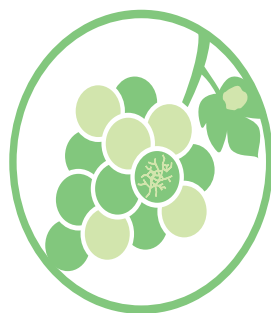


9th International Workshop on Grapevine Downy and Powdery Mildews

JULY 20-21-22, 2022

PIACENZA-CREMONA, ITALY



GDPM
— 2021² —



UNIVERSITÀ
CATTOLICA
del Sacro Cuore

9th International Workshop on Grapevine Downy and Powdery Mildews

SCIENTIFIC COMMITTEE

Tito Caffi	(Unicatt, Italy)
David Gadoury	(Cornell University, U.S.A)
Peter Magarey	(Magarey Plant Pathology, Australia)
Walt Mahaffee	(USDA-ARS, Hort. Crops Res. Unit, USA)
Michelle Moyer	(Washington State University, USA)
Vittorio Rossi	(Unicatt, Italy)

LOCAL ORGANIZERS (Unicatt, Italy)

Valeria Altieri
Tito Caffi
Margherita Furiosi
Claudia Vacchelli

The Committee is grateful to



L'INNOVAZIONE IN VITICOLTURA

9th International Workshop on Grapevine Downy and Powdery Mildews

Program at a glance

Wednesday July 20, 2022

8.00-9.00	Registration
9.00-10.30	Welcome Ceremony
11.00-13.00	Session 1: Breakthrough technologies
14.00-16.00	Session 2: Genetic and breeding
16.30-18.30	Session 3: Disease management

20.30 Social Dinner at Campus Santa Monica

Thursday July 21, 2022

8.00	Meeting point at Campus Santa Monica and trip to <i>Res Uvae</i>
9.00-12.00	Farm presentation and visit to experimental and demonstration vineyards
14.00-15.15	Session 4: Epidemiology and disease forecasting
15.15-16.30	Session 5: Disease management
17.00	Tour of the ancient village and aperitif in the “middle-age”
19.30	Trip back to Cremona

Friday July 22, 2022

8.30-10.30	Session 6: Epidemiology and disease forecasting
11.00-13.00	Session 7: Disease management
14.00-16.30	Session 8: Genetic and breeding
16.30	Closing and farewell

Detailed program

20 July - GDPM 1st day

Campus Santa Monica, Cremona (IT)

8.00-9.00 **Registration and Poster exposition**

9.00-10.30 **Welcome Ceremony**

Prof. Marco Trevisan, Full Professor in Agricultural Chemistry, Dean of the Faculty of Agriculture, Food and Environmental Sciences.

Prof. David Gadoury – 30 years (plus one) of GDPM International Workshop

Prof. Vittorio Rossi – Global Plant Health Assessment: grapevine as a case study

10.30-11:00 **Coffee break**

11.00-13.00 **Session 1: Breakthrough technologies**

Antonin Douillet, Laurent B., Beslay J., Delmotte F., and Raynal M., *"In-field LAMP quantification of Plasmopara viticola airborne inoculum to improve the forecast of epidemic risk"*

Pierre-Henri Dubuis, and Jaquerod A., *"Evaluation of the performance of drone treatments to control downy and Powdery Mildew in grapevines"*

David Gadoury, Sapkota S., Cadle-Davidson L., Underhill A., McCann T., Gold K.M., Gambhir N., Combs D.B., and Nyrop J.P., *"Use of Germicidal UV Light to Suppress Grapevine Diseases and Arthropod Pests"*

Gwen Hoheisel and Moyer M.M., *"The role of sprayer design and education in controlling Erysiphe necator"*

Alex Wong, Moyer M.M., Gadoury D., and Mahaffee W., *"UV-C Light as a Tool to Manage Grape Powdery Mildew"*

Plenary Discussion

13.00-14.00 **Lunch break**

14.00-16.00 **Session 2: Genetic and breeding**

Sabine Wiedemann-Merdinoglu and Possamai T., *"Phenotyping for grapevine QTL identification. The case of resistance to Plasmopara viticola and Erysiphe necator. A review"*

Francois Delmotte, Paineau M., Mazet I.D., Delière L., Fabre F., and Dussert Y., *"Identifying the genetic architecture of Plasmopara viticola traits of interest by genome-wide association studies: case study of mating-type locus and effectors genes involved in the breakdown of grapevine Rpv3 resistance"*

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Chantal Wingerter, Eisenmann B., Kortekamp A., and Bogs J., *“Resistance properties of new fungus-resistant grapevine cultivars against Plasmopara viticola and the impact of their deployment on fungicide use in viticulture”*

Nancy Sharma, Heger L., Combs D., Gold K., and Miles T.D., *“Assessment of QoI and CAA fungicide resistance of Plasmopara viticola populations in vineyards of the Great Lakes region in the United States of America”*

Plenary Discussion

16.00-16.30 Coffee break

16.30-18.30 Session 3: Disease management

Michelle Moyer, *“Improving Confidence and Understanding of Fungicide Program Design in USA Grape Growers Through Peer-Interactive Extension Programming”*

Othmane Taibi, Furiosi M., Caffi T., and Rossi V., *“Characterization of the Folpet fungicidal activity against Plasmopara viticola”*

Llamazares-Miguel Diego, Bodin E., Laurens M., Corio-Costet, M.F., Nieto J., Fernández-Navarro J.R, Mena-Petite A., and Diez-Navajas A.M., *“Genetic regulation in Vitis vinifera by approved basic substances against Downy Mildew”*

Stefan Schumacher, Mertes C., Wohlfahrt Y., Kaltenbach T., Schwab S., Eisenmann B., Kauer R., Bleyer G., Berkelmann-Loehnertz B., and Fuchs R., *“VITIFIT: Aiming for copper reduction in organic viticulture - Improvement of established strategies and new techniques for plant protection against Plasmopara viticola”*

Plenary Discussion

20.30 Social dinner in Santa Monica

21 July - GDPM 2nd day

Res Uvae farm, Castell'Arquato (IT)

8.00 Trip to *Res Uvae* (meeting point at Campus Santa Monica)

9.00-12.00 Farm presentation
Field experiments visit

Open coffee

12.00-14.00 Friendly BBQ in a viticultural landscape and wine tasting

14.00-15.15 Session 4: Epidemiology and disease forecasting

Giuliana Maddalena, Lecchi B., Serina F., Torcoli S., and Toffolatti S.L., *"Oospore germination dynamics and disease forecasting model: an integrated approach for Downy Mildew management"*

Marta Zaffaroni, Rey J.F., Rimbaud L., Papaix J., and Fabre F., *"Disentangling the effects of pathogen sexual reproduction on the effectiveness and durability of resistance deployment strategies: Plasmopara viticola as a case study"*

Gottfried Bleyer, Steinger M., Schumacher S., Fuchs R., Kassemeyer H.H., and Krause R., *"Grapevine Downy Mildew: Long-term development and validation of plant protection strategies based on the forecast model "VitiMeteo Plasmopara"*

Plenary Discussion

15.15-16.30 Session 5: Disease management

Riccardo Bugiani, Cavazza F., Landi M., and Preti M., *"Fungicide activity of milk and whey powders towards Erysiphe necator, the causal agent of Powdery Mildew of grapevine"*

Lior Gur, Cohen Y., Frenkel O., Schweitzer R., Shlissel M., and Reuveni M., *"Macro and micronutrients suppress Powdery Mildew development in grapevines and affects berries metabolites"*

Karl Bleyer, *"Establishment of a strong Powdery Mildew Population – Experimental approaches to Remediation"*

Plenary Discussion

17.00 Tour of the ancient village and aperitif in the *"middle-age"*

19.30 Trip back to Cremona

22 July - GDPM 3rd day

Campus Santa Monica, Cremona (IT)

8.30-10.30 Session 6: Epidemiology and disease forecasting

Alexa McDaniel, Khot L., and Moyer M.M., *"Alternative Disease Management Approaches: Best Implemented Before the "Critical Window" for Erysiphe necator in Eastern Washington?"*

Sara Leoni, Basso T., Tran M., Schnée S., Fabre A.L., Kasparian J., Wolf J.P., and Dubuis P.H., *"Highly sensitive spore detection to follow real-time epidemiology of downy and Powdery Mildew"*

Marc Raynal, Davadan L., Lely D., Magot C., Gizardin F., Taillée M., and Robichon G., *"Experimentation in the vineyard of an insurance protocol to cover the harvest's risk of damage due to cryptogamic diseases linked to the reduction of phytosanitary inputs"*

Ronald Krause, Augenstein B., and Sawas N., *"Digital Transformation in Agriculture and the Role of Decision Support Systems"*

Benoit Laurent, Douillet A., Beslay A., Bordes J., Delmotte F., Debord C., Raynal M., and the VISA network partners, *"The VISA network: a collaborative project between research institutes and vineyard owners to create the first epidemiological monitoring network of Downy Mildew epidemic based on aerial spore capture"*

Plenary Discussion

10.30-11.00 Coffee break

11.00-13.00 Session 7: Disease management

Sarah Lowder, Neill T.M., Miles T.M., Moyer M.M., Oliver C., Ding S., and Mahaffee W.F., *"Rapid sampling technique to monitor Erysiphe necator more effective than visual scouting"*

Mascha Hoffmeister, Zito R., and Stammler G., *"Fungicides as efficient tools in integrated control of grape Powdery Mildew (Erysiphe necator)"*

Charlotte Oliver and Moyer M.M., *"Influence of sustainability programs on fungicide stewardship practices in Pacific Northwest United States vineyards"*

Sylvain Schnee, Huber R., Marcourt L., Michellod E., Wolfender J.L., Gindro K., and Ferreira Queiroz E., *"Generation of antifungal stilbenes derivatives towards grapevine Downy Mildew using enzymatic secretome of Botrytis cinerea"*

Gianfranco Romanazzi, Piancatelli S., D'Ignazi G., and Moumni M., *"Innovative approaches to grapevine Downy Mildew management on large and commercial scale"*

Plenary Discussion

13.00-14.00 Lunch break

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14.00-16.30 Session 8: Genetic and breeding

Omer Frenkel, Gur L., Cohen Y., Cadle-Davidson L., Kisselstein B., Ovadia S., and Reuveni M., *"New findings from the old world raises questions about the presumed immigration pattern of Erysiphe necator"*

Tyrone Possamai, Wiedemann-Merdinoglu S., Lacombe M.C., Dorne M.A., Merdinoglu D., De Nardi B., Migliaro D., Velasco R., De Mori G., Cipriani G., and Testolin R., *"Phenotyping and genetic analysis of the Caucasian grape resistance to Erysiphe necator"*

Agnes Calonnec, Jolivet J., Ramaroson M.L., Dufour M.C., and Corio-Costet M.F., *"Defence responses of three grapevine cultivars to Powdery Mildew contribution to ontogenic resistance vs genetic resistance"*

Federica Bove, Salotti I., and Rossi V., *"Field evaluation of grapevines resistant to Downy Mildew and Powdery Mildew"*

Caroline Mertes, Schumacher S., Kaltenbach T., Bleyer G., and Fuchs R. *"Studies on the resistance of different developmental stages in susceptible and tolerant grapevine cultivars against the pathogen Plasmopara viticola"*

Silvia Laura Toffolatti, Marone Fossolo E., and Maddalena G., *"Screening for adaptation to resistant grapevine accessions in Plasmopara viticola population of north-eastern Italy"*

Plenary Discussion

16.30 Closing ceremony and farewell

20-22 July - GDPM

Campus Santa Monica, Cremona (IT)

Parallel session: Posters

1	Heger L., Martin F., Sharma N., and Miles T.D.	<i>"Advances in molecular and optical detection strategies for grape Downy Mildew"</i>
2	Dvorak E., Mazet I., Couture, C., Foulongne-Oriol, M., and Delmotte F.	<i>"Crossing Plasmopara viticola strains in controlled conditions to uncover the genomic bases of Downy Mildew resistance breakdown in grapevine"</i>
3	Miclot A., Delmotte F., Bourg J., Mazet I.D., Fabre F., and Delière L.	<i>"Four years of monitoring of disease-resistant grapevine varieties in French vineyards"</i>
4	Delmotte F., Paineau M., Mazet I.D., Wiedemann-Merdinoglu S., and Fabre F.	<i>"The characterization of pathotypes in Plasmopara viticola, the agent of grapevine Downy Mildew"</i>
5	Thompson S., Neill T., Mahaffee W., and Miles T.	<i>"Bridging the gap between Powdery Mildew genomics and valuable culturing methods of Erysiphe necator and Podosphaera aphanis"</i>
6	Wiedemann-Merdinoglu S., Lacombe M.C., Dorne M.A., Dumas V., Onimus C., Prado E., Schneider C., Louise Dit Adèle S., Misbach J., Negrel L., Baltenweck R., Hugueney P., and Merdinoglu D.	<i>"Fine monitoring of the effects of grapevine resistance loci on the development of Plasmopara viticola"</i>
7	Bugiani R., Bergamaschi A.R., and Cavazza F.	<i>"Optimization of copper applications using Laminarine for the sustainable control of grape Downy Mildew"</i>
8	Raynal M., Poeydebat C., Courchinoux E., Delière L., and Delmotte F.	<i>"Quantification and management of Plasmopara viticola primary inoculum in soil – Towards prophylactic control of grapevine Downy Mildew"</i>
9	Taibi O., Bardelloni V., Bove F., Scaglia F., Caffi T., and Rossi V.	<i>"Activity of resistance inducers against Plasmopara viticola in vineyard"</i>
10	Furiosi M., Hasanaliyeva G., Caffi T., and Rossi V.	<i>"Soil covering and biofumigant effect of Armoracia rusticana against spore dispersal and viability of Downy mildew inoculum in viticultural systems- BIOVINE"</i>
11	Giovannini O., Varner M., and Perazzolli M.	<i>"Soil microclimate could affect the timing of Plasmopara viticola oospores germination and primary infections"</i>
12	Bajagić B., Sedlar A., Latinović J., Višacki V., and N. Latinović	<i>"Different water consumption and fungicide drift in control of grapevine Downy Mildew"</i>
13	Schnee S., Remolif E., Malgar A., Cleroux M., Bach B., Blackford M., Bourdin G., Lorenzini F., Gindro K., and Dubuis P.H.	<i>"Monitoring of the application of different doses of copper products on the vine organs: residue measurements and impact on efficacy against downy mildew"</i>
14	Furiosi M., Rossi V., Legler S., and Caffi T.	<i>"Study on fungicides' use in viticulture: present and future scenarios to control powdery and downy mildew"</i>