



# **IOBC-WPRS Meeting**

**of the Working group**

**“Integrated  
Protection  
in  
Viticulture”**

**13 - 15 October 2025  
Mikulov, Czech Republic**

# Presentation

Plant protection in viticulture is a subject of discussion due to the adverse effects of pesticide use on human health and the environment. The EU has launched a series of measures to reduce the negative impacts of intensive agricultural practices and to support the transition to more ecologically-based pest management methods. Additionally, climate change brings specific regional challenges to different wine-growing areas. While heat, drought, and fires push viticulture to its limits in some regions, other areas struggle with persistent rain and fungal diseases. The main challenge is to develop plant protection and cultivation systems that are as sustainable and effective as possible for each region. Research in this field is producing excellent results, but implementing them in practice remains challenging. For our working group, representing the wine-growing regions of the Western Palearctic, it is particularly important to scientifically understand regional sustainability challenges and communicate to policymakers that these issues can vary significantly from region to region.

We are pleased to invite you to the IOBC/WPRS Working Group conference, “Integrated Protection in Viticulture,” which will be held in Mikulov, Czech Republic. This international conference (October 13–15, 2025) aims to bring together scientists, researchers, students, and consultants working in the areas of biological control and integrated protection in viticulture. The conference offers opportunities for idea-sharing and discussions on current research findings, and promising areas for future research will be identified. The symposium will be organized under the auspices of the International Organization for Biological and Integrated Control (IOBC), Mendel University in Brno, and the Winemakers Association of the Czech Republic.

We invite participants to attend this conference and to present their latest research results.

We look forward to seeing you in Mikulov,

Sincerely,

**Christoph Hoffmann** (convenor)

**Aleš Eichmeier** (local organizer)

# Scientific Committee

**Agnes Calonnec** (INRA Centre de Bordeaux-Aquitaine: Villenave d'Ornon, France)

**Rene Fuchs** (State Institute of Viticulture and Oenology, Germany)

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**Josep Armengol** (Polytechnic University of Valencia, Spain)

**Aleš Eichmeier** (Mendel university in Brno, Czech Republic)

**Patrik Kehrli** (Agroscope, Switzerland)

**Jorge Sofia** (National Institute of Agricultural and Veterinary Research, Portugal)

**César Gemenó** (Institute of Grapevine and Wine Sciences, Spain)

**Enrico Battiston** (International Organisation of Vine and Wine, France)

**Gianfranco Romanazzi** (Marche Polytechnic University, Italy)

**George Karaoglanidis** (Aristotle university of Thessaloniki, Greece)

# Organizing Committee

**Aleš Eichmeier** (Mendel university in Brno, Czech Republic)  
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**Linda Holcová** (Mendel university in Brno, Czech Republic)  
**Richard Danko** (Mendel university in Brno, Czech Republic)  
**Miroslav Baránek** (Mendel university in Brno, Czech Republic)  
**Dana Homolová** (Mendel University in Brno, Czech Republic)  
**Martin Bažík** (Motivation Labs, Czech Republic)



16:00-16:15 **O30 Wine waste: a weapon against grapevine pathogens.** *Artemis Tsioka, Pol Gimenez-Gil, Panagiotis Arapitsas, Aikaterini Tzamourani, Angeliki Kasioura, George Ntourtoglou, Maria Dimopoulou, Alexandra Evangelou, Christina Virgiliou, Georgios Theodoridis, Danai Gkizi*

## 16:15 - 17:15 **Session 9**

### **Topic 4.1. Sustainable management of soil and weeds: Soil management strategies: implications for pest control**

Chairpersons: Linda Holcová and Patrik Kehrli

16:15-16:30 **O31 High levels of copper and persistent synthetic pesticides in vineyard soils drive microbial communities.** *Kathleen Mackie-Haas, Elias Barmettler, Stefanie Lutz, Thomas Bucheli, Marcel van der Heijden*

16:30-16:45 **O32 Perspective on vibrational mating disruption to control *Scaphoideus titanus* Hemiptera: Cicadellidae.** *Valerio Mazzoni, Samuele Sontacchi, Gianfranco Anfora, Andrea Pugliese, Elena Gonella, Alberto Alma, Rachele Nieri*

16:45-17:00 **O33 *Cryptoblabes gnidiella* as an emerging pest of Mediterranean viticulture: past, present and future.** *Renato Ricciardi, Giovanni Benelli, Andrea Lucchi*

17:00-17:15 **O34 What's the impact of "farm to fork" strategy and climate change on bioecology in vineyards? The case study of Península de Setubal's wine region.** *Miguel Cachao, Ana Chambel, Sérgio Pinto, Goreti Trindade*

**17:30-20:00 Poster viewing session with bubble wine tasting (Kamil Prokeš winery, U Vrbů winery, Richard Danko, MENDELU)**



# POSTER CONTRIBUTIONS

**P17 The potential applicability of a horsemint (*Mentha longifolia* L.) genotype (Hór-1) from the Hungarian Bükk mountains in the grapevine (*Vitis vinifera* L.) disease control: preliminary results.** Xénia Pálfi, Katalin Patonay, Nóra Bakos-Barczy, Helga Szalontai, Marietta Korózs, Miklós Lovas, Zoltán Karácsony

**P18 Exploring biological control agents for the inhibition of downy mildew in grapevines.** Veronica Castellari, Michele Perazzolli

**P19 Sustainable Biocontrol of *Scaphoideus titanus* through the application of entomopathogenic fungi.** Alessandro Cicerone, Simona Abbà, Paola Dolci, Marika Rossi, Marta Vallino, Riccardo Barbera, Domenico Bosco

**P20 Can disinfectants or fungicides improve the effectiveness of hot water treatment against Petri disease in nursery vines?** Minette Havenga, Matthew Webber, Leander Engelbrecht, Lizel Mostert, David Gramaje, Francois Halleen

**P21 Transcriptomic changes in genotypes harboring distinct resistance loci during interaction with *Plasmopara viticola*.** Miroslav Baránek, Martin Hádlík, Kateřina Baránková, Viera Kováčová

**P22 Study of the wine lees by-product metabolomic and peptidic fingerprint produced by various yeast strains and their evaluation as internal circular economy agent against grapevine pathogens.** Artemis Tsioka, Pol Gimenez-Gil, Panagiotis Arapitsas, Aikaterini Tzamourani, Angeliki Kasioura, George Ntourtoglou, Maria Dimopoulou, Alexandra Evangelou, Christina Virgiliou, Georgios Theodoridis, Danai Gkizi

**P23 Effect of the “attract and reward” strategy on the presence of phytoseiid mites in Mediterranean vineyards.** Ignacio Pérez-Moreno, Luis Rubén Román-Fernández, Elena Martínez-Villar, Vicente Santiago Marco-Mancebón, Sergio Ibáñez-Pascual, Saioa Legarrea

## Session 8

### O30

# Wine waste: a weapon against grapevine pathogens

Artemis Tsioka<sup>1</sup>, Pol Gimenez-Gil<sup>1</sup>, Panagiotis Arapitsas<sup>1, 2</sup>, Aikaterini Tzamourani<sup>1</sup>, Angeliki Kasioura<sup>1</sup>, George Ntourtoglou<sup>1</sup>, Maria Dimopoulou<sup>1</sup>, Alexandra Evangelou<sup>1</sup>, Christina Virgiliou<sup>3, 4</sup>, Georgios Theodoridis<sup>3, 4</sup>, Danai Gkizi<sup>1</sup>

<sup>1</sup>Department of Wine, Vine and Beverage Sciences, School of Food Science, University of West Attica, 12243 Athens, Greece

<sup>2</sup>Research and Innovation Centre, Fondazione Edmund Mach, 38010 Trento, Italy

<sup>3</sup>Biomic AUTH, Center for Interdisciplinary Research and Innovation (CIRI-AUTH), Balkan Center B1.4, 10th km Thessaloniki-Thermi Rd., 57001 Thessaloniki, Greece

<sup>4</sup>FoodOmicsGR Research Infrastructure, AUTH Node, Center for Interdisciplinary Research and Innovation (CIRI-AUTH), 57001 Thessaloniki, Greece

*Phaeomoniella chlamydospora* (Pch) and *Phaeoacremonium minimum* (Pmin), primary pathogens of Petri disease cause significant yield and economic losses. This study aimed to evaluate the activity of wine lees, a wine-making by-product mainly composed by yeast cells, against Pch and Pmin. Different fermentation schemes with two yeast species on synthetic grape juice under monoculture and mixed culture conditions were performed to produce yeast biomass. After yeast cell lysis High Molecular Weight Biomolecule Mixtures (HMW-BM) were extracted and subsequently hydrolyzed to obtain Low Molecular Weight Biomolecule Mixtures (LMW-BM). The HMW-BM and LMW-BM were examined for their ability to reduce growth and sporulation of Pch and Pmin *in vitro*. None of the HMW-BM reduced the growth or sporulation of Pch and Pmin while LMW-BM were more effective. Following the promising LMW-BM results, fermentation assays from two schemes were conducted to produce yeast biomass from grape musts. After hydrolyzation of yeast biomass, the products were tested for their ability to reduce symptoms caused by Pch and Pmin in artificially inoculated rooted cuttings. Wood discoloration caused by Pmin and Pch was reduced by 47-52% and 35-73% respectively. The study of peptide fingerprinting was performed throughout untargeted analysis using reverse-phase LC-TOF MS. The results indicate the possible utility of wine lees as an alternative and innovative phytoprotective weapon against two major grapevine pathogens.

The research project entitled «reLees» is implemented in the framework of H.F.R.I call "Basic research Financing (Horizontal support of all Sciences)" under the National Recovery and Resilience Plan "Greece 2.0" funded by the European Union - NextGenerationEU (H.F.R.I. Project Number:15100)

**Keywords:** *Phaeomoniella chlamydopsora*, *Phaeoacremonium minimum*, young grapevine decline, wine less.

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## Study of the wine lees by-product metabolomic and peptidic fingerprint produced by various yeast strains and their evaluation as internal circular economy agent against grapevine pathogens

Artemis Tsioka<sup>1</sup>, Pol Gimenez-Gil<sup>1</sup>, Panagiotis Arapitsas<sup>1,2</sup>, Aikaterini Tzamourani<sup>1</sup>, Angeliki Kasioura<sup>1</sup>, George Ntourtoglou<sup>1</sup>, Maria Dimopoulou<sup>1</sup>, Alexandra Evangelou<sup>1</sup>, Christina Virgiliou<sup>3,4</sup>, Georgios Theodoridis<sup>3,4</sup>, Danai Gkizi<sup>1</sup>

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<sup>2</sup>Research and Innovation Centre, Fondazione Edmund Mach, 38010 Trento, Italy

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*Phaeomoniella chlamydospora*, *Phaeoacremonium minimum*, *Botrytis cinerea*, *Aspergillus carbonarius*, *Plasmopara viticola* and *Eryshiphe necator* are major grapevine pathogens that cause a significant decrease in grapevine yield and economic losses annually. *B. cinerea*, *A. carbonarius*, *P. viticola* and *E. necator* are notorious for quickly developing resistance to conventional fungicides and for *P. chlamydospora* and *P. minimum* there is not yet an effective treatment with chemical means. Moreover, the risk of contaminating production with chemical residues and the trend of using environmental-friendly fungicides, emerge the need for alternative solutions to be found. Wine lees are the sediment that settles at the bottom of the fermentation tank, after the fermentation of must into wine, and consist mainly of yeast biomass. Wine lees are considered an environmental pollutant by-product. In the research project "reLees", we examine the potential utilization of wine lees as an alternative and innovative phytoprotective agent against grapevine pathogens. Furthermore, we investigate the peptidomic profile of wine lees by applying metabolomic technologies. The aim of "reLees" project is to develop an environmental and economic system for wine-making by-product utilization, contributing to the circular economy.

The research project entitled «reLees» is implemented in the framework of H.F.R.I, called "Basic research Financing (Horizontal support of all Sciences)" under the National Recovery and Resilience Plan "Greece 2.0" funded by the European Union - NextGenerationEU (H.F.R.I. Project Number: 15100)

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