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=== POSTER ABSTRACTS ===

The Micropropagation Potential and Regenerative Ability from Somatic Embryos of *Vitis Vinifera* Ssp. *Sylvestris* (Gmel.)

Carmen Florentina Popescu [1,✉]

During the last hundred years, the habitat of *V. sylvestris,* as wild grapevines, has been reduced due to pathogens or intensive rivers and forests management. So, in our days, it is present only in certain ecosystems in Romania. The recent papers underlined that *Vitis vinifera* subsp. *sylvestris* is one of the critically endangered subspecies and its conservation in germplasm collection could be an important source of adaptive traits for cultivated grape vines. In a previous paper was presented the morphological characterization based on OIV descriptors of the individual plants collected from some wild grapevine populations growing along the Danube River, providing valuable information. The aim was to establish an *ex situ* collection with plant material tested and confirmed as virus-free and to use it as possible starting plant material for further breeding of grapevine cultivars and rootstocks.

In the present work are presented the results obtained with wild *Vitis vinifera* ssp. *sylvestris* accessions under *in vitro* culture conditions. For long-term conservation or for virus-free plant recovery (if viruses were detected) were applied micropropagation methods starting from meristematic tissues (apex and axillary buds). The *in vitro* development revealed particular aspects and significant differences among wild populations (accessions belonging to 7 different populations) regarding their competence for differentiation, moment of differentiation in inoculated explants, the aspect of proliferative structures, the rates of multiplication and rooting.

The same accessions were tested for their competence in plant regeneration by organogenesis / or embryogenesis starting from somatic tissues. If in the case of petiole explants, for whole plant regeneration, a crucial role had the medium

[1] *National Research and Development Institute for Biotechnology in Horticulture Ştefăneşti-Argeş.*
✉ ***Corresponding author: Carmen Florentina Popescu****, National Research and Development Institute for Biotechnology in Horticulture Ştefăneşti-Argeş*
E-mail: carm3n_popescu@yahoo.com

composition, in the case of anthers culture, the somatic embryogenesis process and the morphological aspects of the new dedifferentiated structures, proved to be a process strongly dependent by genotype.

Stress selection under controlled *in vitro* condition was applied to investigate the salinity (NaCl) and lime ($CaCO_3$) tolerances of the wild grapevine accessions and to select resistance or tolerant genotypes to these abiotic stresses (salty and calcareous soils). The salt and carbonate chloride stresses induced reduction of differentiation ability of tissues structures and prolonged the period of cultures, which is necessary to overcome the toxic accumulation of certain ions in tissue structures and to restore the growth process.

The results suggested the possible use of selected wild plants either as rootstocks with increased and stable tolerance to these types of environmental stresses (3 accessions of *V. sylvestris*), or to use them for future breeding applications (other 4 different accessions of *V. sylvestris*).

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