



UNIVERSITÀ DEGLI STUDI DI MILANO
FACOLTÀ DI AGRARIA

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CIRIVE
















Centro
Interdipartimentale di
Ricerca per la
Innovazione in
Viticoltura ed
Enologia



CIRIVE (composition)

- 27 researchers
- 4 Departments involved
- Viticulture
- Grapevine protection
- Enology
- Microbiology
- Optimization and mechanization in vineyard

ARGOMENTI di RICERCA

Resp. Scientifici	Ricerca	Scheda completa
Piero Attilio Bianco Paola Casati	Ruolo dei batteri endofiti nel fenomeno del "recovery" in viti affette da giallumi	
Paola Casati Piero Attilio Bianco	Ricerca e Sviluppo di Diagnostici Innovativi per la Certificazione Sanitaria della Vite	
Maurizio Cocucci	Creazione di una piattaforma diagnostica per la certificazione di uve destinate alla vinificazione (PIDICEUVE)	
Osvaldo Failla Attilio Scienza	Qualità enologica dell'uva in relazione alle condizioni ambientali e vocazionalità alla viticoltura	
Franco Faoro	Effetti degli stress biotici e abiotici sulla isto-citologia e ultrastruttura della vite	
Roberto Foschino	Selezione e Valorizzazione di Enococchi autoctoni per la produzione di vino Rosso di VAltellina DOC e Valtellina Superiore DOCG (SVEVA)	
Roberto Foschino	Valorizzazione delle D.O.C.G. Franciacorta ed Oltrepò Pavese metodo classico mediante impiego di lieviti autoctoni per il miglioramento delle produzioni e come marcatori di tipicità. (ENOTRACK)	
Roberto Foschino	Strategie di analisi e di controllo dello sviluppo di <i>Brettanomyces/Dekkera</i> nell'industria enologica PRIN 2007	
Riccardo Guidetti	Valorizzazione e ottimizzazione della filiera del postraccolta vitifrutticolo valtellinese attraverso sistemi innovativi e trasformazioni ad alta qualità (VALORVI')	
Riccardo Guidetti	- Progetto S.T.E.P.: Sustainable Technology for Economic Porcessing (INNOVHUE) - Chambers promoting intelligent energy for SMEs - CHANGE" (Agrimercati)	
Marcello Iriti	Gli induttori di resistenza nel controllo delle malattie della vite e loro effetti sul metabolismo secondario della pianta	
Antonio Tirelli	Valutazione della genuinità dei vini fermi e spumanti DOC e DOCG Oltrepò	
Annamaria Vercesi	Comportamento epidemico di <i>Plasmopara viticola</i> (Berk. et Curt.) Berlese e De Toni ed applicabilità di modelli di simulazione	
Annamaria Vercesi	Funghi ocratossinogeni presenti su vite	
Annamaria Vercesi	Mezzi di contenimento delle infezioni peronosporiche su vite	

VITICULTURE research group



Attilio SCIENZA



Osvaldo FAILLA



Lucio BRANCADORO

Post.Doc. and Ph. D. students

Serena IMAZIO
Mara ROSSONI
Laura RUSTIONI
Barbara BIAGINI
Gabriella DE LORENZIS
Valeria CARASTRO
Marina BOGICEVIC

Paolo CARNEVALI
Margherita SQUADRITO
Giuseppina LAS CASAS
Giovambattista SIMONE DI LORENZO
Gabriele COLA
Simone PARISI

Germplasm (wild and cultivated) characterization and conservation

Grape ripening physiology and quality evaluation

Rootstock breeding for resistance to abiotic stresses

Territorial viticulture and zoning

Precision and sustainable viticulture

Clonal selection

Plant protection:

Prof. Piero A. Bianco, Dr Paola Casati, Dr Fabio Quaglino, Dr Anna Zorloni, Dr Stefania Prati, Dr Daniela Bulgari

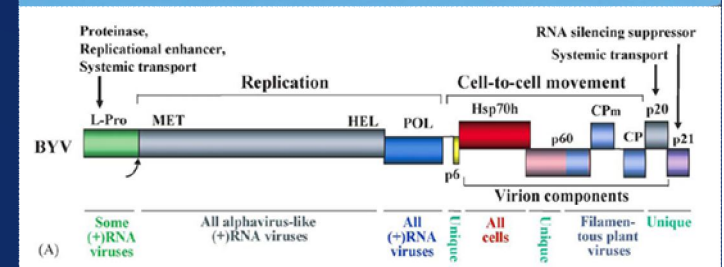
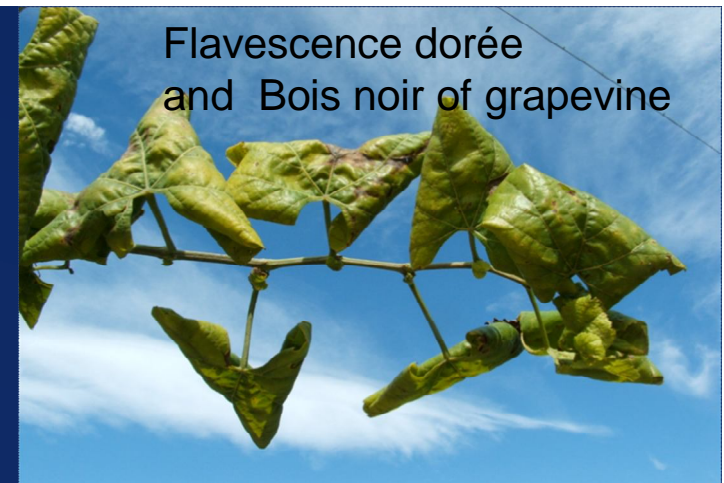
molecular detection of plant pathogens

- disease etiology of diseases caused by viruses, phytoplasmas and other pathogenic microorganisms

- sequencing of pathogen genome and set up of molecular tools for early and reliable detection of causal agents

biological control

- control of phytoplasma diseases in grapevine (grapevine yellows) by endophytes (recovery)



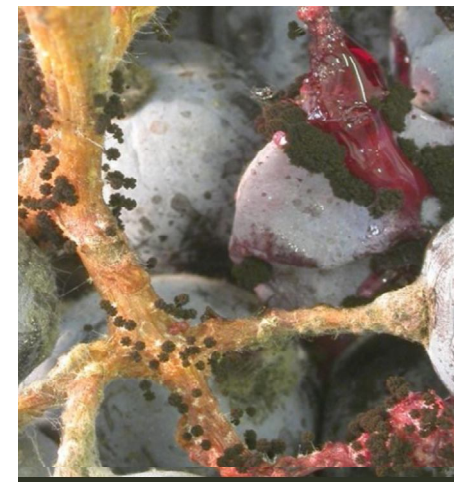
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Research group

prof. A. Vercesi, dr. S. L. Toffolatti, dr. A. Pedrazzini, dr. D. Sordi

Research topics

- Germination dynamics of *Plasmopara viticola* oospores
- Mathematical modelization of the oospore germination process
- Grapevine resistance mechanisms against *P. viticola*
- Epidemic behaviour of *P. viticola*
- Use of epidemic models in order to evaluate the infection risk of *P. viticola*
- Spatial and temporal distribution of the strains belonging to the main grapevine pathogen resistant to the active substances most commonly used in vineyard
- Management strategies of the fungal pathogens causing bunch rots and mycotoxin accumulation



Research group

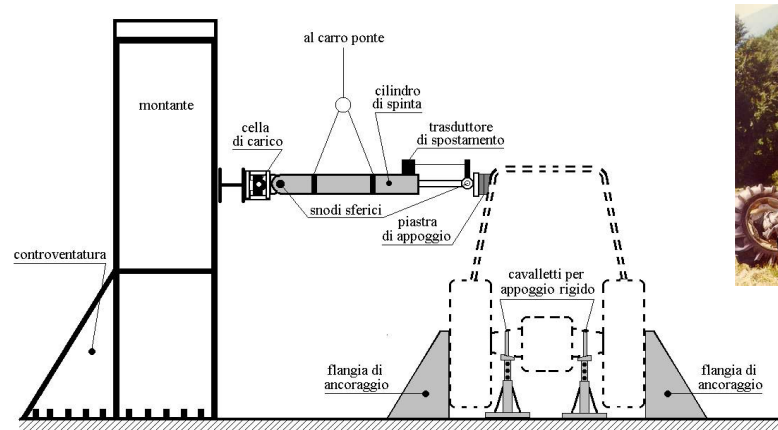
(Prof. D. Pessina, Dr. D. Facchinetti,
Dr. M. Belli, Dr. V. Bonalume)

Research topics

- *ROPS (Roll Over Protective Structures) fitted on narrow-track) tractors for vineyard and orchard, and other devices to prevent operator's damages and injuries*
- *Ergonomics and wellness in vineyard and orchard mechanized operations: noise, vibrations, microclimate, visibility, etc.*
- *Optimization of spraying machinery in vineyard and orchard, especially in terms of efficient distribution, reduction of the drift losses and power requirements*

Scientific and technical skills

- *ROPS test rig for the execution of official test in accordance to OECD, EU and ISO standards*
- *Noise level meters and vibrations real time analyzer for test carried out in accordance to ISO and SAE standards*
- *Test bench and relevant instrumentation for the evaluation of the distribution efficiency and set up of spraying machinery*



Research group

(prof. R.Guidetti, dr. R. Beghi, dr. V. Giovenzana)

Research topics

- *Quality characterizations (Solid soluble, acidity, polyphenols, anthocyanins) of grapes by not destructive method (NIR system).*
- *Evaluation of botrytis by Image Analysis.*
- *Assessment of energy consumptions (electricity, thermal, water) in the oenological process.*
- *Application of renewable energy in the wine process.*

Scientific and technical skills

- *Mechanical workshop for prototype developing.*
- *Electronic laboratory for software and hardware research.*
- *Monitoring system for energy evaluations.*
- *Engineering competence for oenological process: design, plants evaluations, lay-out studies, gravity applications.*



Research group (prof. R.Foschino, dr. C. Picozzi, dr. I. Vigentini)

Research topics

- *Phenotypic and genotypic characterization of malolactic bacteria isolated from red cold climate wine-growing areas (biogenic amines production, phycrotrophism)*
- *Polymorphisms of *Saccharomyces cerevisiae* genes involved in quality of wine production*
- *Study on genetic diversity, physiological traits, resistance to stress factors in *Brettanomyces bruxellensis* strains*

Scientific and technical skills

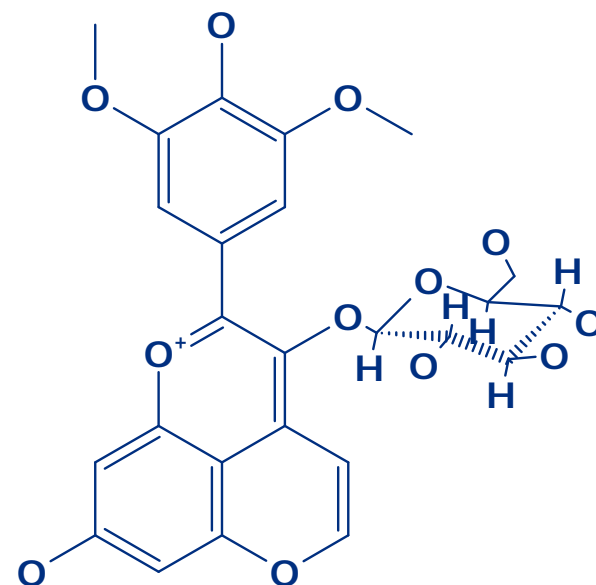
- *Cultural methods for detection, quantification, growth kinetics, sporulation, viability of microorganisms in oenology.*
- *Phenotypic and genotypic characterization of microbial strains by different approaches (enzymatic assays, fermentation tests, PCR-based techniques, PFGE typing, mtDNA RFLP, sequence analysis of genes)*
- *DNA cloning, hybridization, Southern analysis, heterologous protein production*
- *Bacteriophage and host strains interaction in wine matrices*

Research group members

Prof. A. Tirelli, Dr. M. Gabrielli, Dr. D. Fracassetti

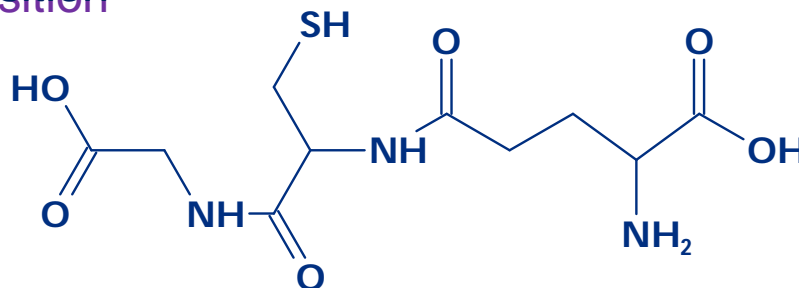
Research topics

- Oenological behaviour of thiol compounds
- Winemaking practices affecting *Brettanomyces* behaviour in wine
- Modifications of phenol compounds in winemaking
- Evaluation of chemical oxidation markers in wine



Scientific and technical skills

- Technology and chemistry of winemaking
- High performance liquid or gas chromatographic techniques coupled with mass spectrometry and traditional detection methods to evaluate grape, must and wine composition





Prof. Ella Pagliarini, PhD - Dr. Monica Laureati, PhD

DiSTAM - Sezione di Tecnologie Alimentari



SENSORY EVALUATION AND CONSUMER SCIENCE

RESEARCH TOPICS

- Influence of Memory and Emotions on Food Choice
- Sensory Evaluation in Quality Control
- Food Choice in Consumers of Different Age
- Chemosensory Perception
- Sensory Perception and Obesity
- Cross-cultural Studies with Typical Food

FACILITIES

- Sensory lab designed according to ISO guidelines for the setting up of discriminant, descriptive and hedonic methods
- Sensory and consumer research data collection software program (Fizz, Biosystemes)

CIRIVE

**Centro Interdipartimentale di Ricerca per l'Innovazione in
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Secretary - Prof. Roberto Foschino

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Thank you

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