

Managing Wild Bacterial Flora Symposium

Tuesday, June 19
8:00 am – 5:30 pm
Carson 1

This symposium will be video taped and will be available online for \$200 for a 90-day subscription.

This symposium will present the latest information on the bacterial contribution to wine quality and composition and provide practical strategies for management of bacterial metabolism. In addition, emerging problem organisms will be highlighted.

Co-chairs:

Linda Bisson, *University of California, Davis*
David Mills, *University of California, Davis*

Program:

- 8:30 am – 8:45 am
Introduction and Overview of Wild Flora Issues
Linda Bisson, *University of California, Davis*
- Practical Aspects of Bacterial Management: Detection*
- 8:45 am – 9:30 am
Molecular Methods of Microbe Detection
Trevor Phister, *North Carolina State University, Raleigh*
- 9:30 am – 10:00 am
Ecosystem Profiling: Management by Detection of Unwanted Genes
David Mills, *University of California, Davis*
- 10:00 am – 10:15 am
Break
- 10:15 am – 10:45 am
Non-molecular Methods of Detection
Roy Thornton, *California State University, Fresno*
- Impact of Bacterial Metabolite on Wine Composition*
- 10:45 am – 11:30 am
Comparison of Inoculated and Wild Malolactic on Wine Composition and Sensory Properties
Peter Costello, *Australian Wine Research Institute*
- 11:30 am – Noon
A Global Survey of Levels of Undesirable Metabolites in Wines
George Soleas, *Ontario Liquor Control Board, Canada*



- Noon – 1:30 pm
Lunch on own
- Acetic Acid Bacteria*
- 1:30 pm – 2:30 pm
Analysis and Control of Acetic Acid Bacteria in Winemaking
José Manuel Guillamón, *Universitat Rovira i Virgili, Spain*
- 2:30 pm – 3:30 pm
Impact of Microoxygenation on Wine Microbial Flora
Wessel du Toit, *University of Stellenbosch, South Africa*
- 3:30 pm – 3:45
Break
- Lactic Acid Bacteria*
- 3:45 pm – 4:15 pm
Managing Difficult Malolactic Fermentations
Peter Sommer, *Chr. Hansen, Denmark*
- Practical Aspects of Bacteria Management*
- 4:15 pm – 4:30 pm
Overview and Monitoring of Sanitation Practices
Paula Mara, *University of California, Davis*
- 4:30 pm – 4:45 pm
Incidence of Bacterial Spoilage
Shirley Molinari, *Vinquiry, California*
- 4:45 pm – 5:15 pm
Emerging Spoilage Organisms
David Mills, *University of California, Davis*
- 5:15 pm – 5:30 pm
Closing Comments

President's Welcome & Technical Projects Committee (TPC) Overview

Wednesday, June 20
8:00 am – 8:30 am
Tahoe Room

Merit Award Presentation

Wednesday, June 20
8:30 am – 9:15 am
Tahoe Room

Developing a Research Program Near the Climatic Limits of Commercial Vine Culture
Dr. G. Stanley Howell, *Emeritus, Michigan State University*
Biographical information is on page 20

Viticultural Practices Session

Wednesday, June 20
9:30 am – 11:10 am
Carson Room

Moderator:
Larry Bettiga, *University of California Cooperative Extension, Monterey County*

- Program:**
- 9:30 am – 9:50 am
Effect of Crop Load Adjustment on Fruit Ripening, Uniformity and Sensory Characteristics
Michael Anderson, *University of California, Davis*
 - 9:50 am – 10:10 am
Impact of Training System on Berry Composition and Wine Quality of Syrah
David Sorokowsky, *RH Phillips Wine Company, California*
 - 10:10 am – 10:30 am
Impact of Deficit Irrigation on Aroma Composition of Merlot Wine
Michael Qian, *Oregon State University, Corvallis*
 - 10:30 am – 10:50 am
Influence of Sunlight Exposure on Monoterpane Accumulation in the Interspecific Hybrid Traminette
Patricia Skinkis, *Oregon State University, Corvallis*



10:50 am – 11:10 am
Effects of Irrigation Levels during Final Stages of Ripening on Yield and Wine Composition
Martin Mendez-Costabel, *University of California, Davis*

Grape & Wine Composition and Sensory Analysis Session

Wednesday, June 20
10:00 am – Noon
Tahoe Room

Moderator:
David Stevens, *Davon International, California*

- Program:**
- 10:00 am – 10:20 am
Electronic Nose Evaluation of Cabernet Sauvignon Fruit Maturity
Ahmad Athamneh, *Virginia Polytechnic Institute,*
 - 10:20 am – 10:40 am
Fast Aroma Analysis of Cabernet Sauvignon and Riesling Grapes Using an Electronic Nose
Amalia Berna, *CSIRO Food Futures Flagship, Australia*
 - 10:40 am – 11:00 am
Estimated Sensory Thresholds of *Harmonia axyridis*
Tederson Luiz Galvan, *University of Minnesota, Saint Paul*
 - 11:00 am – 11:20 am
Impact of SO₂ on Culturability and Viability of *Brettanomyces* in Wine
Nicole Umiker, *Washington State University, Pullman*
 - 11:20 am – 11:40 am
Determination of the Role of Fruit Maturity in the Sensory Properties of Cabernet Sauvignon Wines
Kirsten Skogerson, *University of California, Davis*
 - 11:40 am – Noon
Key Constituents Affecting Wine Body: An Exploratory Study in Table Wines
Ron Runnebaum, *University of California, Davis*



Supplier Showcase Seminar: Microbiology

Wednesday, June 20
10:30 am – Noon
Summit Pavilion

Chair:

Susan Rodriguez, *California State University, Fresno*

This seminar will provide an overview of how to set up an in-house microbiology program, information on equipment required, appropriate testing at different stages of production, as well as information on more advanced tests that can be considered. An industry panel will discuss their in-house programs.

Speakers:

Jeff Farthing, *Rutherford Hill Winery, California*

Nichola Hall, *Vinquiry, California*

Lars Peterson, *Gusmer Enterprises, California*

Megan Schofield, *Beam Wine Estates, California*

Pat Williams, *Anzen Biosciences, Utah*

2007 James F. Guymon Lecture

Wednesday, June 20
1:30 pm – 2:30 pm
Tahoe Room

Quantifying the Chemistry of Distilled Spirits

Dr. Roger B. Boulton, *University of California, Davis*

Supplier Showcase Seminar: Filtration Fundamentals

Wednesday, June 20
1:30 pm – 3:00 pm
Summit Pavilion

Chair:

Tom Collins, *LangeTwins Wine Estates, California*

This workshop is intended to address the fundamentals of filtration and the characteristics of different filtration systems for winemakers and production staff. It will include an overview of filtration systems and wine filtration. This workshop will also be offered on Thursday at the same time.

Speakers:

Dave Gusmer, *Gusmer Enterprises, California*

Conor O'Hara, *Cuno, Connecticut*

Introduction to Distilled Spirits Seminar & Tasting

Wednesday, June 20
3:00 pm – 6:00 pm
Crystal Ballroom

Chair:

Roger Boulton, *University of California, Davis*

Assisted by:

James Kennedy, *Oregon State University, Corvallis*

This unique seminar will offer descriptions of the range of major spirits from tequila and pear brandy to American whisky, Scotch whiskey, aged rum and Cognac. The origin of each spirit class will be presented. The production and aging practices that contribute to their distinctiveness will be described briefly for each tasting. The seminar will be led by Roger Boulton, this year's J. F. Guymon Lecturer. Boulton teaches the only university course offered on the production of distilled spirits from fermented beverages.

The tasting will include one example for each product offered and may include spirits such as St. George Pear Brandy, Laphroaig Scotch Whisky, Remy Martin Cognac, Anchor Junipero Gin, Patron Silver Tequila and Pyrat Rum. The distilled beverages offered in the tasting were chosen based on Professor James Guymon's legacy at the University of California, Davis. Professor Emeritus Guymon was an enologist who devoted 38 years to teaching, research and service in the area of brandy production and wine biochemistry.

Thursday
PROGRAM INFORMATION CONTINUED

Chemistry & Measurement O₂ Review Seminar

Thursday, June 21
8:00 am – Noon
Crystal Ballroom

Chair:

John Thorngate, *Beam Wine Estates, California*

The importance of oxygen to winemaking is well established, from the deleterious effects of rapid oxidation to the meritorious effects of slow dissolution. However, a definitive understanding of the mechanisms underlying the reactions of oxygen with wine components continues to evolve.

The purpose of this seminar is to highlight what is currently known about wine oxidative chemistry. The general role of oxygen in winemaking, from microoxidation in young wines to oxygen transfer in bottled wines, will be discussed. Presentations will address the role of phenolics in wine oxidation and hydrogen peroxide formation, the importance of metal ion catalysis and the Fenton reactions, and the ability to monitor free radical reactions through electron paramagnetic resonance, a technique that has been successfully applied in the brewing industry.

Moderator:

Art Caputi, *Art of Winemaking, Washington*

Program:

8:00 am – 8:10 am

Introduction

Art Caputi, *Art of Winemaking, Washington*

8:10 am – 8:40 am

Oxygen in Winemaking

Wessel du Toit, *University of Stellenbosch, South Africa*

8:40 am – 9:10 am

Oxidation–Phenolic Chemistry

James Kennedy, *Oregon State University, Corvallis*

9:10 am – 9:40 am

Oxidation–Fenton Chemistry

Andrew Waterhouse, *University of California, Davis*

9:40 am – 10:10 am

Oxidation–Free Radical/EPR

David Barr, *Bruker-BioSpin, Massachusetts*

Thursday
PROGRAM INFORMATION CONTINUED



10:10 am – 10:25 am

Break

10:25 am – 10:55 am

Oxygen Measurement

John Thorngate, *Beam Wine Estates, California*

10:55 am – 11:25 am

Microoxygenation Considerations

Felipe Laurie, *University of Talca, Chile*

11:25 am – 11:55 am

Closure Considerations

Roger Boulton, *University of California, Davis*

11:55 am – Noon

Closing Comments

Art Caputi, *Art of Winemaking, Washington*

Research Forum – Grape Genomics

Thursday, June 21

9:00 am – 11:00 am

Whitney Room

Refreshments sponsored by California Department of Food & Agriculture - PD/GWSS Board and Saint-Gobain Ceramics-Albuz

Facilitator:

Grant Cramer, *University of Nevada, Reno*

This open forum is designed to offer an interactive meeting for researchers to discuss and debate scientific issues. The facilitator will invite a core group of researchers recognized for their expertise in this selected research topic to enhance the interaction. This forum is intended for academic or industry researchers who are registered for the annual meeting and who are directly and actively engaged in research in this topic area. All that attend this forum will be expected to participate on some level.

The recent sequencing of the grape genome will have widespread impact on grape research from the field to the laboratory. The significant applications of this research will be discussed at this forum among researchers and will include time for Q & A. Researchers working in this field are encouraged to participate in this exchange of scientific findings and work in progress.



Supplier Showcase Seminar: Vine Health

Thursday, June 21
 10:30 am – Noon
 Summit Pavilion

Chair:
Mike Vail, *Agro Tech, California*

This showcase will discuss plant protection and disease monitoring in the nursery for plant production and commercial disease testing practices and the interpretation of results.

Speakers:
Michael Monette, *Sunridge Nursery, California*
Judit Monis, *STA Laboratories, Inc., California*
Fred Peterson, *Duarte Nursery, California*

Honorary Research Lecture

Thursday, June 21
 1:30 pm – 2:30 pm
 Carson Room

Beyond the Genome: Opportunities for a New Concept of Viticulture
 — A Research Overview
Dr. Riccardo Velasco, *Istituto Agrario San Michele all'Adige (IASMA), Italy*

Supplier Showcase Seminar: Filtration Fundamentals

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Speakers:
Dave Gusmer, *Gusmer Enterprises, California*
Conor O'Hara, *Cuno, Connecticut*

Vine Pest Management Session

Thursday, June 21
 2:50 pm – 4:10 pm
 Carson Room

Moderator:
Paul Verdegaal, *University of California Cooperative Extension, San Joaquin County*

Program:
 2:50 pm – 3:10 pm
 Molecular and Genetic Approaches to Optimize Breeding of Fanleaf Resistant Rootstocks
Brady Smith, *University of California, Davis*

3:10 pm – 3:30 pm
 Pathogenicity, Biology and Epidemiology of *Botryosphaeria* of Grapevines in California
José Ramón Úrbez-Torres, *University of California, Davis*

3:30 pm – 3:50 pm
 Performance of Virus-Infected Cabernet Sauvignon Accessions Compared to Healthy Vines of the Same Source
James Wolpert, *University of California, Davis*

3:50 pm – 4:10 pm
 Demonstration of Berry Shriveling Transmission by Chip Budding
Mark Krasnow, *University of California, Davis*

Phenolics Session

Thursday, June 21
 2:50 pm – 4:30 pm
 Tahoe Room

Moderator:
James Kennedy, *Oregon State University, Corvallis*

Program:
 2:50 pm – 3:10 pm
 Influence of Vintage, Site and Vine Vigor on Pinot noir Grape Anthocyanins and Proanthocyanidins
Jessica Cortell, *Oregon State University, Corvallis*

Thursday

PROGRAM INFORMATION CONTINUED

3:10 pm – 3:30 pm

Competition Reactions of Hydrogen Peroxide with Iron (II) and Sulfite in Model Wine Solution

Ryan Elias, *University of California, Davis*

3:30 pm – 3:50 pm

Variation in the Phenolic Composition of California Pinot noir Fruit and Wines

Thomas Fitzpatrick, *University of California, Davis*

3:50 pm – 4:10 pm

Formation of Polymeric Pigments in Wine with a Low Ratio of Tannin to Anthocyanin

Karl Wilker, *Missouri State University, Mt Grove*

4:10 pm – 4:30 pm

Assessment of Fruit Tannin and Tannin-Binding Capacity of Berry Cell Walls from Pinot noir by Clonal Selection and Site

Robert Scholz, *University of California, Davis*



Clonal Aspects of Winegrowing: Where Are We Today? Symposium & Tasting

Friday, June 22

8:30 am – 5:00 pm

Crystal Ballroom

Co-chairs:

Deborah Golino, *Foundation Plant Services, University of California, Davis*

James Wolpert, *University of California, Davis*

When selections of the same grapevine variety from different sources are compared, subtle performance differences between selections of the same winegrape variety become apparent. These differences are caused by mutations in genes that control characters such as leaf lobing, berry color, disease resistance, and ripening date. Over time, mutations accumulate and lead to greater diversity in older varieties. Selections that differ in these ways and have been evaluated are known as “clones” of a variety. Planting superior clones can improve a variety’s production and winemaking characteristics.

Today there is an unprecedented wealth of clonal material of the major grape varieties in the United States. Decisions on clones have become an integral part of the vineyard planning process. Growers want to know how clones might enhance viticultural performance and wine quality or help create a particular wine style.

Our symposium will include experts from around the world to discuss the best information available on clones and clonal performance.

Moderator:

Phil Freese, *WineGrow, California*

Program:

8:30 am – 9:00 am

Opening Comments

9:00 am – 9:30 am

Biology and History of Clones

Andrew Walker, *University of California, Davis*

9:30 am – 10:00 am

Clones and Vine Selection in California

Deborah Golino, *Foundation Plant Services, University of California, Davis*

Friday

PROGRAM INFORMATION CONTINUED

10:00 am – 10:50 am

Recent Developments in French Clonal Programs

Jean-Michel Boursiquot, *ENTAV-ITV and University of Montpellier, France*

10:50 am – 11:10 am

Break

Sponsored by Duarte Nursery Inc

11:10 am – Noon

A Sixth Sense (includes tasting)

Michael Silacci, *Opus One, California*

Noon – 1:30 pm

Lunch on Own

Moderator:

James Wolpert, *University of California, Davis*

1:30 pm – 2:00 pm

Tannin development in fruit and wines of Pinot Noir from California and Oregon

Douglas O. Adams, *University of California, Davis*

2:00 pm – 2:30 pm

Wine Grape Clonal Evaluation on the Central Coast

Larry Bettiga, *University of California Cooperative Extension, Monterey County*

2:30 pm – 3:00 pm

Experiences in Grape Vine Plant Material Evaluation in Mendocino and Lake Counties

Glenn McGourty, *University of California Cooperative Extension, Mendocino and Lake Counties*

3:00 pm – 3:20 pm

Break

3:20 pm – 4:20 pm

Clonal Selection in Australia — A Yalumba Perspective (includes tasting)

Nigel Blieschke, *Yalumba Nursery, Australia*

4:20 pm – 4:50 pm

Evaluation of Winegrape Clones in California and Future Outlook

James Wolpert, *University of California, Davis*

4:50 pm – 5:00 pm

Closing Comments