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## Program and Abstracts



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## CLIMACTERIC AND NON-CLIMACTERIC BEHAVIOR IN MELON GERMPLASM, A MODEL TO STUDY FRUIT RIPENING

C. Leida<sup>1</sup>, C. Moser<sup>1</sup>, C. Esteras<sup>2</sup>, B Picó.<sup>2</sup>, A. Monforte.<sup>3</sup>

<sup>1</sup>Research and Innovation Centre, Fondazione Edmund Mach, Via E. Mach 1, 38010 S. Michele all'Adige, (Trento - Italy).

<sup>2</sup>Institute for the Conservation and Breeding of Agricultural Biodiversity (COMAV-UPV) Universitat Politècnica de València, Camino de Vera s/n, 46022 Valencia, (Spain)

<sup>3</sup> Instituto de Biología Molecular y Celular de Plantas (IBMCP), Universitat Politècnica de València (UPV)-Consejo Superior de Investigaciones Científicas (CSIC), Ciudad Politécnica de la Innovación (CPI), Ed. 8E, C/Ingeniero Fausto Elio s/n, 46022 Valencia, (Spain).

Melon (*Cucumis melo* L. *Cucurbitaceae*) represents one of the most variable species within the genus *Cucumis* as well as among the other cultivated plants. Moreover it is a key species in order to study ethylene involvement in ripening because several climacteric and non-climacteric accessions are available. A core collection of 176 melon accessions including wild relatives, feral types, landraces, breeding lines and commercial cultivars from 54 countries was selected for this study. This collection was genotyped with AFLP and SNP markers and extensively phenotyped for plant and fruit traits at COMAV, including the abscission layer formation as indicator of climacteric/non climacteric ripening. PCA based on SNP markers confirmed the division of this species in clear subspecies; *melo* and *agrestis*. Among ssp *agrestis* genotypes, African wild types were easily distinguished from far eastern *conomon* along PC1, while PC2 separated Indian *momordica* from the rest. *Melo* subspecies comprises five groups distributed along PC1 and PC2. A high degree of variability for abscission layer formation (from full-slip to absense) was observed among and within groups indicating that the genetic variability present in this species is appropriated to study climacteric and non-climacteric ripening.

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