, Napa
- November 14—Central Coast Grape Expo, Paso Robles
- November 15—Viticulture Club Fall Harvest BBQ, Fresno/Clovis area
- November 18—Grape, Nut and Tree Fruit Expo, Fresno Fairgrounds
- November TBD—Holiday Event, Fresno State Winery
- December 3—Viticulture & Enology Resume Workshop, Fresno State
- January 27-29—Unified Wine & Grape Symposium, Booth # 830 & Reunion (1/28)
- February TBD—Fresno State Viticulture & Enology Career Fair

Fresno State Department of Viticulture and Enology





FRESNO STATE

Viticulture and Enology