69th ASEV National Conference

The National Conference is returning to a California setting where wine tasting is minutes away from whale watching. Monterey County includes nine appellations showcasing 175 unique vineyards and 60 tasting rooms located in three different regions.

Please visit www.asev.org for additional program, sponsorship, registration, and hotel information.

2018 Merit Award Presentation

Thursday, June 21, 9:15 am – 10:00 am
Dr. Terry Acree, Cornell University, New York
From Methyl Anthranilate to Mercaptohexanol: Measuring Wine Qualia

Dr. Terry Acree is Professor at the Department of Food Science of Cornell University, New York.

The ASEV Merit Award is presented annually to an individual who has significantly contributed in an outstanding manner to the progress and advancement of enology and viticulture to the industry and/or to the Society. This award acknowledges excellence in the fields of education, technology, research, management, public relations, or any discipline related to enology and viticulture.

The ASEV Board is pleased to honor Dr. Terry Acree of Cornell University, New York as ASEV’s 2018 Merit Award recipient.

Dr. Acree, a professor in the food science department at Cornell University in New York, primarily focuses on food composition and its relationship to the chemosensory perception of flavor. In his laboratory, he and other scientists have identified odorants that affect flavor in food. As a result, Dr. Acree and Henry Arn established their site Flavornet in 1997 to compile the identified aroma compounds found in human odor space. Using Gas Chromatography–Olfactometry, Dr. Acree’s research has explained, at least in terms of their most prominent features, the odors of complex foods like the lychee fruit aroma in Gewürztraminer wine. Ultimately, he hopes to be able to explain how sensory composition of food contributes to food perception, choice and enjoyment.
2018 ASEV National Conference Overview

All events will be held at the Portola Hotel and/or the Monterey Conference Center, unless noted otherwise.

_as of May 2018_

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<td>4:00 pm – 6:00 pm ASEV Board Meeting</td>
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<td>8:00 am – 5:00 pm <em>Brettanomyces</em> Symposium</td>
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<tr>
<td>7:00 pm – 8:00 pm ASEV Board Reception (by invitation only)</td>
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<td>8:00 pm – 10:30 pm ASEV Board Dinner (by invitation only)</td>
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<td>6:30 am – 7:00 pm Registration</td>
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<td>7:30 am – 7:00 pm Poster Sessions</td>
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<td>7:55 am – 8:05 am President’s Welcome</td>
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<td>8:05 am – 8:15 am Monterey County Vintners &amp; Growers Association Presentation</td>
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<td>8:15 am – 9:55 am Enology – Wine Phenolics Session (oral research reports)</td>
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<td>Noon – 1:30 pm Early Career Member Lunch</td>
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<td>1:30 pm – 2:30 pm Winemaking – Using Malolactic Fermentation as a Driver of Red Wine Style (industry seminar)</td>
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<td>1:30 pm – 2:30 pm Grapegrowing – Building Healthy Soils (industry seminar)</td>
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<td>2:45 pm – 3:30 pm Keynote Presentation - It’s the Journey not the Destination: Myths and Measurements on the Road to Winegrape Quality</td>
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<td>3:45 pm – 4:45 pm Viticulture – Student Flash Talks (selected student poster presenters)</td>
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<tr>
<td>3:45 pm – 5:25 pm Enology – Student Flash Talks (selected student poster presenters)</td>
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<tr>
<td>5:25 pm – 7:00 pm Poster Authors Present (research reports) &amp; Monterey County Regional Wine Reception</td>
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<td>8:00 am – 9:00 am Enology – Wine Metals and Reactivity Session (oral research reports)</td>
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<td>8:00 am – 9:00 am Viticulture – General Viticulture Session (oral research reports)</td>
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<td>11:30 am – Noon AJEV Best Enology Paper Author Presentation</td>
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<td>Noon – 1:00 pm ASEV Annual Business Meeting</td>
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<td>1:10 pm – 2:30 pm Enology – Microbiology Session (oral research reports)</td>
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<tr>
<td>1:10 pm – 2:30 pm Viticulture – Viticulture from East to West Session (oral research reports)</td>
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<tr>
<td>2:45 pm – 3:15 pm AJEV Best Viticulture Paper Author Presentation</td>
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<td>3:30 pm – 5:00 pm A Focus on Current Issues in the California Grape and Wine Industry (outreach seminar)</td>
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<tr>
<td>5:15 pm – 7:15 pm Student-Industry Mixer Reception</td>
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Brettanomyces Symposium

TUESDAY, JUNE 19
8:00 am – 5:00 pm

Brettanomyces has long been viewed as a spoilage organism in the wine industry. Although the organism was first identified in 1930, only recently have we begun to understand the impact this yeast has on winemaking globally. In recent years, scientists have sequenced the genome, described genetic and physiological diversity within the genus, identified a range of metabolic products contributing to spoilage, and explored how Brettanomyces interacts with different wine environments and microorganisms. Join us as we update you on the latest research, discuss how winemaking practices influence Brettanomyces and what tools are available for control.

Tastings will explore the ways that Brettanomyces can alter the sensory characteristics of a wine beyond just “barnyard and Band-Aid.” You will leave this symposium with a better understanding of this organism, its impact on wine quality, and the latest strategies for its control.

Symposium Organizing Committee:
Nichola Hall (Co-Chair), Scott Laboratories, California
James Osborne (Co-Chair), Oregon State University, Corvallis
Jim Harbertson, Washington State University, Tri-Cities

Program:
Program is subject to change.

I. Genetics and Biodiversity Session
Linda Bisson (Moderator), University of California, Davis

Ileana Vigentini, University of Milan, Italy
Chris Curtin, Oregon State University, Corvallis

II. Isolation, Identification and Sensory Session
Torey Arvik (Moderator), Jackson Family Wines, California

Lucy Joseph, University of California, Davis
Richard DeScenzo, ETS Laboratories, California

III. Brettanomyces Control Session
Thomas Henick-Kling (Moderator), Washington State University, Tri-Cities

Charles Edwards, Washington State University, Pullman
Ileana Vigentini, University of Milan, Italy
James Osborne, Oregon State University, Corvallis

IV. Where To Go From Here
Torey Arvik (Moderator), Jackson Family Wines, California

Steve Peck, J. Lohr Vineyards & Wines, California
Marcia Torres Forno, Jackson Family Wines, California
Linda Bisson, University of California, Davis

Brettanomyces Symposium Sponsored by:

International Speaker: Ileana Vigentini

Domestic Speaker: Torey Arvik

Constellation Brands
Domestic Speaker

Domestic Speaker: Torey Arvik
Research presentations (oral and poster) are based on submitted abstracts and represent work in progress and final research.

**WEDNESDAY, JUNE 20**

7:55 am – 8:05 am
President’s Welcome
**Jim Harbertson, Washington State University, Tri-Cities**

8:05 am – 8:15 am
Monterey County Vintners & Growers Association Presentation
**Kristen Barnhisel, J. Johr Vineyards and Wines, California**  
**Kim Stemler, Monterey County Vintners & Growers Association, California**

8:15 am – 9:55 am
**Enology – Wine Phenolics Session**  
(research report)

Moderator:
**Anita Oberholster, University of California, Davis**

Program:
Influence of Berry Ripeness on the Extraction of Skin and Seed Polyphenols and Sensory Characteristics of Pinot noir
**Dominik Durner, DLR Rheinpfalz, Germany**

Characterization of Skin Cell Wall Material from Pinot noir and Cabernet Sauvignon from Different Regions
**Cristina Medina-Plaza, University of California, Davis**

Impact of Fruit Maturity and Extended Maceration on Phenolic Extraction of Cabernet Sauvignon Wines
**Caroline Merrell, Washington State University, Tri-Cities**

Wine Oxidation: Analysis of Quinone Reaction Products Using $^{13}$C Isotope Tracing
**Andrew Waterhouse, University of California, Davis**

Pigmented Tannin and Derivative Analysis by a Complimentary Suite of Mass Spectrometric Techniques
**Jonathan Cave, University of California, Davis**

Red Blotch Disease Affects Vine Metabolism before Symptoms Are Apparent
**Kaan Kurtural, University of California, Davis**

Impact of Red Blotch Disease on Grape and Wine Composition and Quality of Three Varieties Harvested Sequentially
**Raul Cauduro Girardello, University of California, Davis**

Sources of Resistance to Root-knot Nematode and Phylloxera
**Daniel Pap, University of California, Davis**

2018 ASEV Extension Distinction Award Presentation

10:15 am – 11:00 am
Engaging Industry Citizen Scientists to Address Fundamental Production Issues
**Dr. Patty Skinkis, Oregon State University, Corvallis**

2018 Honorary Research Lecturer

11:15 am - Noon
Wine Tannins and Pigments: An Overview of 30 Years of Research
**Dr. Véronique Cheynier, Institut National de Recherche Agronomique (INRA), France**

Keynote Presentation

2:45 pm – 3:30 pm
It’s the Journey not the Destination: Myths and Measurements on the Road to Winegrape Quality
**Dr. Mark Matthews, University of California, Davis**
THURSDAY, JUNE 21

**Enology – Wine Metals and Reactivity Session (research report)**

8:00 am - 9:00 am

**Moderator:**
Roger Boulton, University of California, Davis

**Program:**
Rapid Determination of Active Sulfur Dioxide by Headspace Gas Chromatography
Todd Jenkins, University of California, Davis

Fundamental Studies of Iron Oxidation Reactions in Wine-like Conditions
Robert Coleman, University of California, Davis

Implementation of a Quick Test to Control Removal of Iron and Copper from Wine
Stephan Sommer, Appalachian State University, Boone

**Enology – General Session (research report)**

10:15 am - 11:15 am

**Moderator:**
Tom Collins, Washington State University, Tri-Cities

**Program:**
Comparing Nitrogen Addition in the Vineyard Versus in the Winery on Pinot noir and Chardonnay
Tian Tian, Oregon State University, Corvallis

Polyfunctional Thiols in Wine: Chirality, Precursor Stereochemistry, and Sauvignon blanc Clone Type
Liang Chen, The University of Adelaide, Australia

Optimization of Winery Cleaning and Sanitation: Effective Chemistries for Microbial Inactivation and Fermentation Soils
Cory Marx, University of California, Davis

**Viticulture – General Session**

8:00 am - 9:00 am

**Moderator:**
Lise Asimont, Vinsense, California

**Program:**
Effect of Root Trimming and Planting Method on Early Vine Development
Larry Bettiga, University of California Cooperative Extension, Monterey County

Isohydric and Anisohydric Winegrape Varieties and Stomatal Response to Soil Water Availability
Joelle Bou Harb, Washington State University, Prosser

Changes in Splitting Susceptibility with Grape Variety and Berry Development
Ben-Min Chang, Washington State University, Prosser

**Viticulture – Crop Load Management Session (research report)**

10:15 am - 11:15 am

**Moderator:**
Markus Keller, Washington State University, Prosser

**Program:**
Crop Load Management of Newly Planted Pinot gris in the San Joaquin Valley of California
Shijian Zhuang, University of California Cooperative Extension, Fresno County

Pinot noir Yield Potential and Nutrient Reserves under Long-Term Vineyard Floor Management
Patricia Skinkis, Oregon State University, Corvallis

Long Term Weather Variability and Concord Grape Berry Weight Dynamics
Golnaz Badr, Cornell University, New York

**2018 ASEV Merit Award Presentation**

9:15 am – 10:00 am

From Methyl Anthranilate to Mercaptohexanol: Measuring Wine Qualia
Dr. Terry Acree, Cornell University, New York

**2018 AJEV Best Enology Paper Author Presentation**

11:30 am - Noon

Impact of Grape Maturity and Ethanol Concentration on Sensory Properties of Washington State Merlot Wines
Emma Sherman, The New Zealand Institute for Plant and Food Research Ltd., New Zealand

AJEV Best Enology Paper Award sponsored by Safe Harbor Wine Storage
**ORAL SESSIONS (CONTINUED)**

**Enology – Microbiology Session (research reports)**

1:10 pm - 2:30 pm

**Moderator:**
Nichola Hall, Scott Laboratories, California

**Speakers:**
- Impact of Non-*saccharomyces* Yeast on *Hanseniaspora Uvarum* Growth and Volatile Acidity Production during Cold Soak
  **Jared Johnson, Oregon State University, Corvallis**
- Butter Bomb or Fruit-Driven Chardonnay – How Genetics and Metabolomics Can Assist with the Decision
  **Eveline Bartowsky, Lallemand, Australia**
- Building a Genome-Scale Mathematical Model for Yeast to Understand Differences in Metabolism among Commercial Strains
  **Ardic Arikal, University of California, Davis**
- The Estimation of Fermentation Parameters in Research and Commercial Winemaking
  **Roger Boulton, University of California, Davis**

**Viticulture – Viticulture from East to West Session (research reports)**

1:10 pm - 2:30 pm

**Moderator:**
Renee Threlfall, University of Arkansas, Fayetteville

**Speakers:**
- Sour Grapes, Indeed! Malic Acid Increases in Certain *Vitis spp.* during Maturation
  **Elizabeth Burzynski, Cornell University, New York**
- Influence of Plant Growth Regulators on Autumn King Table Grapes under Two Training Systems
  **Ashraf El-kereamy, University of California Cooperative Extension, Kern County**
- Sunpreme, a Raisin Grape with Novel Traits, on Different Rootstocks and Trellises
  **Matthew Fidelibus, University of California, Davis**
- Grape Ripening Control through Source–Sink Ratio Manipulation
  **Johann Martínez-Lüscher, University of California, Davis**

**2018 AJEV Best Viticulture Paper Author Presentation**

2:45 pm - 3:15 pm

Population Diversity of Grape Phylloxera in California and Evidence for Sexual Reproduction
**Andy Walker, University of California, Davis**

AJEV Best Viticulture Paper Award sponsored by J. Lohr Vineyards & Wines

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**POSTER SESSIONS (RESEARCH REPORTS)**

**WEDNESDAY, JUNE 20**

Poster Presentations
7:30 am - 7:00 pm

**THURSDAY, JUNE 21**

Poster Presentations
7:30 am - 5:00 pm

Authors present their poster research during the Monterey County Regional Wine Reception (5:25 pm – 7:00 pm)

**Chair:**
Leticia Chacón-Rodríguez, Safe Harbor Wine Storage, California

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= Student Flash Talks

**Enology & Viticulture Research Report Posters**

- Pinot noir Hydroxycinnamic Acid Content under Different Aging Conditions and Volatile Phenol Production by *Brettanomyces*
  **Marlie Shelton, Oregon State University, Corvallis**
- A Method Based on Loop-Mediated Isothermal Amplification Was Developed to Detect *Brettanomyces bruxellensis* Rapidly
  **Shini Yang, Northwest A&F University, China**
- Yeast Species Associated with Texas High Plains Vineyards and Natural Fermentations of Tempranillo Grapes
  **Matthias Bougreau, Texas Tech University, Lubbock**
Enology & Viticulture Research Report Posters (continued)

A Two-year survey of Pinot noir Vineyard-associated 
*Saccharomyces* Populations in the Okanagan Valley

Elaine Cheng, *The University of British Columbia, Canada*

Alcohol and Ester Evolution during Red and White Wine Fermentations

Nicolas Delchier, *University of California, Davis*

Impact of Prefermentation Cold Soak Conditions on Pinot noir Wine Volatile Aroma Compounds

Mengying Fu, *Oregon State University, Corvallis*

Accomplishing Spontaneous Chardonnay Fermentations in the Okanagan Using the Alternative Yeast 
*Saccharomyces uvarum*

Garrett McCarthy, *The University of British Columbia, Canada*

Identification and Characterization of Non-*Saccharomyces* Yeasts Isolated from British Columbian Vineyards

Yuritzel Moreno, *The University of British Columbia, Canada*

A Tale of Two Wineries: How Minimal Intervention Techniques Can Add Diversity to the Conventional Cellar

Sydney C. Morgan, *The University of British Columbia, Canada*

Microbiological Characteristics of Sulfite-Free Wine and the Development of a Detection Medium for Acetic Acid Bacteria

Ken-ichi Okumura, *Asahi Breweries, Ltd., Japan*

Understanding Wine Yeast Strain Variation Using a Combined Lipidomic, Metabolomic, and Transcriptomic Approach

Ayca Ozcan, *University of California, Davis*

Impact of Fermentation Temperature, Yeast and Tank Size on Dissipated Heat, Viability, and Aroma Formation in White Wine

Mira Schwinn, *DLR-Rheinpfalz, Germany*

Selection of Non-*Saccharomyces* Wine Yeasts from Port Wine

João Simões, *BIOCANT – Associação de Transferência de Tecnologia, Portugal*

Managing pH and Acid Composition to Assess Microbial Ecology of Wine Fermentation

Andrew Tyler Williams, *Washington State University, Prosser*

A GC/MS Method for the Elucidation of Volatile Aroma Compounds in Commercial Gins by HS-SPME

Layton Ashmore, *Washington State University, Tri-Cities*

Contribution of the Mexican Academy to Scientific Research in Viticulture and Enology in Latin America

Guillermo Castillo, *Universidad Autónoma de Baja California, Mexico*

Investigating Fruitiness Aroma Perception in White Wines

Angelica de Castro Iobbi, *Oregon State University, Corvallis*

Chemical and Sensory Effects of Cofermentation and Postfermentation Blending of Syrah with Selected Rhône White cvs

Paul Mawdsley, *California Polytechnic State University, San Luis Obispo*

Understanding the Composition of White Wine Lees during Vinification

Tohru Okuda, *University of Yamanashi, Japan*

Evaluation of the Enological, Economic, and Environmental Interest in Using Potassium Polyspartate

Laurent Pare, *Vins Arterra, Canada*

Changes in Lipid Composition of Pinot noir Wines in Response to Yeast Product Addition and Fermentation Temperature

Quynh Phan, *Oregon State University, Corvallis*

Chemical Profiling of Red Wines Using Surface-Enhanced Raman Spectroscopy

Yanqi Qu, *University of Massachusetts, Amherst*

Comparative Analysis of the Total Carbohydrate Composition of Red Wine Polysaccharides

Ludwig Ring, *Oregon State University, Corvallis*

Ultrasound Application in Winemaking

Emilio Celotti, *University of Udine, Italy*

Advances in Quantitative Analysis of Wine Phenolics and Color Using Simultaneous Absorbance, Transmission and Fluorescence Excitation Emission Mapping Spectroscopy

Adam Gilmore, *HORIBA Instruments Inc., New Jersey*

Genetic Basis for High SO₂ Production by a *Saccharomyces cerevisiae* Wine Strain

Maria Alessandri, *Oregon State University, Corvallis*

Complex Complexes – Stability of Copper Sulfide Precursors of Hydrogen Sulfide under Varying Brine Dilution Conditions

Rachel B. Allison, *Cornell University, New York*

Postfermentation Production of Acetaldehyde by *Saccharomyces cerevisiae*

Thi Nguyen, *University of California, Davis*

Tracking Redox Potential during Fermentation as an Enological Parameter and Indicator of Yeast Metabolism

Gordon Walker, *Opus One Winery, California*

Approaches to Limit S Off-Flavors during White Wine Fermentation with Specific Emphasis on Yeast Nitrogen Nutrition

Pascal Wegmann-Herr, *DLR-Rheinpfalz, Germany*
POSTER SESSIONS (RESEARCH REPORTS CONTINUED)

Enology & Viticulture Research Report Posters (continued)

Investigating the Effects of Temperature and Ethanol on Proanthocyanidin Adsorption to Grape Skin Cell Wall Material
Jordan Beaver, University of California, Davis

Characterization of Vineyard and Aging Effects on Anthocyanin Profiles of Pinot noir Wines
Shelby Byer, University of California, Davis

Effects of Whole Cluster and Dried Stem Additions on Color, Phenolics, and Sensory Properties of Pinot noir Wines
Niclas Dermutz, California Polytechnic State University, San Luis Obispo

Impact of Vineyard Site and Clone on Phenolic Composition of Cabernet Sauvignon Wines
Danielle Fox, Washington State University, Tri-Cities

Uncovering Winemaking × Clone Interactions in Pinot noir: Effect of Microwaved Stems and Extended Maceration
Juel Peter Hernandez, California Polytechnic State University, San Luis Obispo

Adsorption Potential of Grape Insoluble Polysaccharides to Red Wine Phenolics
Eri Inoue, University of Yamanashi, Japan

Effects of Variations in Berry Size and Manipulations of Fermentation Solids in Zinfandel Grapes and Wines
Daniel Postiglione, California Polytechnic State University, San Luis Obispo

Increased Extraction in Pinot noir with High Concentrations of SO2 at Crush
Melaney Schmidt, Chemeketa Community College, Oregon

Mathematical Modeling of Anthocyanin Mass Transfer to Predict Extraction in Simulated Red Wine Fermentation Scenarios
Patrick Setford, The University of Adelaide, Australia

Aroma and Chemical Characterization of White Wines Produced in Mexico
Rodrigo Alonso-Villegas, Universidad Autónoma De Baja California, Mexico

Sensory Comparison for Two Consecutive Years of Pinot noir Wines from 12 Vineyard Locations
Annegret Cantu, University of California, Davis

Shedding Light on Port Wine Aroma Production Complexity: Terroir versus Yeast Impacts
Frank Rogerson, Symington Family Estates, Portugal

Toward the Development of a Sustainable Wine Scoring System. A Case for Craft Wineries
Andres Valero, Purdue University, Indiana

Assessment of Red Wine Astringency Perception by Physicochemical and Sensory Methods
Aude A. Watrelot, University of California, Davis

Reverse Osmosis as a Method for Mitigating Smoke Taint
Ioan Pavel Gitsov, Washington State University, Tri-Cities

Assessing Smoke Taint Risk Based on the Composition of Smoke-Exposed Grape Berries and the Resulting Wines
Garrett Lattanzio, Washington State University, Tri-Cities

Smoke Taint: Challenging Current Beliefs and Exploring In-Winery Mitigation Strategies
Matthew Noestheden, The University of British Columbia, Canada

Compositional Differences in the Combustion Products of High Desert Botanicals in Grapes and Wine
Rosemary Veghte, Washington State University, Tri-Cities

Identification of Aroma Differences in Norton and Cabernet Sauvignon Grapes and Wines Using a Non-Targeted Analysis
Mani Awale, University of Missouri, Columbia

Applications of the CRISPR Technology for the Wine Industry
Laurent Deluc, Oregon State University, Corvallis

Determining the Role of auxin-Response Factor 4 (VitviARF4) in the Ripening Initiation of Vitis vinifera Fruits
Laurent Deluc, Oregon State University, Corvallis

Evaluation of Postharvest Marketability of Arkansas Table Grapes Grown in High Tunnel Production
Molly Felts, University of Arkansas, Fayetteville

The Effects of Reducing Herbicide Use on Vine Performance, Productivity, and Fruit Composition in New Zealand Vineyards
Mark Krasnow, Thoughtful Viticulture, New Zealand

Secondary Bud Growth and Fruitfulness of Vitis vinifera Grenache Grown on the Texas High Plains: A Two-Year Review
Thayne Montague, Texas Tech University, Lubbock

Performance of Taxonomically Diverse Arbuscular Mycorrhizal Fungi Isolated from a Red-Hill Soil with Pinot noir
R Paul Schreiner, United States Department of Agriculture – Agricultural Research Service -Horticultural, Oregon

Vine Vigor Influences Pinot noir Bud Fruitfulness to a Greater Extent than Pruning and N Practices
Miranda Ulmer, Oregon State University Corvallis

Early Source-Sink Modulation in Merlot (Vitis vinifera L.) Enhances Fruit Quality through a Flavonoid Metabolome Shift
Josh VanderWeide, Michigan State University, Okemos

Effect of Shoot Density Manipulation on Canopy Growth and Berry Chemistry
Claire Villasenor, California Polytechnic State University, San Luis Obispo
Use of Foliar Spray of CaCO₃ to Reduce Heat Stress and Enhance Fruit Quality of Syrah in the San Joaquin Valley of California
Shijian Zhuang, University of California Cooperative Extension, Fresno County

Grapevine Fanleaf Virus Resistance Screening in a 101-14 x rotundifolia Population
Cecilia Agüero, University of California, Davis

Greenhouse Evaluation of Grapevine Leafroll Associated Virus on Different Rootstocks
Zhennua Cui, University of California, Davis

Characterizing Grapevine Powdery Mildew Resistance Genes from the Chinese Species Vitis piazeikii
Laila Fayyaz, University of California, Davis

Evaluation of Resistance in PdR1 Locus against a Hypervirulent Xylella fastidiosa Strain
Karla Huerta-Acosta, University of California, Davis

Effects of Grapevine Red Blotch Virus (GRBV) on Grape Development and Harvested Fruit
Arran Rumbaugh, University of California, Davis

Wild Vitis Species Offer Diverse Sources of Resistance and Susceptibility to Xiphinema Index
Jason Weibel, University of California, Davis

Precision Mid-season Yield Estimation in Lake Erie Concord
Jacqueline Dresser, Cornell University, New York

Identification of Anthocyanins in Enchantment Grapes and during Wine Production
Sarah E. Mayfield, University of Arkansas, Fayetteville

Genotype and Environment Effects on Polyphenol Profile and Coloration of Grape Berries in Nebraska
Xiaoqing Xie, University of Nebraska, Lincoln

The Effect of Four Common Rootstocks on Grapevine Physiology and Productivity of Chardonnay in Northern California
Wei-Chao Cheng, University of California, Davis

Influence of Rootstock on Scion Mortality, Performance and Berry Composition in the Four Corners Region of New Mexico
Gill Giese, New Mexico State University, Los Lunas

Developing a Model System to Identify Main Mechanisms Involved in Nitrogen Growth Responses of Grafted Grapevines
Landry Rosdeutsch, Oregon State University, Corvallis

Performance of Rootstocks in a Cabernet Sauvignon Vineyard Infected with Grapevine Fanleaf Virus
Rhonda Smith, University of California Cooperative Extension, Sonoma County

Effects of Cold Temperature Exposure Regimes on Damage to Phloem and Buds of Dormant Merlot Canes
Carl Bogdanoff, Agriculture and Agri-Food Canada

Pruning Approaches to Revive Cold-Injured Grapevines
Markus Keller, Washington State University, Prosser

Changes in Grape Flavonoid Composition Driven by Exposure to Solar Radiation: New View on an Old Topic
Johann Martínez-Lüscher, University of California, Davis

The Impact of Leaf Removal on Anthocyanin, Quercetin and Procyanidin Composition in Vitis vinifera L. Syrah Grapes.
Kevin Usher, Agriculture and Agri-Food Canada

Anthocyanin Regulation Under Deficit Irrigation and its Role in Improving the Red Color of Scarlet Royal Table Grapes
Maha Afifi, California Table Grape Commission, California

Evaluation of Plant-Based Measurement as an Irrigation Scheduling Tool in Grapevine
Bhaskar Bondada, Washington State University, Tri-Cities

δ¹³C in Sugars as a Proxy for Photosynthesis and Water Stress in Precision Viticulture: A Statewide Study in California
Luca Brillante, University of California, Davis

Assessing Spatial Variability of Grape Skin Flavonoids at the Vineyard Scale Based on Plant Water Status Mapping
Luca Brillante, University of California, Davis

Differences in Spatial Water Uptake by Rootstocks 110R and 101-14Mg Revealed by Multidimensional ERT
Luca Brillante, University of California, Davis

Partial Solar Radiation Exclusion, Not Applied Water Amount, Mitigates Grape Berry Flavonoid Concentration
Christopher Chen, University of California, Davis

Cabernet Sauvignon Berry Quality from Vines Irrigated through Direct Root Zone Irrigation
Gillian Hawkins, Washington State University, Pullman

Conserving Water While Increasing Efficiency of Grape Production through Direct Root-Zone (DRZ) Deficit Irrigation
Pete Jacoby, Washington State University, Pullman

Exogenous Application of Abscisic Acid (s-ABA) Does Not Influence Fruit Ripening in Red Blotch-Infected Grapevines
Alex Lemberg, Oregon State University, Corvallis

Interaction of Deficit Irrigation and Grapevine Red Blotch Virus (GRBV) on Disease Development and Grapevine Physiology
Alex Lemberg, Oregon State University, Corvallis

Postveraison Water Deficits Improve Pinot noir Fruit Quality without a Yield Penalty
Alex Lemberg, Oregon State University, Corvallis

Re-evaluating Field Methods of Water Status Determination in the Vineyard
Alex Lemberg, Oregon State University, Corvallis
Enology & Viticulture Research Report Posters (continued)

- Performance of Cabernet Sauvignon under Direct Root-Zone Deficit Irrigation
  Xiachao Ma, Washington State University, Pullman

- Applied Water Amount, Not Timing of Leaf Removal, Alters Grapevine Berry Flavonoid Content in Cabernet Sauvignon
  Marshall Pierce, University of California, Davis

- Microtensiometer Implant for Continuous, Direct Measure of Stem Water Potential
  Michael Santiago, FloraPulse Co, California

- Mechanisms of Water Movement in Grapevines during Hydraulic Redistribution
  Nataliya Shcherbatyuk, Washington State University, Prosser

- Field Testing of an Automated Canopy Temperature-Based Water Stress Index for Precision Irrigation of Winegrape
  Krista Shellie, United States Department of Agriculture – Agricultural Research Service – Horticultural Crops Research, Oregon

- From Plant Water Status to Wine Flavonoid Composition: A Precision Viticulture Approach in a Sonoma County Vineyard
  Runze Yu, University of California, Davis

- Proximal Soil Sensing for Vineyard Management in Crimson Seedless Table Grape
  Runze Yu, University of California, Davis

- Grapevines Hit with a Double Whammy: Effects of Water Stress during Heat Waves on Growth and Physiology
  Yun Zhang, Washington State University, Prosser

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Student Flash Talks

Some student Authors have been assigned oral, 3.25-minute Flash Talks. These “flash” presentations will provide additional opportunities for interaction between conference attendees and student researchers.

**Enology**

**Moderator:**
Caroline Merrell, Washington State University, Tri-Cities

*(Listed in presentation order)*

**Wednesday, June 20**

3:45 pm – 5:25 pm

- Pinot noir Hydroxycinnamic Acid Content under Different Aging Conditions and Volatile Phenol Production by *Brettanomyces*
  Marlie Shelton, Oregon State University, Corvallis

- A Method Based on Loop-Mediated Isothermal Amplification Was Developed to Detect *Brettanomyces bruxellensis* Rapidly
  Shini Yang, Northwest A&F University, China

- A Two-year survey of Pinot noir Vineyard-associated *Saccharomyces* Populations in the Okanagan Valley
  Elaine Cheng, The University of British Columbia, Canada

- Accomplishing Spontaneous Chardonnay Fermentations in the Okanagan Using the Alternative Yeast *Saccharomyces uvarum*
  Garrett McCarthy, The University of British Columbia, Canada

- Identification and Characterization of Non-*Saccharomyces* Yeasts Isolated from British Columbia Vineyards
  Yuritzel Moreno, The University of British Columbia, Canada

- A Tale of Two Wineries: How Minimal Intervention Techniques Can Add Diversity to the Conventional Cellar
  Sydney C. Morgan, The University of British Columbia, Canada

- Understanding Wine Yeast Strain Variation Using a Combined Lipidomic, Metabolomic, and Transcriptomic Approach
  Ayca Ozcan, University of California, Davis

- Impact of Fermentation Temperature, Yeast and Tank Size on Dissipated Heat, Viability, and Aroma Formation in White Wine
  Mira Schwinn, DLR-Rheinpfalz, Germany

- Managing pH and Acid Composition to Assess Microbial Ecology of Wine Fermentation
  Andrew Tyler Williams, Washington State University, Prosser

- A GC/MS Method for the Elucidation of Volatile Aroma Compounds in Commercial Gins by HS-SPME
  Layton Ashmore, Washington State University, Tri-Cities

- Investigating Fruitiness Aroma Perception in White Wines
  Angelica de Castro Iobbi, Oregon State University, Corvallis
Chemical and Sensory Effects of Cofermentation and Postfermentation Blending of Syrah with Selected Rhône White cvs
**Paul Mawdsley**, California Polytechnic State University, San Luis Obispo

Changes in Lipid Composition of Pinot noir Wines in Response to Yeast Product Addition and Fermentation Temperature
**Quynh Phan**, Oregon State University, Corvallis

Chemical Profiling of Red Wines Using Surface-Enhanced Raman Spectroscopy
**Yanqi Qu**, University of Massachusetts, Amherst

Genetic Basis for High SO2 Production by a *Saccharomyces cerevisiae* Wine Strain
**Maria Alessandri**, Oregon State University, Corvallis

Complex Complexes – Stability of Copper Sulfide Precursors of Hydrogen Sulfide under Varying Brine Dilution Conditions
**Rachel B. Allison**, Cornell University, New York

Postfermentation Production of Acetaldehyde by *Saccharomyces cerevisiae*
**Thi Nguyen**, University of California, Davis

Investigating the Effects of Temperature and Ethanol on Proanthocyanidin Adsorption to Grape Skin Cell Wall Material
**Jordan Beaver**, University of California, Davis

Characterization of Vineyard and Aging Effects on Anthocyanin Profiles of Pinot noir Wines
**Shelby Byer**, University of California, Davis

Effects of Whole Cluster and Dried Stem Additions on Color, Phenolics, and Sensory Properties of Pinot noir Wines
**Niclas Dermutz**, California Polytechnic State University, San Luis Obispo

Impact of Vineyard Site and Clone on Phenolic Composition of Cabernet Sauvignon Wines
**Danielle Fox**, Washington State University, Tri-Cities

Uncovering Winemaking × Clone Interactions in Pinot noir: Effect of Microwaved Stems and Extended Maceration
**Juel Peter Hernandez**, California Polytechnic State University, San Luis Obispo

Effects of Variations in Berry Size and Manipulations of Fermentation Solids in Zinfandel Grapes and Wines
**Daniel Postiglione**, California Polytechnic State University, San Luis Obispo

Increased Extraction in Pinot noir with High Concentrations of SO2 at Crush
**Melaney Schmidt**, Chemeketa Community College, Oregon

Mathematical Modeling of Anthocyanin Mass Transfer to Predict Extraction in Simulated Red Wine Fermentation Scenarios
**Patrick Setford**, The University of Adelaide, Australia

Toward the Development of a Sustainable Wine Scoring System. A Case for Craft Wineries
**Andres Valero**, Purdue University, Indiana

Reverse Osmosis as a Method for Mitigating Smoke Taint
**Ioan Pavel Gitsov**, Washington State University, Tri-Cities

Assessing Smoke Taint Risk Based on the Composition of Smoke-Exposed Grape Berries and the Resulting Wines
**Garrett Lattanzio**, Washington State University, Tri-Cities

Smoke Taint: Challenging Current Beliefs and Exploring In-Winery Mitigation Strategies
**Matthew Noestheden**, The University of British Columbia, Canada

Viticulture

**Moderator:**
**Andy Walker**, University of California, Davis

*Listed in presentation order*

**WEDNESDAY, JUNE 20**

3:45 pm – 4:45 pm

Identification of Aroma Differences in Norton and Cabernet Sauvignon Grapes and Wines Using a Non-Targeted Analysis
**Mani Awale**, University of Missouri, Columbia

Vine Vigor Influences Pinot noir Bud Fruitfulness to a Greater Extent than Pruning and N Practices
**Miranda Ulmer**, Oregon State University, Corvallis

Effect of Shoot Density Manipulation on Canopy Growth and Berry Chemistry
**Claire Villasenor**, University of California, Davis

Characterizing Grapevine Powdery Mildew Resistance Genes from the Chinese Species *Vitis Piaszezii*
**Laila Fayyaz**, University of California, Davis

Evaluation of Resistance in PdR1 Locus against a Hypervirulent Xylella Fastidiosa Strain
**Karla Huerta-Acosta**, University of California, Davis

Effects of Grapevine Red Blotch Virus (GRBV) on Grape Development and Harvested Fruit
**Arran Rumbaugh**, University of California, Davis

Wild Vitis Species Offer Diverse Sources of Resistance and Susceptibility to Xiphinema Index
**Jason Weibel**, University of California, Davis

Identification of Anthocyanins in Enchantment Grapes and During Wine Production
**Sarah E. Mayfield**, University of Arkansas, Fayetteville

The Effect of Four Common Rootstocks on Grapevine Physiology and Productivity of Chardonnay in Northern California
**Wei-Chao Cheng**, University of California, Davis

Partial Solar Radiation Exclusion, Not Applied Water Amount, Mitigates Grape Berry Flavonoid Concentration
**Christopher Chen**, University of California, Davis
Student Flash Talks (continued)

Performance of Cabernet Sauvignon under Direct Root-Zone Deficit Irrigation
**Xiaochi Ma**, *Washington State University, Pullman*

Applied Water Amount, Not Timing of Leaf Removal, Alters Grapevine Berry Flavonoid Content in Cabernet Sauvignon
**Marshall Pierce**, *University of California, Davis*

From Plant Water Status to Wine Flavonoid Composition: A Precision Viticulture Approach in a Sonoma County Vineyard
**Runze Yu**, *University of California, Davis*

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**Outreach Seminar**

Join us for the annual regional Outreach Seminar at the 2018 ASEV National Conference that will focus on current issues in the California grape and wine industry. The 90-minute seminar will cover everything from the impact of climate change on berry composition to strategies for maintaining a sustainable agricultural workforce. See you there!

**Thursday, June 21**

3:30 pm – 5:00 pm

**A Focus on Current Issues in the California Grape and Wine Industry**

**Program:**

The Great Warm Up: How Much Berry Exposure in a Changing World
**Kaan Kurtural**, *University of California, Davis*

Strategies to Mitigate Extreme Fermentation Conditions
**Anita Oberholster**, *University of California, Davis*

Strategies for Workforce Sustainability: Assessing Job Satisfaction of Agricultural Workers
**Monica Cooper**, *University of California, Davis*
Industry Seminars

These seminars are an ASEV program featuring the fundamentals of commercial winemaking and viticulture practices. They are designed to emphasize useful, practical, hands-on knowledge of the general topic category with specific product focus. Suppliers with related products and services will have table top displays to view.

These seminars are included in the General Registration fee.

Organizing Committee:
Lise Asimont (Chair), VinSense, California
Nichola Hall, Scott Laboratories, California
Patty Skinkis, Oregon State University, Corvallis
Hans Walter-Peterson, Cornell Cooperative Extension, New York

WEDNESDAY, JUNE 20
1:30 pm – 2:30 pm
Winemaking - Using Malolactic Fermentation as a Driver of Red Wine Style
The conversion of L-malic acid into L-lactic acid and CO₂ is not the only reaction conducted by malolactic bacteria during the process referred to as Malolactic fermentation. During this process the bacteria are growing and metabolizing and by doing so are forming an interesting array of metabolic end products. During this focused session we will appreciate the many finer points of MLF and in particular how the bacteria can drive wine style by influencing flavors and color.

Chair:
Nichola Hall, Scott Laboratories, California

Speakers:
Eveline Bartowsky, Lallemand, Australia
Ben Mayo, Riboli Family Winery, California

WEDNESDAY, JUNE 20
1:30 pm – 2:30 pm
Grapegrowing – Building Healthy Soils
The health of soil is foundational to a vineyard’s sustainability and potential for wine quality. This seminar will present how soil scientists and viticulturists define and analyze soil health and the soil management practices they employ to promote greater soil health and tilth. Perspectives from certified sustainable, organic and biodynamic practicing viticulturists will be given.

Chair:
Lise Asimont, VinSense, California

Speakers:
Joshua Beniston, Santa Rosa Junior College, California
Karen Peterson, Martinore Estate, Oregon

Supplier Display Tables are still available (at publication time)!

Contact: info@asev.org or (530) 753-3142 or visit www.asev.org for details

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2018 Pre-registration Rates
Valid through June 20

■ Brettanomyces Symposium
(Tuesday, June 19)
ASEV Member ........................................... $275*
Non-Member ............................................ $375*
Student Member ......................................... $50*

■ General Registration
(Wednesday, June 20 & Thursday, June 21)
Includes: Research reports (oral and poster), Industry Seminars & Supplier Displays, Merit Award presentation, Poster Session, Flash Talks, Monterey County Wine Reception, and Student-Industry Mixer.
ASEV Member ........................................... $235*
Non-Member ............................................ $460*
Student Member ......................................... $65*

■ Industry Seminar ONLY
– Winemaking - Using Malolactic Fermentation as a Driver of Red Wine Style (1 hr.)
– Grapegrowing – Building Healthy Soils (1 hr.)
(Wednesday, June 20)
These Industry Seminars and Supplier Displays are included in General Registration fees.
(Fees are per seminar and include admission to supplier displays)
ASEV Member (if ONLY registering for Industry Seminar) ... $50**
Non-Member (if ONLY registering for Industry Seminar) ..... $75**

*After June 12, the additional $25 – $75 fee will only be applied once if you are registering for multiple events.
**CAWG Members are welcome to register at the ASEV Member rates. Please contact us for a promotional code.

2 Ways to Pre-Register
1 Online
www.asev.org
2 Telephone
1-(888) 559-9530 or (781)-688-8229
The call center is open from 6:00 am to 5:00 pm (PT), Monday through Friday.
For registration changes, you may contact the call center by email (registration@asev.org) or at the number above.

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