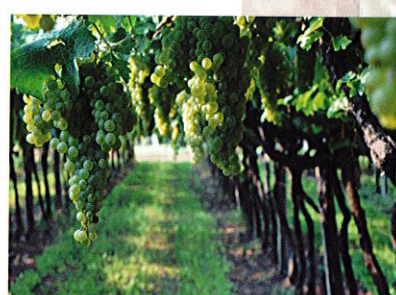
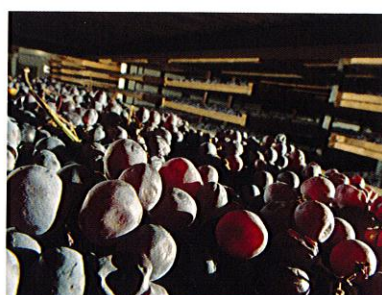




UNIVERSITÀ
di VERONA
Dipartimento
di BIOTECNOLOGIE



X INTERNATIONAL SYMPOSIUM ON GRAPEVINE PHYSIOLOGY AND BIOTECHNOLOGY



BOOK OF ABSTRACTS

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RRV, GLRaV-1, GLRaV-3, GVA, GFLV. TAS-ELISA was used for plant testing of GLRaV-2 and GFKV. Viruses were detected by ELISA between 2012-2015.

This research was necessary for selecting virus free plants for further propagation in vitro as a basis for Nuclear stock and virus elimination of important cultivars. Only two viruses were identified in grape nursery: GFKV and GLRaV-3. The most common virus was GFKV (detected in 41,2% of tested plants). All tested plants of cv. Crystal, Bianca, Platovsky were infected with this virus. GLRaV-3 was detected in 0,06% of tested plant. This virus was identified in cv. Crystal only. About 87,5% of samples were infected with one virus (GFKV) while , 12,5% was infected with two viruses.

Therefore, in vitro culture wasn't an effective method for virus elimination in grape plants. Elimination of GFKV was 34,4%, GLRaV-3 wasn't eliminated.

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Providing and protection of primary sources and basic mother stocks of superior grape cultivars

Hassan Mahmoudzadeh⁽¹⁾ - **Hamed Doulati Baneh**⁽²⁾

West Azarbayjjan Agricultural and Education and Natural Resources Research Center, Seed and Plant Department, Ourmia, Iran⁽¹⁾ - *West Azarbayjjan Agricultural and Education and Natural Resources Research Center, Seed and Plant Institute, Ourmia, Iran*⁽²⁾

In order to change the production and structure improvement of the vineyards of Iran and establishment of basic vineyards of healthy mother superior cultivars were evaluated in Iranian commercial grapes named Shast Arrows, Fakhri, Asgari, Sefid bidaneh, Paykani. Originality and morphological and genetic recorded the following steps aimed Primary vines were studied to provide healthy and genuine. The project includes a choice of superior clons of vines with top choice in terms of performance and quality throughout the country to determine the symptoms, to determine the health of plants, directions consists of purifying using heat therapy and meristem culture, creating healthy plants, maintenance was the primary nuclei of vines. Vegetative propagation of native gardens and orchards, the base will be in the near future. Products that were obtained on the basis of this project, to be free from viruses GFLV, GFLV, GVA and ToRS and other important pathogens were tested and were reproduced under the terms of infactions. Production of virus-free plants in this project based on the standard method of pathogen-free number PM 4130 production of certified fruit trees Plant Protection Organization Europe. During the execution of the project was to preserve the originality. Nuclear Research Center for Agriculture and Natural Resources in West Azerbaijan healthy primary production and to maintain round the Askrynhavs and under control of the disease were sent to horticultural research. Part of the sample in a pot and some were in vitro culture. For maintenance and operations carried out health tests such as ELISA and PCR-based techniques were used to control them.

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Rpv3 locus and stilbenoid induction mediate downy mildew resistance in the Merzling x Teroldego segregating population

Giulia Malacarne^{*(1)} - **Silvia Vezzulli**^{*(1)} - **Antonella Vecchione**⁽²⁾ - **Chiara Dolzani**⁽²⁾ - **Domenico Masuero**⁽²⁾ - **Zeraye Haile Mehari**⁽²⁾ - **Pietro Franceschi**⁽²⁾ - **Elisa Banchi**⁽²⁾ - **Riccardo Velasco**⁽²⁾ - **Marco Stefanini**⁽²⁾ - **Ron Wehrens**⁽²⁾ - **Urska Vrhovsek**⁽²⁾ - **Luca Zulini**⁽²⁾ - **Claudio Moser**⁽²⁾



**Equally contributed Research and Innovation Centre, Fondazione Edmund Mach, San Michele all'Adige (TN), Italy⁽¹⁾ - Research and Innovation Centre, Fondazione Edmund Mach, San Michele all'Adige (TN), Italy⁽²⁾*

All grapevine cultivars (*Vitis vinifera* L.) traditionally grown in Europe are susceptible to downy mildew (DM) caused by *Plasmopara viticola*, an oomycete which is able to attack any grapevine green tissue. DM control mainly relies on the use of synthetic fungicides which are costly and have negative environmental impact. The exploitation of DM-resistant *Vitis* genetic resources for the development of new resistant varieties is a promising alternative.

Recent studies conducted at FEM, taking advantage of a segregating population derived from Merzling (a tolerant hybrid) and Teroldego (a susceptible landrace), pointed to the importance of stilbenoids in conferring DM resistance. However, the genetic bases of DM resistance as well as stilbenoid biosynthesis upon DM infection in this population have not been elucidated yet.

With this aim, in the present study 136 F1 individuals of this cross were characterized at genotypic level by means of 190 microsatellite markers used to build the Merzling × Teroldego linkage map. The F1 individuals were also screened for degree of disease resistance and production of 42 phenolics (including 18 different stilbenoids). Our results indicated a normal distribution of several disease resistance parameters, and a significant induction of stilbenoids upon infection. The integration of genotypic and phenotypic data by QTL analysis showed that DM resistance in this segregating population is mainly mediated by the *Rpv3* locus and defined a number of novel regions associated to the traits under investigation. The validation of some candidate genes positioned within these genomic regions will identify those possibly involved in DM resistance and in the biosynthesis of phenolics related to the plant's response to DM.

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Preliminary investigations on bioactive molecules concentration in Aglianico grape berries

*Antonella Biafore⁽¹⁾ - Antonella Vitti⁽²⁾ - Nunzia Rendina⁽²⁾ - Daniele Gioia⁽¹⁾ - Maria Francesca Silletti⁽²⁾ - Egidio Lardo⁽¹⁾ - Ippolito Camele⁽²⁾ - Maria Nuzzaci⁽²⁾ - **Vitale Nuzzo⁽¹⁾***

Dipartimento delle Culture Europee e del Mediterraneo (DiCEM), University of Basilicata, Matera, Italy⁽¹⁾ - Scuola di Scienze Agrarie, Forestali, Alimentari ed Ambientali, University of Basilicata, Potenza, Italy⁽²⁾

Polyphenolic compounds biosynthesis in grape may be affected by biotic agents, such as *Aspergillus* spp. or *Penicillium* spp., that are mycotoxin-producing fungi species.

This work aims to establish a possible relationship between ochratoxin A (OTA) and polyphenols in Aglianico grapes in presence of a different degree of ailing berries.

Six empirical classes of Aglianico grapes with increasing number of ailing berries were considered. OTA was determined on berries juice by a semi-quantitative cELISA analysis. Polyphenols concentration from skins and berries juice were determined by spectrophotometric methods.

The results showed that higher OTA concentrations were present in the juice obtained from classes with high number of ailing berries. Furthermore, polyphenols concentration of berries skins increased in the classes with high number of ailing berries. Our preliminary results seemed to demonstrate that the presence of mycotoxin-producing fungi and, consequently OTA, on ailing berries could be affect the increase of polyphenolic content in the same berries.