

# Riccardo Mora

## Molecular Geneticist, Ph.D.



I am a biologist with 10 years of experience in molecular biology and genetics. My field of research is focused mainly on molecular genetics and genomic engineering of grapevine, complex traits dissection, varietal identification and SNP-based technologies genotyping, marker-assisted selection (MAS) in breeding programs and sequencing technologies. I gained extensive experience also in seedlessness, plant-pathogen interaction and nitric oxide signaling.

### Scientific Work Experiences

2023-12 →  
today



#### Lab Manager and Post-doc Researcher

**Laboratory of Genetic Biotechnology and Molecular Genetics -  
Department of Biotechnology – University of Verona**

Genomic engineering of *V. vinifera* and *A. thaliana*, CRISPR/Cas9-genome editing, markers development, varietal identification and MAS. Coordinator of the research group and academic supervisor. Participant in PRIN and PRIN-PNRR projects.

2022-08 →  
2023-08



#### R&D Scientist

**Microbion S.r.l. – San Giovanni Lupatoto (VR)**

Quality control in food, probiotic and pharmaceutical formulations in compliance with ISO 9001. Identification of prokaryotic/eukaryotic contaminants and antibiotics resistance through molecular and morphological methods. Sanger and NGS Illumina consultant. Oxford Nanopore Technology specialist for the development of library preparation and sequencing protocols in metagenomics characterization with MinION Mk1B metabarcoding. GLP and sterility practices in BSL-1/BSL-2 laboratory. Project cost analyst, scientific project support and TITAN Project EU participant.

2018-10 →  
2022-03



#### PhD Student

**Laboratory of Genetic Biotechnology - Department of Biotechnology –  
University of Verona**

Dissection of genetic determinants of phenology and qualitative traits in *Vitis vinifera* through two complementary genetic approaches: QTL mapping on bi-parental populations and association study (GWAS).

DNA extraction and genotyping with SSR/SNP markers through Sanger/NGS sequencing and Illumina Vitis18K SNP chip. Phenotyping and technological traits measurement (Brix degree, pH, polyphenols content), heat stress analysis through photosynthesis parameters. Varietal identification and parental analysis with microsatellite markers,

### Contacts

#### Address

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[riccardo.mora@hotmail.com](mailto:riccardo.mora@hotmail.com)

#### LinkedIn

[www.linkedin.com/in/riccardo-mora](https://www.linkedin.com/in/riccardo-mora)

#### ResearchGate

<https://www.researchgate.net/profile/Riccardo-Mora-2>

### Hard Skills

- Molecular biology, genomics and plant pathology
- NGS, ONT and Sanger sequencing
- Laboratory management
- Communication and teaching
- Project management

### Technical Skills

- DNA/RNA manipulation
- Library preparation for Illumina and ONT sequencing
- Sample preparation and Sanger sequencing with ABI 3130xl Genetic Analyzer
- Molecular cloning and heterologous expression
- PCR, RT-PCR, TD-PCR, HRM
- Genotyping and fingerprinting

genetic diversity analysis, allele frequency distribution and marker-assisted selection in breeding programs to improve local varieties for quality and resistance traits. Development of protocols for ancient DNA extraction from grape seeds.

Scientific supervisor: Prof. Diana Bellin

2018-03 →

2018-10



## Research Fellow

**Laboratory of Phytopathological Biotechnology – Department of Biotechnology – University of Verona**

Characterization of pathogenicity signals in Kiwifruit during *Pseudomonas syringae* pv. *actinidiae* (Psa) infection.

Evaluation of activity of different natural molecules in bacterial biofilm formation and *in vitro* motility. Design and development of plasmids expressing –his tag for Psa receptors purification and to study promoter sequences.

Scientific supervisor: Prof. Annalisa Polverari

2017-11 →

2018-03



## Research Associate

**Laboratory of Genetic Biotechnology - Department of Biotechnology – University of Verona**

Complementation test on knock-out lines of *A. thaliana* for functional confirmation of pre-selected candidate genes. Development of transgenic lines of *A. thaliana* expressing recombinant GFP::proteins to study their cellular localization and function.

Scientific supervisor: Prof. Diana Bellin

2016-06 →

2017-10



## Master's degree Trainee

**Laboratory of Genetic Biotechnology - Department of Biotechnology – University of Verona**

Identification of candidate genes involved in the signaling pathway of nitric oxide (NO) during the hypersensitive response in *A. thaliana*.

Genetic screening of mutant lines of *A. thaliana* to identify candidate genes involved in NO signaling pathway. Bulked-segregant analysis, pool and library preparation for Illumina NGS sequencing.

Scientific supervisor: Prof. Diana Bellin

2013-05 →

2014-11



## Bachelor's degree Trainee

**Laboratories of Mycology and Microbiology - Department of Agriculture Science and Technologies – University of Bologna**

Evaluation of effectiveness of biological compounds against the agents of Fusarium Head Blight (FHB) in hard wheat.

Evaluation of competition activity of different Ascomycota and bacterial strains against *Fusarium graminearum* and *F. culmorum*. Microbiological approaches to evaluate the antimicrobial activity of plantaricins and bacteriocins produced respectively from *Lactobacillus plantarum*, *Bacillus subtilis* and *B. amyloliquefaciens*. Physiopathology and Europe's regulations for deoxynivalenol control in food.

Scientific supervisor: Prof. Annamaria Pisi.

- Golden Braid assembly
- CRISPR/Cas9 genome editing
- QTL analysis
- Phenotyping
- *In vitro* culture
- Optical, immersion and SEM microscopy

## Languages

English: B2

German: elementary

## Interests

Photographer

Pianist

Houseplants expert

Nature lover

## Education

### October 2022      **Doctor of Philosophy – Ph.D. in Biotechnology**

University of Verona

### October 2017      **Master of Science: Agri-food Biotechnology**

University of Verona

110/110 cum laude

### October 2015      **Bachelor of Science: Biology**

Alma Mater Studiorum - University of Bologna

96/110

## Courses and Organizations

- **Member of Italian Society of Agriculture Genetics (SIGA)**

Since September 2025

- **cGMP regulations and Quality Assurance**

Theoretical course – Quality Assurance Training Lab, (virtual) August 2022

- **New breeding techniques: CRISPR-Cas9 in plants**

Practical-theoretical course of Italian Society of Plant Genetics (SIGA), Verona, July 2<sup>nd</sup>-5<sup>th</sup>, 2019

## Publications and Posters

**Mora R.**, Dal Corso G., Maci S., Gambino G., Villa D., Marini M., Fanelli V., Montemurro C., Bellin D. - Engineering of seedlessness in *Vitis vinifera*: towards the functional evaluation of *VviINO* gene as a new resource for grapevine seedlessness. LXVIII SIGA Annual Congress, Viterbo (Italy), September 9<sup>th</sup>-12<sup>th</sup> 2025. ISBN 978-88-944843-6-6.

Marini M., Costantini L., Pettenuzzo S., Lorenzi S., **Mora R.**, Bolognesi G., Villa D., Grando M. S., Bellin D. - Genetic dissection of phenology in *Vitis vinifera* through multi-population QTL analysis. LXVIII SIGA Annual Congress, Viterbo (Italy), September 9<sup>th</sup>-12<sup>th</sup> 2025. ISBN 978-88-944843-6-6.

Villa D., Marini M., De Rosa V., Falchi R., Londo J. P., **Mora R.**, Bolognesi G., Bellin D. - Evaluation of budbreak regulation on grapevine genotypes with extreme behaviour. LXVIII SIGA Annual Congress, Viterbo (Italy), LXVIII SIGA Annual Congress, Viterbo (Italy), September 9<sup>th</sup>-12<sup>th</sup> 2025. ISBN 978-88-944843-6-6.

Mascio I., **Mora R.**, Dal Corso G., Maci S., Pirolo C. S., Dellino M., Miazzi M. M., Fanelli V., Villa D., Marini M., Montemurro C. and Bellin D. - Functional analysis of *VviINO* involvement in seed development in *Vitis vinifera* through a CRISPR-Cas9 mediated knockout approach. International Symposium on Biotechnological Tools in Horticulture, Rimini (Italy), May 5<sup>th</sup>-9<sup>th</sup> 2025.

Maci S., **Mora R.**, Bellin D., Dal Corso G., Nitti A., Pirolo C. S., Dellino M., Miazzi M.

M., Fanelli V., Montemurro C. - New *in vitro* cultivation techniques for molecular editing programs of grapevine. – VITROSOI V Congress, Viterbo (Italy), October 14<sup>th</sup>-17<sup>th</sup> 2024.

**Mora R.**, Dal Corso G., Pettene M., Calzolari G., Maci S., Montemurro C., Bellin D. - Establishing functional analysis of *VvINNO* in *Vitis vinifera* through a CRISPR/Cas9 mediated knockout approach. LXVII SIGA Annual Congress, Bologna (Italy), September 10<sup>th</sup>-13<sup>th</sup> 2024 - ISBN: 978-88-944843-5-9

Vervalle J. A., Costantini L., Lorenzi S.; Pindo M.; **Mora R.**; Bolognesi G.; Marini M.; Lashbrooke J. G.; Tobutt K. R.; Vivier M.; Roodt-Wilding R.; Grando M. S.; Bellin D. A high-density integrated map for grapevine based on three mapping populations genotyped by the *Vitis18K* SNP chip. *Theor Appl Genet* 135, 4371–4390 (2022). <https://doi.org/10.1007/s00122-022-04225-6>

**Mora R.** – Dissection of genetic determinants of phenology and qualitative traits in *Vitis vinifera* through two complementary genetic approaches - PhD thesis, October 7<sup>th</sup>, 2022, <https://iris.univr.it/handle/11562/1075187>

Vervalle J. A., Costantini L., Lorenzi S., **Mora R.**, Marini M, Lashbrooke J. G., Burger P, Vivier M. A., Grando M. S., Roodt-Wilding R., Bellin D. - Construction of a high-density consensus map based on three mapping populations and a reference genome sequence. XI International Symposium on Grapevine Physiology and Biotechnology (virtual), Stellenbosch (South Africa) October 31<sup>st</sup> – November 5<sup>th</sup>, 2021,

Mujtaba T., Marini M., Shmulevitz R., **Mora R.**, Bolognesi G., Bellin D., Tornielli G. B. - Understanding the genetic basis of grapevine phenological traits through QTL mapping. XI International Symposium on Grapevine Physiology and Biotechnology (virtual) October 31<sup>st</sup> – November 5<sup>th</sup>, 2021, Stellenbosch (South Africa).

**Mora R.**, Delfino P., Crespan M., Gardiman M., Giust M., Tomasi D., Bolognesi G., Marini M., Bellin D.- Identification and validation of SNPs associated to the veraison time/flowering-veraison time interval in grapevine. LXIV SIGA Annual Congress (virtual) September 14<sup>th</sup>-16<sup>th</sup> 2021.

Vervalle J.A., Costantini L., Grando M.S., Lorenzi S., **Mora R.**, Marini M., Lashbrooke J., Burger P., Vivier M., Roodt-Wilding R., Bellin D. High-density consensus linkage map based on three mapping populations using the *Vitis18K* SNP chip for grapevine breeding. LXIV SIGA Annual Congress (virtual) September 14<sup>th</sup>-16<sup>th</sup> 2021.

Marini M., Shmulevitz R., Baroni A., Mujtaba T., Bolognesi G., Zemerli M., **Mora R.**, Imanifard Z., Polverari A., Tornielli G.B., Bellin D. Selection of new grapevine genotypes derived from the autochthonous cv. Corvina. LXIV SIGA Annual Congress (virtual) September 14<sup>th</sup>-16<sup>th</sup> 2021.

Marini M., Shmulevitz R., Vervalle J., Baroni A., **Mora R.**, Mujtaba T., Costantini L., Zemerli M., Bolognesi G., Tornielli G.B., Grando M.S., Polverari A., Bellin D. - Understanding the genetic determinism of phenological and quality traits in 'Corvina' grape variety for selection of improved genotypes – Macrowine 2021 (virtual), June 23<sup>rd</sup>-30<sup>th</sup> 2021

Tornielli G.B., Marini M., Shmulevitz R., **Mora R.**, Imanifard Z., Delfino P., Bellin D. - Determination of phenological and quality traits in progenies obtained from local grapevine varieties. - CONAVI, 8th Conference of viticulture, Udine (Italy) July 5<sup>th</sup>-7<sup>th</sup> 2021.

Imanifard Z., Delfino P., Liu R., Huang J., **Mora R.**, Guzzo F., Delledonne M., Bellin D. - *The specific transcriptome modulation associated to Nitric Oxide induced Cell Death.* - 7th Plant Nitric Oxide International Meeting, Nice (France) October 24<sup>th</sup>-26<sup>th</sup> 2018.

**Mora R.**, Imanifard Z., Delfino P., Mascio I., Kleinfelder Fontanesi K., Delledonne M., Bellin D. - *Identification of a positive regulator of nitric oxide signaling during pathogen induced hypersensitive cell death in Arabidopsis thaliana.* - LXII SIGA Annual Congress, Verona (Italy) September 25<sup>th</sup>-28<sup>th</sup> 2018.

## Collaborations

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- **Dott. Giorgio Gambino** – Consiglio Nazionale delle Ricerche, Istituto per la Protezione Sostenibile delle Piante (CNR-IPSP), Torino, Italy
- **Prof. Cinzia Montemurro** – University of Bari Aldo Moro, Bari, Italy
- **Dott. Manna Crespan** - Centro di Ricerca per la Viticoltura (CREA-VE), Conegliano, Italy
- **Prof. Maria Stella Grando** and **Dott. Laura Costantini** – Department of Cellular, Computational and Integrative Biology (CIBIO), University of Trento, Italy
- **Dott. Jessica Vervalle** – Wageningen University and Research (WUR), Wageningen, Netherlands
- **Dott. Massimo Pindo** – Fondazione Edmund Mach, San Michele all'Adige, Italy
- **Prof. Matteo Ballottari** - Sole Lab, Department of Biotechnology, University of Verona, Italy
- **Prof. Massimo Delledonne** – Functional Genomics Laboratory, Department of Biotechnology, University of Verona, Italy
- **Dott. Francesco Licausi** – Scuola Superiore Sant'Anna, Pisa, Italy

## Grants

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### MARCH 2024

#### **Research Fellowship / Department of Biotechnology - University of Verona**

“Development of approaches for genetic improvement in grapevine”, partially financed under “Research and Development 2021/22” call, promoted by Fondazione Cariverona

### DECEMBER 2023

#### **Research Fellowship / Department of Biotechnology - University of Verona**

“Genetic analysis on ancient DNA from grape seeds from archeological sites” – PRIN2022 project “ArchaeoAdWines” –

Archeology of Adriatic Wine"

OCTOBER 2018

**PhD Fellowship / Department of Biotechnology - University of Verona**

XXXIV PhD course in Biotechnology

MARCH 2018

**Research Fellowship / Department of Biotechnology - University of Verona**

"Research of natural compounds with inhibitory activity of the infectious process of phytopathogenic bacteria"

NOVEMBER 2016, OCTOBER 2018/2019/2020, MARCH 2019/2020, MAY 2020

**Scholarship for Laboratory Teaching Activities / Department of Biotechnology - University of Verona**

- Genetic methodologies course
- Molecular genetics course
- Transcriptomics course

## Supervisor and Correlator Activities

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JULY 2025

**Academic tutor and correlator** / Student Kamilia Safi Ahmed - Bachelor's Degree in Biotechnology, Faculty of Biotechnology – University of Verona

JUNE 2025

**Academic tutor** / Student Ginevra Vigna - Bachelor's Degree in Biotechnology, Faculty of Biotechnology – University of Verona

FEBRUARY 2025

**Academic tutor** / Student Silvia Ruffini - Bachelor's Degree in Biotechnology, Faculty of Biotechnology – University of Verona

**Academic tutor and correlator** / Student Nicole Placchi - Master's Degree in Agri-food Biotechnology, Faculty of Biotechnology – University of Verona

OCTOBER 2024

**Academic tutor** / Student Daniel Losciale - Bachelor's Degree in Biotechnology, Faculty of Biotechnology – University of Verona

**Academic tutor** / Student Thomas Bertoncello - Bachelor's Degree in Biotechnology, Faculty of Biotechnology – University of Verona

MARCH 2024

**Academic tutor and correlator** / Student Matthew Pettene: Production of constructs for genomic editing of multiple loci on the *Inner No Outer* gene in *Vitis vinifera*. - Bachelor's Degree in Biotechnology, Faculty of Biotechnology – University of Verona

DECEMBER 2023

**Academic tutor and correlator** / Student Antonio Baggio: Optimization and application of PCR-based molecular markers for assisted selection in grapevine. - Master's Degree in Agri-food Biotechnology, Faculty of Biotechnology – University of Verona

**Academic tutor and correlator** / Student Giorgia Calzolari: Assembly of CRISPR-Cas9 constructs for the knockout of *VviNO* gene in *Arabidopsis thaliana* - Bachelor's Degree in Biotechnology, Faculty of Biotechnology – University of Verona

**Supervisor and correlator** / Student Zohra: Syed Kazmi: Application of two assembly strategies for the creation of CRISPR-Cas9 constructs for gene knockout in *Arabidopsis thaliana* - Bachelor's Degree in Biotechnology, Faculty of Biotechnology – University of Verona

MARCH 2021

**Supervisor and correlator** / Student Andrea Lombardini: "Phenotypic characterization and QTL analysis in the segregating population of *Vitis vinifera* Cabernet Sauvignon x Corvina" – Master's Degree in Agri-food Biotechnology, Faculty of Biotechnology – University of Verona

NOVEMBER 2019

**Supervisor and correlator** / Student Giada Bolognesi: "Optimization of approaches for the validation of SNPs associated with phenotypic traits in *Vitis vinifera*" – Master's Degree in Agri-food Biotechnology, Faculty of Biotechnology – University of Verona

MAY 2019

**Supervisor and correlator** / Student Gabriele Calliari: "Molecular validation and phenotyping of a segregating population deriving from the cross Garganega x Pinot Bianco" – Bachelor's Degree in Biotechnology, Faculty of Biotechnology – University of Verona

FEBRUARY 2019

**Supervisor and correlator** / Student Matteo Kaixi Chen: "Selection of resistant genotypes to *Plasmopara viticola* with SSR molecular markers in Corvina x Solaris crossing population" – Bachelor's Degree in Biotechnology, Faculty of Biotechnology – University of Verona

OCTOBER 2018

**Supervisor and correlator** / Student Anita Adami: "Optimization of a protocol for varietal identification of *Vitis vinifera* cultivar by means of SSR markers and its application in a case study" – Bachelor's Degree in Biotechnology, Faculty of Biotechnology – University of Verona

I authorize the processing of my personal data present in the curriculum vitae pursuant to Legislative Decree 30 June 2003, n. 196 and of the GDPR (EU Regulation 2016/679).

