68th ASEV National Conference

June 26–29, 2017

Program Includes
- Merit Award Presentation – Dr. Andrew Walker
  University of California, Davis
- ASEV Extension Distinction Award Presentation –
  Mr. Larry Bettiga
  University of California Cooperative Extension, Monterey County
- Honorary Research Lecturer –
  Dr. Alan Lakso
  Cornell University, New York
- New Understandings in Wine Oxidation Chemistry Symposium
- Research Reports
- Student Flash Talks
- Washington Regional Wine Reception
- Industry Seminars with Supplier Displays
- Outreach Seminar

Hyatt Regency Bellevue
Bellevue, Washington USA

REGISTRATION & PROGRAM GUIDE

American Society for Enology and Viticulture
The National Conference explores new grounds as it goes to Bellevue, Washington, the gateway to the entire Puget Sound wine region. Bellevue is located minutes away from Woodinville Wine Country, which hosts over 90 wineries’ production facilities, barrel rooms and/or tasting rooms. Washington State is home to 900 wineries, more than 350 grape growers and 50,000 acres of vineyards. Today, Washington viticulture is a $4.8 billion-plus industry and is the second-largest producer of premium wine in the U.S.

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

2017 Merit Award Presentation

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.

Thursday, June 29, 9:15 am – 10:00 am

Dr. Andrew Walker, University of California, Davis
The Southwestern Vitis – a Grape Breeding Motherlode

The ASEV Board is pleased to honor Dr. Andrew Walker of the University of California in Davis as ASEV’s 2017 Merit Award recipient.

Dr. Walker’s lab focuses on grape breeding and the genetics of resistance to pests and diseases. He breeds rootstocks for resistance to nematodes, phylloxera, fanleaf, drought and salinity, and wine grapes with resistance to Pierce’s disease and powdery mildew. He served as the Louis P. Martini Endowed Chair from 2000 to 2015 and was recently appointed the Louise Rossi Endowed Chair in Viticulture in 2015.

Dr. Walker is currently a professor and geneticist at the University of California, Davis, teaching general viticulture and grapevine identification. Dr. Walker has a long history of involvement with ASEV, serving as secretary/treasurer from 1999 to 2004 and technical program director from 2011 to 2015. He was also ASEV’s Honorary Research Lecturer in 2009.
# 2017 ASEV National Conference Overview

All events will be held at the Hyatt Regency Bellevue, unless noted otherwise.

*as of May 2017*

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<th>Monday, June 26</th>
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<td>4:00 pm – 6:00 pm</td>
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<th>Tuesday, June 27</th>
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<td>7:55 am – 8:05 am</td>
<td>President’s Welcome</td>
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<td>8:05 am – 8:15 am</td>
<td>Washington Wine Commission Welcome</td>
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<td>Enology – Wine Aroma Session (oral research reports)</td>
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<td>Viticulture – Water Relations Session (oral research reports)</td>
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<td>ASEV Extension Distinction Award Presentation – Preparation and Delivery of Viticulture Extension on the Frontier</td>
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<td>Honorary Research Lecturer – Perspectives on Applied Physiology in Support of Viticulture</td>
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<td>12:05 pm – 1:30 pm</td>
<td>Early Career Member Lunch</td>
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<td>1:30 pm – 3:30 pm</td>
<td>Winemaking &amp; Grapegrowing: Redwine Color: From Grape to Glass (industry seminar)</td>
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<td>3:45 pm – 4:15 pm</td>
<td>Keynote Presentation – Seeing through the Haze - Insights into Smoke Taint Impacts in Wine</td>
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<td>4:20 pm – 6:00 pm</td>
<td>Student Flash Talks (selected student poster presenters)</td>
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<td>Poster Authors Present (research reports) &amp; Washington Regional Wine Reception</td>
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<td>Viticulture – Canopy Management Session (oral research reports)</td>
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<td>Merit Award Presentation – The Southwestern <em>Vitis</em> - a Grape Breeding Motherlode</td>
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<td>Enology – Molecular Microbiology Session (oral research reports)</td>
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<td>Viticulture – General Viticulture Session (oral research reports)</td>
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<td>ASEV Annual Business Meeting</td>
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<td>Enology – Phenolics Session (oral research reports)</td>
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<td>Viticulture – Remote Sensing Session (oral research reports)</td>
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<td>Grapegrowing — Fungicide Resistance (industry seminar)</td>
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<td>Winemaking — The Influence of Lees (industry seminar)</td>
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<td>AJEV Best Viticulture Paper Author Presentation</td>
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<td>3:30 pm – 5:00 pm</td>
<td>Outreach Seminar — Smoke Taint</td>
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<td>5:15 pm – 7:15 pm</td>
<td>Student-Industry Mixer Reception</td>
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New Understandings in Wine Oxidation Chemistry Symposium

TUESDAY, JUNE 27

8:30 am – 5:30 pm

Wine oxidation has been an area of very active research for the last 15 years, with major advances in our understanding of the chemistry, as well as the application of that chemistry to wine production management. Developments over the last 5 years have been most enlightening. This one-day symposium will include the most important and productive research teams from around the world. The areas to be covered are 1) fundamental understanding of oxidation chemistry, and 2) the application of that new understanding to managing wine production for achieving desired results.

Organizing Committee:
Andrew Waterhouse, University of California, Davis
Maurizio Ugliano, University of Verona, Italy
Paul Kilmartin, University of Auckland, New Zealand

Speakers:

Fruit Oxidation during Harvest
Paul Kilmartin, University of Auckland, New Zealand

Review of Oxygen during Fermentation
Linda Bisson, University of California, Davis

The Effects of Oxygen on “Reductive Aroma” Compounds During Fermentation and Postbottling
Marlize Bekker, Australian Wine Research Institute, Australia

Redox Status and Wine Oxidation
John Danilewicz, Plumpton College, United Kingdom

Formation of Oxidized Aroma in Wine
Vicente Ferreira, University of Zaragoza, Spain Country

Rapid Fingerprinting Techniques for Management of Must and Wine Oxidation in the Winery
Maurizio Ugliano, University of Verona, Italy

Practical Monitoring of Polyphenolics Oxidation
Christine Pascal, Nomacorc, France

New Developments in Red Wine MOx
Andrew Waterhouse, University of California, Davis

Use of MOx in Winemaking
Laurent Fargeton, Vivelys, France

Protection of Wine against Oxidation: A New Natural Solution for Aging
Jean-Michel Salmon, Institut National de Recherche Agronomique (INRA), France

Oak and Wine Oxidation (cork and wood)
Alexandre Pons, University of Bordeaux, France
Speaker sponsored by Diam Bouchage and Seguin Moreau

Barrels
Antonio Ferreira, Cork Supply, Portugal
Speaker sponsored by Cork Supply USA

Coffee Break sponsored by Stavin
ORAL SESSIONS

Research presentations (oral and poster) are based on submitted abstracts and represent work in progress and final research.

WEDNESDAY, JUNE 28

7:55 am – 8:05 am
President’s Welcome
Nichola Hall, Scott Laboratories, California

8:05 am – 8:15 am
Introduction of Washington State Wine
Steve Warner, Washington State University

Enology – Wine Aroma Session
(research report)

8:15 am – 9:55 am
Moderator:
John Thorngate, Constellation Brands, California

Program:
Impact of Intercontinental Bulk Wine Shipping Conditions on the Aroma and Sensory Profile of Chardonnay
Dominik Durner, Institute for Viticulture and Oenology, Germany

Characterizing Glycosidically-Bound Sensory Precursors in Smoke-Exposed Vitis vinifera Berries
Matthew Noestheden, The University of British Columbia, Canada

Myths and Facts about the Role of Precursors in the Formation “Reductive Aromas” in Wines Post Bottling
Marlize Bekker, The Australian Wine Research Institute, Australia

Use of Glutathione in White Winemaking – Friend or Foe?
Pascal Wegmann-Herr, Institute for Viticulture and Oenology, Germany

Free Monoterpene Isomer Profiles of Eight Vitis vinifera L. cv. Varietal White Wines
Mei Song, Oregon State University, Corvallis

Viticulture – Water Relations Session
(research report)

8:15 am – 9:55 am
Moderator:
Mark Greenspan, Advanced Viticulture Inc., California

Program:
Changes of the Grape Berry (Vitis vinifera L.) Cuticle during Fruit Development in Response to Water Deficit Stress
Nicolas Dimopoulos, The University of British Columbia, Canada

2017 ASEV Extension Distinction Award Presentation

10:15 am – 11:00 am
Preparation and Delivery of Viticulture Extension on the Frontier
Mr. Larry Bettiga, University of California Cooperative Extension, Monterey County

2017 Honorary Research Lecturer

11:20 am – 12:05 pm
Perspectives on Applied Physiology in Support of Viticulture
Dr. Alan Lakso, Horticulture Section of Cornell University, New York

Keynote Presentation

3:45 pm – 4:15 am
Seeing through the Haze – Insights into Smoke Taint Impacts in Wine
Dr. Mark Krstic, Australian Wine Research Institute
THURSDAY, JUNE 29

Enology – Brettanomyces Management Session (research report)

8:00 am – 9:00 am

Moderator:
James Osborne, Oregon State University, Corvallis

Program:
Impact of Oenococcus oeni on Brettanomyces bruxellensis Growth in Wine
Aubrey DuBois, Oregon State University, Corvallis
Reduction of Brettanomyces bruxellensis Populations from Oak Barrel Staves Using Steam
Zachary Cartwright, Washington State University, Pullman
Inactivating Brettanomyces bruxellensis in Different Table Wines Using High Pressure Processing
Sanelle van Wyk, University of Auckland, New Zealand

Enology – Molecular Microbiology Session (research report)

10:15 am – 11:15 am

Moderator:
Linda Bisson, University of California, Davis

Program
Role of Microbial Community in Problematic Fermentations
Vidhya Ramakrishnan, University of California, Davis
Evolutionary Engineering and Breeding of Saccharomyces cerevisiae to Increase Acidity and Decrease Ethanol Levels in Wines
Jessica Noble, Université de Montpellier, France
Molecular Characterisation of Saccharomyces cerevisiae during Fed-Batch Fermentation of High-Gravity Grape Musts
Christian Vogelei, Weincampus Neustadt Breitenweg, Germany

Viticulture – Canopy Management Session (research report)

8:00 am – 9:00 am

Moderator:
Pat Bowen, Agriculture & Agri-Food, Canada

Program:
Partial Solar Radiation Exclusion with Color Shade Cloths May Improve Red Wine Grape Composition
Johann Martinez, University of California, Davis
Efficiency of Leaf Removal and Cluster Thinning Are Modulated by Climatic Conditions in Cool Climate Viticulture
Shijian Zhuang, University of California Cooperative Extension, Fresno County
Proanthocyanidin Compositional Shifts Are Modulated by Canopy Gaps and Applied Water in Winegrape
Runze Yu, University of California, Davis

Viticulture – General Viticulture Session (research report)

10:15 am – 11:15 am

Moderator:
Michelle Moyer, Washington State University, Prosser

Program
Causal Role of Drosophila spp. in Sour Rot Development
Megan Hall, Cornell University, New York
Cold-Climate Cultivar Fall-Acclimation and Fruit Ripening Alterations in Response to Changing Temperatures
Harlene Hatterman-Valenti, North Dakota State University, Fargo
A Preliminary Study of Taxonomic and Geographic Relationships among Accessions of Vitis berlandieri and Associated Taxa
Jake Uretsky, University of California, Davis

2017 ASEV Merit Award Presentation

9:15 am – 10:00 am

The Southwestern Vitis – a Grape Breeding Motherlode
Dr. Andrew Walker, University of California, Davis

2017 AJEV Best Enology Paper Author Presentation

11:30 am – Noon

Effects of Vineyard and Winemaking Practices Impacting Berry Size on Evolution of Phenolics during Winemaking
Federico Casassa, California Polytechnic University, San Luis Obispo
AJEV Best Paper Award sponsored by J. Lohr Vineyards & Wines
Thursday, June 29 (continued)

### Enology – Phenolics Session (research reports)

1:10 pm – 2:30 pm

**Moderator:**

_Federico Casassa, California Polytechnic University, San Luis Obispo_

**Speakers:**

- Impact of Postveraison Berry Exposure on the Skin Tannin Activity of Partial Extracts
  _James Campbell, University of California, Davis_

- Elucidating the Fundamental Mechanism of Phenolic Extraction in Red Wine Fermentations
  _Cristina Medina-Plaza, University of California, Davis_

- Impact of Berry Maturity and Alcohol Content on Wine Phenolic Hydrophobicity and Content Over Time
  _Caroline Merrell, Washington State University, Tri-Cities_

- Quantitative Estimation of the Distributions of Iron and Copper Complexes across the pH range of Model Wines
  _Robert Coleman, University of California, Davis_

### Viticulture – Remote Sensing Session (research reports)

1:10 pm – 2:30 pm

**Moderator:**

_Lise Asimont, Francis Ford Coppola Presents, California_

**Speakers:**

- Development of a Real-Time Temperature Inversion Network for Assessing North Coast Vineyard Frost Conditions
  _Mark Battany, University of California Cooperative Extension, San Luis Obispo County_

- A Thermal Camera-Based Smartphone Application to Measure Vine Water Status
  _Paul Petrie, The Australian Wine Research Institute and the South Australian Research and Development Institute, Australia_

  _Samuel Ortega-Farias, Universidad de Talca Citra-Utalca, Chile_

- “To Fly or Not to Fly”: Airborne Remote Sensing for Determination of Vine Water and Nitrogen Status at a Regional Scale
  _Vinay Pagay, University of Adelaide, Australia_

### 2017 AJEV Best Viticulture Paper Author Presentation

2:45 pm – 3:15 pm

Effect of Postharvest Defoliation on Carbon and Nitrogen Resources of High-Yielding Sauvignon blanc Grapevines

**Marc M. Greven, New Zealand Institute for Plant and Food Research, New Zealand**

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

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**POSTER SESSIONS (RESEARCH REPORTS)**

**WEDNESDAY, JUNE 28**

7:30 am – 7:30 pm

Authors present their poster research during Washington Regional Wine Reception (6:00 pm – 7:30 pm) Wednesday, June 28, at the Hyatt Regency Bellevue

**Chair:**

_Leticia Chacón-Rodríguez, Safe Harbor Wine Storage, California_ (Listed in alphabetical order)

= Student Flash Talks

### Enology & Viticulture Research Report Posters

Red Blotch Disease Alters Grapevine Primary Metabolism Resulting in Unstable Berry Flavonoid Composition

**Cassandra Plank, University of California, Davis**

Sanitary Status of Grapevine Nurseries in Washington State

**Rayapti Naidu, Washington State University, Prosser**

Defoliation of Grape Leaves Associated with Downy Mildew, Anthracnose and Isariopsis Leaf Spot

**Luciane Bertoletti Barros, University of California, Davis**
Enology & Viticulture Research Report Posters (continued)

- Map Based Positional Cloning of Powdery Mildew Resistance Genes from the Chinese Grape Species *Vitis piasezkii*
  Laila Fayyaz, University of California, Davis

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

- Complete Genome Sequence of Grapevine Leafroll-Associated Virus 1 Isolates from Washington Vineyards
  Sridhar Jarugula, Washington State University, Prosser

- Feeding and Reproductive Hosts of the Three-Cornered Alfalfa Hopper, a Vector of Grapevine Red Blotch-Associated Virus
  Cindy Preto, University of California, Davis

- Impacts of Grapevine Leafroll and Red Blotch Diseases in Commercial Vineyards
  Prashant Swamy, Washington State University, Prosser

- Effect of Pruning on Grapevine Shoot and Cluster Development as a Function of Arm Position along the Cordon
  Dylan Ellis, California Polytechnic State University, San Luis Obispo

- Specific Yeast-Derived Foliar Spray Application Affects Anthocyanin Gene Expression and Accumulation in Sangiovese
  Ilaria Filippetti, University of Bologna, Italy

- Bunch Exposure Management in a Challenging Environment Using Sun Protection Agents
  Melanie Ford, Washington State University, Tri-Cities

- Crop Load Management to Improve Ripening and Aromatic Contents in White Grapes in the Okanagan Valley
  Yevgen Kovalenko, The University of British Columbia, Canada

- Irrigation Management for Improving the Ripening and Aromatic Contents in White Grapes in the Okanagan Valley
  Yevgen Kovalenko, The University of British Columbia, Canada

- Effect of Liquid Fertilizer on Growth, Quality, and Anthocyanin Levels of Grape Berry
  Yoshinori Nakao, Meijo University, Japan

- Timing of Leaf Removal Differentially Affects the Sensory Quality of Red and White Wines
  Kevin Usher, Agriculture and Agri-Food Canada, Canada

- Effects of Irrigation Deficit Timing on Vine Water Stress and Winter Hardiness in Merlot
  Carl Bogdanoff, Agriculture and Agri-Food Canada, Canada

- Shifts in Proanthocyanidin Composition of Cabernet Sauvignon are Modulated by Selective Shading and Water Deficit
  Christopher Chen, University of California, Davis

- Relationship of Soil Moisture and Leaf Water Potential in Deficit Irrigated Tempranillo Grapes: A Working Hypothesis
  Carmen Gispert, University of California Cooperative Extension, Riverside County

- Use of Infrared Temperature Sensing to Continuously Measure Grapevine Water Status for Irrigation Scheduling
  Xinzhao Hu, University of Adelaide, Australia

- Maintaining Vineyard Production with Season-long Deficit Irrigation
  Pete Jacoby, Washington State University, Pullman

- Production Systems and Applied Water Amounts Interact on Productivity and Berry Composition of Zinfandel
  Kaan Kurtural, University of California, Davis

- Use of Mass Balance in Determining Plant Water Status of Individual Grape Vines
  Shayla Nikzad, University of California, Davis

- Artificial Neural Network Model to Estimate Vine Water Status Using a Multispectral Camera aboard an UAV
  Tomás Poblete, Universidad de Talca Citra-Utalca, Chile

- Deficit Irrigation Practices May Alter Vitis vinifera L. Resistance to Cold Injury: Empirical Evidence from the Field
  Krista Shellie, United States Department of Agriculture, Agricultural Research Service, Parma

- Evaluation of Stomatal Conductance as an Irrigation Scheduling Tool in Grapevine
  Garret Stahl, Washington State University, Tri-Cities

- Vine Water Stress-Based Precision Irrigation Using a Wireless Network of Sensors and Controllers
  Srinivasas Upadhyaya, University of California, Davis

- Field Evaluation of the GRN Rootstocks on the Growth and Productivity of Chardonnay Grapevines in the Salinas Valley
  Larry Bettiga, University of California Cooperative Extension, Monterey County

- Effects of Protective Covers on the Temperature of Young Grapevine Stems and Roots in Winter
  Pat Bowen, Agriculture and Agri-Food Canada, Canada

- Assessing Variability in the Vineyard through a Spatially Explicit Selective-Harvest Approach
  Luca Brilliante, University of California, Davis

- Grapevine Iron (Fe) Chlorosis: Root-Soil-Microbe Dynamics to Mobilize Fe in Alkaline Soils in Central Washington
  Taylor Bruchet, Washington State University, Pullman

- Salt Tolerance of Four Grape Rootstocks is Related to Root Architecture Traits
  Cassandra Bullock-Bent, University of California, Davis
Enology & Viticulture Research Report Posters (continued)

Under-Vine Cover Crops Mitigate Excessive Vine Vigor and Improve Soil Health in a Mature Cool Climate Vineyard
Ming-Yi Chou, Cornell University, New York

Evaluation of Genetic Diversity in Wild Vitis from Northern and Central Mexico
Karla Huerta, University of California, Davis

Modelling Vegetative Vigor in Grapevine. Unravelling Implicated Mechanisms
Ines Hugalde, Instituto Nacional de Tecnología Agropecuaria (INTA), Argentina

Vintage Advancement and Compression in Australia Due to Climate Change
Paul Petrie, The Australian Wine Research Institute and the South Australian Research and Development Institute, Australia

Impacts of Two Viticultural Practices on Dynamic Spatiotemporal Hormone Accumulation in Pinot noir Berries
Joseph Schmidt, Oregon State University, Corvallis

Comparing Nitrogen Fertilization in the Vineyard versus Supplementation in the Winery on Pinot noir and Chardonnay
R Paul Schreiner, United States Department of Agriculture, Agricultural Research Service, Corvallis

Proximal Sensing and Stratified Sampling in Vineyards Provide Direction in Coalescing Vineyard Variability
Runze Yu, University of California, Davis

Crop Load Management of Young Pinot gris in the San Joaquin Valley, California
Shijian Zhuang, University of California Cooperative Extension, Fresno County

Anthocyanins Contribute to Red Wine Flavor
Kei Asada, Sapporo Breweries, Japan

Phenolic Composition and Sensory Properties of Bonarda Wines From Mendoza Province (Argentina)
Federico Casassa, California Polytechnic State University, San Luis Obispo

Influence of Different Aging Tank Materials on Phenolic Composition of Malbec Wines
Federico Casassa, California Polytechnic State University, San Luis Obispo

Effects of Modified Saignée Techniques on the Chemical and Sensory Profile of Argentinian Bonarda and Malbec Wines
Federico Casassa, California Polytechnic State University, San Luis Obispo

Effect of Stem Additions and Microwave Extraction of Musts and Stems on Syrah, Merlot and Cabernet Sauvignon Wines
Federico Casassa, California Polytechnic State University, San Luis Obispo

Impact of Hydrolysable and Condensed Tannins on Red Wine Color Stabilization
Nicolas Delchier, University of California, Davis

Factors Affecting Acetaldehyde, Chromatic Characteristics and Phenolics Evolution during the Oxidation of Red Wine
Angelita Gambuti, University of Naples Federico II, Italy

Influence of Polyphenol Adsorption to Grape Insoluble Polysaccharides on Polyphenol Extraction during Red Winemaking
Eri Inoue, University of Yamanashi, Japan

Comparison of Tannin Addition Protocols and Their Effects on Extraction of Grape Phenolics during Red Wine Fermentation
Glenn Jeffries, Oak Solutions Group, California

Tannin Reacts with SO₂ during Aging, Yielding Newly Discovered Flavan-3-ol Sulfonates in Wine
Lingjun Ma, University of California, Davis

Effect of Timing of Cluster Thinning on Pinot noir Grapes and Wines
Paul Mawdsley, California Polytechnic State University, San Luis Obispo

Chemical Effects of Cofermentation and Postfermentation Blending of Syrah with Selected Rhône White Varieties
Paul Mawdsley, California Polytechnic State University, San Luis Obispo

Comparison of Different Extraction Methods to Predict Anthocyanin Concentration and Color Characteristics of Red Wines
Stephan Sommer, Appalachian State University, Boone

Effect of pH and Ethanol on Tannin-Polysaccharide Interactions
Aude Watrelot, University of California, Davis

Sequential Inoculation of Different Yeasts to Reduce Alcohol Contents of Red Wines
Jesse Aplin, Washington State University, Pullman

Impact of Honeybee Isolates of Lactobacillus kunkeei on Wine Fermentation
Christopher Butler, University of California, Davis

Survival of Brettanomyces bruxellensis in Grape Pomace
Zachary Cartwright, Washington State University, Pullman

Impact of Storage Temperature and Ethanol on Brettanomyces bruxellensis Inoculated into Merlot Wine
Charles Edwards, Washington State University, Pullman

Revealing Buried Treasures in Culture Collections
Lucy Joseph, University of California, Davis

Profiling the Yeast Microbiome in Pinot noir Vineyards and Spontaneous Fermentations at a British Columbian Winery
Vivien Measday, The University of British Columbia, Canada
Identification of *Saccharomyces uvarum* from Spontaneously Fermented Pinot gris in British Columbia’s Okanagan Valley  
**Garrett McCarthy**, *The University of British Columbia, Canada*

Competition Between *Saccharomyces cerevisiae* and *Saccharomyces uvarum* in Controlled Chardonnay Fermentations  
**Sydney C. Morgan**, *The University of British Columbia, Canada*

Native Yeast Diversity in Two Washington Cabernet Sauvignon Vineyards Consists of Common and Unique Species  
**Pat Okubara**, *Washington State University, Pullman*

Effect of Strain-Dependent Variability in Yeast Cell Membrane Lipid Composition, Metabolic Activity and Gene Regulation  
**Ayca Ozcan**, *University of California, Davis*

Isolation and Characterization of Lactic Acid Bacteria from Winery Wastes  
**Maria Jose Rodriguez Vaquero**, *Universidad Nacional de Tucumán (UNT), Argentina*

Enhance of Antioxidant Activity in a Fermented Grape Juice Using Selected *Oenococcus oeni* Strains  
**Maria Jose Rodriguez Vaquero**, *Universidad Nacional de Tucumán (UNT), Argentina*

Polyphenols From Cafayate Grape Pomace Display High Inhibitory Activity on Human Acetylcholinesterase  
**Maria Jose Rodriguez Vaquero**, *Universidad Nacional de Tucumán (UNT), Argentina*

Development of New Yeast Strains for Lowering Ethanol and Increasing Glycerol Content of Wines  
**Michael Sobe**, *Erkloch Geisenheim AG, Germany*

EnolYeast & Viticulture Research Report Posters (continued)

In Vitro Antifungal Activity of Cat’s Claw (*Dolichandra unguis-cati* L.) On Fungal Contaminants of Grapes  
**Pedro Aredes-Fernández**, *Universidad Nacional de Tucumán, Argentina*

Effect of Wine Phenolic Compounds on Spoilage Lactic Acid Bacteria Isolated from Argentinean Wines  
**Pedro Aredes Fernández**, *Universidad Nacional de Tucumán, Argentina*

Selection of *Oenococcus oeni* Strains as Starter Cultures of Malolactic Fermentation in Wines from Tucuman, Argentina  
**Pedro Aredes-Fernández**, *Universidad Nacional de Tucumán, Argentina*

A Rapid and Inexpensive Spectrophotometric Method for Tyramine Detection  
**Pedro Aredes-Fernández**, *Universidad Nacional de Tucumán, Argentina*

Enological Attributes of *Hanseniaspora vineae* Yeast Will Contribute to Increased Chemical and Sensory Complexity  
**Francisco Carrau**, *Universidad de la Republica, Uruguay*

Aroma Precursors as Discriminant Factors in Rare Non-aromatic Red Grape Varieties  
**Francisco Carrau**, *Universidad de la Republica, Uruguay*

Discrimination of Pinot noir Wines from Six Districts in an AVA Using Elemental Analysis  
**Roger Boulton**, *University of California, Davis*

Effect of Optical Berry Sorting on Red Wine Quality  
**Robert Bruce**, *University of California, Davis*

Using the Flash Détente Technology to Effectively Improve Quality in Chilean Red Wines  
**José Cuevas-Valenzuela**, *Viña Concha y Toro, Chile*

Potassium Polyaspartate, a New Compound for Tartrate Stabilization of Wine  
**Paola Domizio**, *University of Florence, Italy*

Cost-Efficient Assessment of Washington Cabernet Sauvignon Wines  
**Anne Johansen**, *Central Washington University, Ellensburg*

The Control of Redox Potential During Wine Fermentations  
**David Killeen**, *University of California, Davis*

Evaluation of a Pretreatment Process, Flash Detente and Thermovinification, on Wine Volatile Composition and Color  
**Phillip Medina**, *Oklahoma State University, Edmond*

Catechol-o-methyltransferase Modulates Anti-Cancer Activity of Anthocyanins  
**Benigno Mojica**, *California State University, Bakersfield*
“Fingerprinting” of Washington Wines
Shirley Orellana, Central Washington University, Ellensburg

A Comparative Analysis of Additives for Enhancing White Wine Shelf Stability
Corinne Rich, University of California, Davis

Fast Arsenic Speciation Analysis of Wines with LC-ICP-QQQ
Courtney Tanabe, University of California, Davis

Rapid Detection of Alcohol Content in Wine by Surface Tension
Julia Wang, Boston University, Boston

Experimental Study of Bottle Shock of White and Red Wine by Sensorial and Chemical Analysis
Pengtao Zhao, Northwest A&F University, China

Characterization of Chinese Syrah Wine by Gas Chromatography-olfactory, Quantitation and Sensory Descriptive Analysis
Pengtao Zhao, Northwest A&F University, China

Comparison of Bourbon and Scotch Whiskies Using Phenolic Hydrophobicity and UHPLC-QTOF/MS
Thomas Collins, Washington State University, Tri-Cities

Profile and Content of Fatty Acid in New and Used Bourbon Whiskey Barrels
Jarrad Gollihue, University of Kentucky, Lexington

Surveying the Composition of Phenolic Compounds in Bourbon Barrels’ Staves
Jarrad Gollihue, University of Kentucky, Lexington

Performance of Wine Tank Anchorage Systems in the Marlborough Earthquakes
Will Lomax, OnGuard, California

New Innovations in the Use of Ozone in Wineries
John McClain, McClain Ozone, California

A Review of Plastics Use in Winemaking: Permeability and Sorption Considerations
Cassandra Plank, University of California, Davis

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.

Moderator:
Andy Walker, University of California, Davis
(Listed in presentation order)

Wednesday, June 28
4:20 pm – 6:00 pm

Map Based Positional Cloning of Powdery Mildew Resistance Genes from the Chinese Grape Species Vitis piazeckii
Laila Fayyaz, University of California, Davis

Effect of Pruning on Grapevine Shoot and Cluster Development as a Function of Arm Position along the Cordon
Dylan Ellis, California Polytechnic State University, San Luis Obispo

Irrigation Management for Improving the Ripening and Aromatic Contents in White Grapes in the Okanagan Valley
Yevgen Kovalenko, The University of British Columbia, Canada

Shifts in Proanthocyanidin Composition of Cabernet Sauvignon are Modulated by Selective Shading and Water Deficit
Christopher Chen, University of California, Davis

Use of Infrared Temperature Sensing to Continuously Measure Grapevine Water Status for Irrigation Scheduling
Xinhao Hu, University of Adelaide, Australia

Use of Mass Balance in Determining Plant Water Status of Individual Grape Vines
Shayla Nikzad, University of California, Davis

Evaluation of Stomatal Conductance as an Irrigation Scheduling Tool in Grapevine
Garret Stahl, Washington State University, Tri-Cities

Grapevine Iron (Fe) Chlorosis: Root-Soil-Microbe Dynamics to Mobilize Fe in Alkaline Soils in Central Washington
Taylor Bruchet, Washington State University, Pullman

Salt Tolerance of Four Grape Rootstocks is Related to Root Architecture Traits
Cassandra Bullock-Bent, University of California, Davis
Student Flash Talks (continued)

Under-Vine Cover Crops Mitigate Excessive Vine Vigor and Improve Soil Health in a Mature Cool Climate Vineyard
Ming-Yi Chou, Cornell University, New York

Evaluation of Genetic Diversity in Wild Vitis from Northern and Central Mexico
Karla Huerta, University of California, Davis

Impacts of Two Viticultural Practices on Dynamic Spatiotemporal Hormone Accumulation in Pinot noir Berries
Joseph Schmidt, Oregon State University, Corvallis

Proximal Sensing and Stratified Sampling in Vineyards Provide Direction in Coalescing Vineyard Variability
Runze Yu, University of California, Davis

Tannin Reacts with SO₂ during Aging, Yielding Newly Discovered Flavan-3-ol Sulfonates in Wine
Lingjun Ma, University of California, Davis

Effect of Timing of Cluster Thinning on Pinot noir Grapes and Wines
Paul Mawdsley, California Polytechnic Institute, San Luis Obispo

Impact of Honeybee Isolates of Lactobacillus Kunkeei on Wine Fermentation
Christopher Butler, University of California, Davis

Survival of Brettanomyces bruxellensis in Grape Pomace
Zachary Cartwright, Washington State University, Pullman

Identification of Saccharomyces uvarum from Spontaneously Fermented Pinot gris in British Columbia’s Okanagan Valley
Garrett McCarthy, The University of British Columbia, Canada

Competition Between Saccharomyces cerevisiae and Saccharomyces uvarum in Controlled Chardonnay Fermentations
Sydney C. Morgan, The University of British Columbia, Canada

Effect of Strain-Dependent Variability in Yeast Cell Membrane Lipid Composition, Metabolic Activity and Gene Regulation
Ayca Ozcan, University of California, Davis

Efficacy of Cleaning Chemistries on Typical Wine Microorganisms
Paul van der Merwe, University of California, Davis

New Impedance Method Reduces the Enumeration Time of Brettanomyces Yeast Contamination in Red Wine
Sanelle van Wyk, University of Auckland, New Zealand

Impact of Nutrient Supplementation of Synthetic Grape Juice on Growth of Pediococcus spp. Post-Alcoholic Fermentation
Megan Wade, Washington State University, Pullman

Evaluation of Native Vineyard Yeasts of Washington State for Biological Control of Botrytis Bunch Rot of Grape
Xuefei Wang, Washington State University, Pullman

Effect of Optical Berry Sorting on Red Wine Quality
Robert Bruce, University of California, Davis

Evaluation of a Pretreatment Process, Flash Detente and Thermovinification, on Wine Volatile Composition and Color
Phillip Medina, Oklahoma State University, Edmond

“Fingerprinting” of Washington Wines
Shirley Orellana, Central Washington University, Ellensburg

Rapid Detection of Alcohol Content in Wine by Surface Tension
Julia Wang, Boston University, Boston

Outreach Seminar

Drought, climate change and a spate of Pacific Coast wildfires have heightened concerns about the impact of smoke on winegrapes and wine. Speakers at this Outreach Seminar will discuss when winegrapes are most susceptible to smoke taint, how it affects wines, varietal susceptibility, exposure levels and strategies to mitigate potential smoke taint.

THURSDAY, JUNE 28

3:30 pm – 5:00 pm

Smoke Taint

Chair:
Tom Collins, Washington State University, Tri-Cities

Speakers:
Tom Collins, Washington State University, Tri-Cities
Mark Krstic, Australian Wine Research Institute
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:
Nichola Hall (Chair), Scott Laboratories, California
Patty Skinkis, Oregon State University, Corvallis
Hans Walter-Peterson, Cornell Cooperative Extension, New York

Wednesday, June 28
1:30 pm – 3:30 pm
Winemaking & Grapegrowing - Red Wine Color: From Grape to Glass
This seminar is designed to explore practical aspects of red wine color through notable industry and academic speakers. Attendees will learn about how humans perceive color, vineyard management tools for color, wine analysis and winery decision making.
Chair:
James Harbertson, Washington State University, Tri-Cities
Speakers:
Tondi Bolkan, Francis Ford Coppola Presents, California
James Harbertson, Washington State University, Tri-Cities
Hildegarde Heymann, University of California, Davis
Russ Smithyman, Chateau Ste. Michelle Winery, Washington
Sara Spayd, North Carolina State University, Raleigh

Thursday, June 29
1:30 pm – 2:30 pm
Grapegrowing – Fungicide Resistance
Fungicides are some of the most important tools used by growers to manage disease development in vineyards around the world. Over time, however, continued use of many of these materials often leads to the development of resistance in local or regional populations of organisms, reducing the number of options available to the vineyard manager to control diseases that impact fruit quality, vine health and productivity. Our three speakers will address how and why disease organisms develop resistance to certain types of fungicides, as well as how growers can develop spray programs that help to sustain the use of effective fungicide materials.
Chair:
Hans Walter-Peterson, Cornell Cooperative Extension, New York
Speakers:
Walter Mahaffee, United States Department of Agriculture-Agricultural Research Service, Horticulture Crops Research, Oregon
Michelle Moyer, Washington State University, Prosser
Wayne Wilcox, Cornell University, New York

1:30 pm – 2:30 pm
Winemaking – The Influence of Lees
Aging wine on yeast lees can have a significant impact on aroma and mouthfeel properties. These effects may be a direct consequence of the release of cellular components from yeast during the self-digestion process known as autolysis but these changes can also arise from the oxygen-consuming capacity of the yeast lees. This session will cover these aspects of lees aging and also offer a practical guide to managing lees in the winery.
Chair:
Linda Bisson, University of California, Davis
Speakers:
Alan Bakalinsky, Oregon State University, Corvallis
Jean-Michel Salmon, Institut National de Recherche Agronomique (INRA), France
Nicolas Quille, Pacific Rim and Company, Oregon
## 2017 Pre-registration Rates

Valid through June 20

### New Understandings in Wine Oxidation Chemistry Symposium
(Tuesday, June 27)

- ASEV Member .................................................. $275*
- Non-Member ..................................................... $375*
- Student Member ................................................. $50*

### General Registration
(Wednesday, June 28 & Thursday, June 29)

**Includes:** Research reports (oral and poster), Industry Seminars & Supplier Displays, Merit Award presentation, Poster Session, Flash Talks, Washington Regional Wine Reception, and Student-Industry Mixer.

- ASEV Member .................................................. $235*
- Non-Member ..................................................... $460*
- Student Member ................................................. $65*

### Industry Seminar ONLY
- Color (2 hrs.)
(Wednesday, June 28)

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) ... $75**
- Non-Member (if ONLY registering for Industry Seminar) ... $100**

### Industry Seminar ONLY
- Fungicide Resistance (1 hr.)
- The Influence of Lees (1 hr.)
(Thursday, June 29)

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) ... $75**
- Non-Member (if ONLY registering for Industry Seminar) ... $100**

*After June 20, 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.*

## Membership Information

**Save over $300 on registration fees by becoming a member today!** If you are not already a member, now is the time to join. You can apply online or download an application from our website at www.asev.org. Membership includes access to our online journal.

### 2017 Pre-registration Rates

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<th>ASEV Member</th>
<th>Non-Member</th>
<th>Student Member</th>
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<td>$275*</td>
<td>$375*</td>
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<tr>
<td>General Registration</td>
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*CAWG Members are welcome to register at the ASEV Member rates. Please contact us for a promotional code.*