


ABSTRACTS BOOK

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**P0225 DEVELOPING INTROGRESSION LINES OF *S. MELONGENA* CARRYING GENOME SEGMENTS OF THE WILD PROGENITOR *S. INSANUM***

Pietro Gramazio<sup>1</sup>, Mariola Plazas<sup>2</sup>, Edgar García-Fortea<sup>1</sup>, Gulio Mangino<sup>1</sup>, Santiago Vilanova Navarro<sup>1</sup>

<sup>1</sup>Instituto de Conservación y Mejora de la Agrodiversidad Valenciana, Universitat Politècnica de València (Valencia) Spain

<sup>2</sup>Instituto de Biología Molecular y Celular de Plantas, Consejo Superior de Investigaciones Científicas-Universitat Politècnica de València (Valencia) Spain

**1 Full text**

*Solanum insanum*, considered the wild progenitor of the eggplant (*Solanum melongena*), is an annual weed able to grow on a wide range of climatic and soil conditions including poor soils and dry areas. Biochemical analysis has also shown that *S. insanum* has higher total levels of bioactive phenolic metabolites of interest for human health than *S. melongena*. Despite all these features, *S. insanum* has remained largely underutilized in *S. melongena* breeding. The development of introgression lines (ILs) using wild species could be of great interest to eggplant breeders. For these reasons, we started the construction of a *S. insanum* ILs using the most recent molecular tools available. An F1 plant, derived from a cross between *S. melongena* and *S. insanum*, was backcrossed to obtain the BC1. In order to accelerate the ILs construction process, 196 BC1 plants were genotyped with 40 SNPs using a Sequenom platform. These SNPs were distributed across all the chromosomes according to the genome information. Based on the best *S. melongena* background recovery and good distribution of the *S. insanum* segments, 52 BC1 plants were selected and backcrossed again. In the BC2, 96 plants were selected and genotyped with 90 SNPs. Thirty-seven selected BC2 plants will be backcrossed in order to obtain the BC3. Following this methodology and based on the actual results we expect to start selfing selected plants in the BC3 generation, bringing forward the time frame usually needed to obtain ILs by 2 to 3 years.