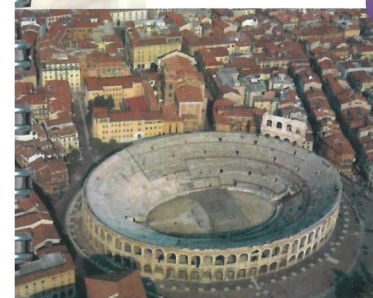




UNIVERSITÀ
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Dipartimento
di BIOTECNOLOGIE



X INTERNATIONAL SYMPOSIUM ON GRAPEVINE PHYSIOLOGY AND BIOTECHNOLOGY



BOOK OF ABSTRACTS

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results pinpoint the strength of the PBA approach as QTL may be missed when focussing on single full sib families. Furthermore, the simultaneous search for multiple QTL also yields estimated genomic breeding values that can be used for selecting progeny with favourable resistance.

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Unravelling the knot of disease resistant hybrid kinship

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Within the FEM grapevine breeding program, re-established in the middle '80s, the selection process has been based on the major need for innovation raised by grapevine growers. During the past years, this request has been addressed to increase the complexity and the originality of wines, while in the last decade the need for new varieties resistant/tolerant to abiotic and biotic stresses has emerged. In order to reach this goal, the germplasm collection has grown, increasing its number of acquisitions.

In this work, 264 accessions acquired from European and non-European breeding programs or wild accessions collected in northeastern America were studied. Most were phenotyped for downy and powdery mildew resistance, while all were genetically characterized at 190 microsatellite markers well-scattered across the grapevine genome.

Firstly, 9 reference markers were used for the true-to-type identification through international and private databases, where feasible. Secondly, in order to validate the available pedigree information and to infer new relationships, the 50 most informative microsatellite markers were chosen and analyzed with specialized software.

Finally, the overall genetic material was divided into five classes: known and related (38%); unknown and related (21%); known and unrelated (10%); unknown and unrelated (23%); and redundant (8%). The unknown (related and unrelated) accessions hold great potential as exclusive genetic resources, mainly donors of disease resistance traits, and will provide preparatory information to prospective Marker-Assisted Breeding programs.

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Light Emitting Diode inhibited gray mold and induced stilbene compound accumulations and defense-related gene expressions in *Vitis flexuosa*

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Light Emitting Diode inhibited gray mold and induced stilbene compound accumulations and defense-related gene expressions in *Vitis flexuosa*.

Light plays a key role throughout the entire lifecycle of plants and light quality has been considered important factor in management of plant disease associated with plant-pathogen interactions. In the present work, the accumulation of stilbenic compounds and defense related gene expression by light-