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## INTRODUCTION



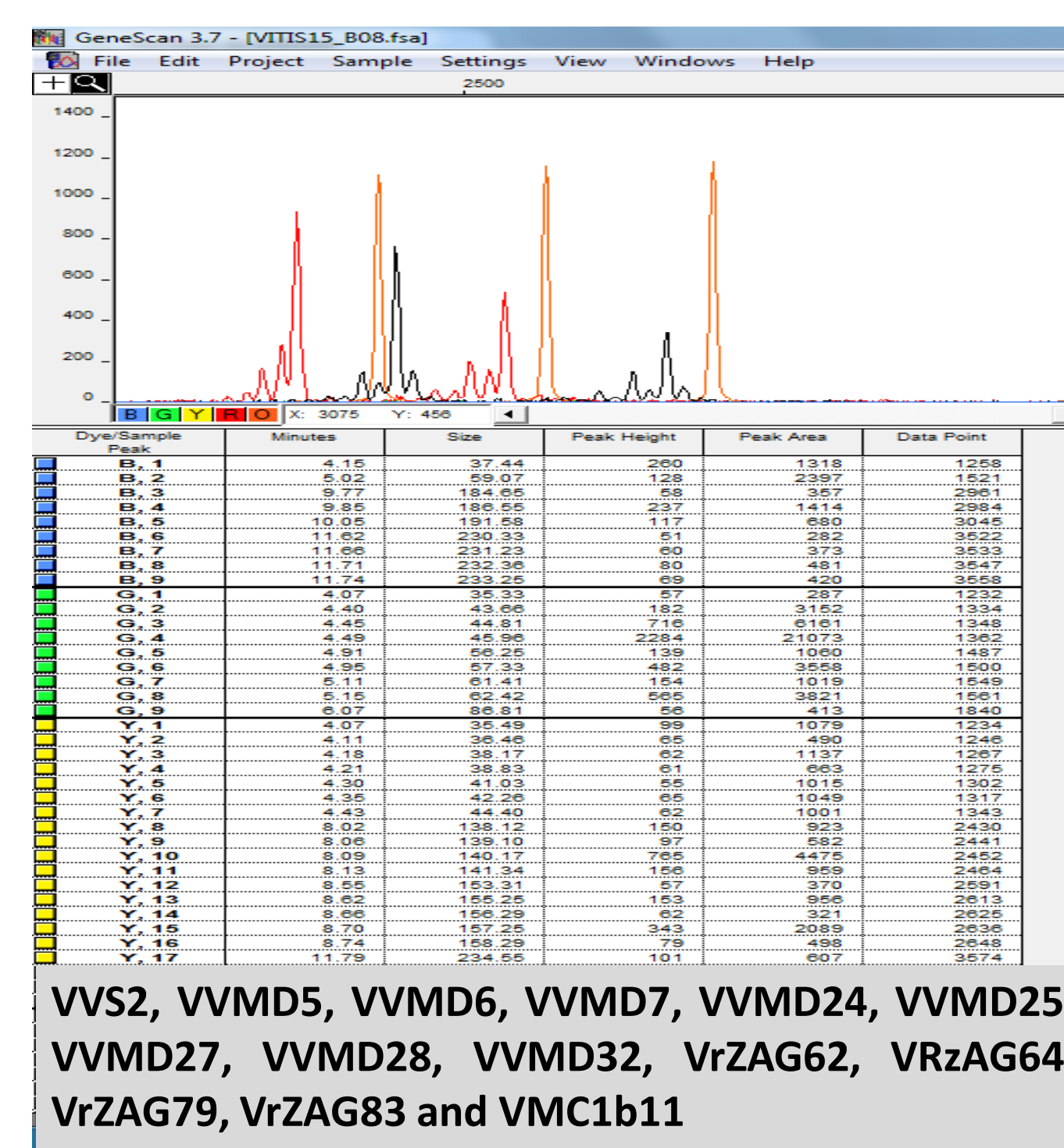
*Vitis vinifera* subsp. *sativa* L. is one of the most important crops in the Mediterranean Basin. Grapevine varieties have initially resulted from the domestication of *V. vinifera* subsp. *sylvestris* (Gmelin) Hegi in Western Asia and the Caucasus to yield table and wine grapevines, respectively. Human migrations, spontaneous hybridization of domesticated cultivars with wild relatives, as well as the selection of plants with mutations, give thousands of cultivars that were vegetative propagated. Nowadays, European wild populations are considered to be endangered but also lot of grapevine cultivars are in risk of disappearance. At the Comunitat Valenciana (Spain), where vinification was made since ancient times, more than 150 varieties were reported growing previously to 1900. However, a great genetic erosion was produced after the phylloxera arrival when the number of cultivars grafted onto resistant rootstocks was drastically reduced, and in many areas, vineyards were replaced by other crops. In addition, few foreign varieties have also been widespread worldwide, decreasing variability. In 2015, we started the recovery of cultivars in risk of extinction and the development of preservation activities which include the *in vitro* culture and virus sanitation. The recovered plants were transferred to collections to preserve them under greenhouse and/or field conditions.

## RECOVERING and PRESERVATION OF OLD GRAPEVINES VARIETIES

### PROSPECTIONS



### IDENTIFICATION

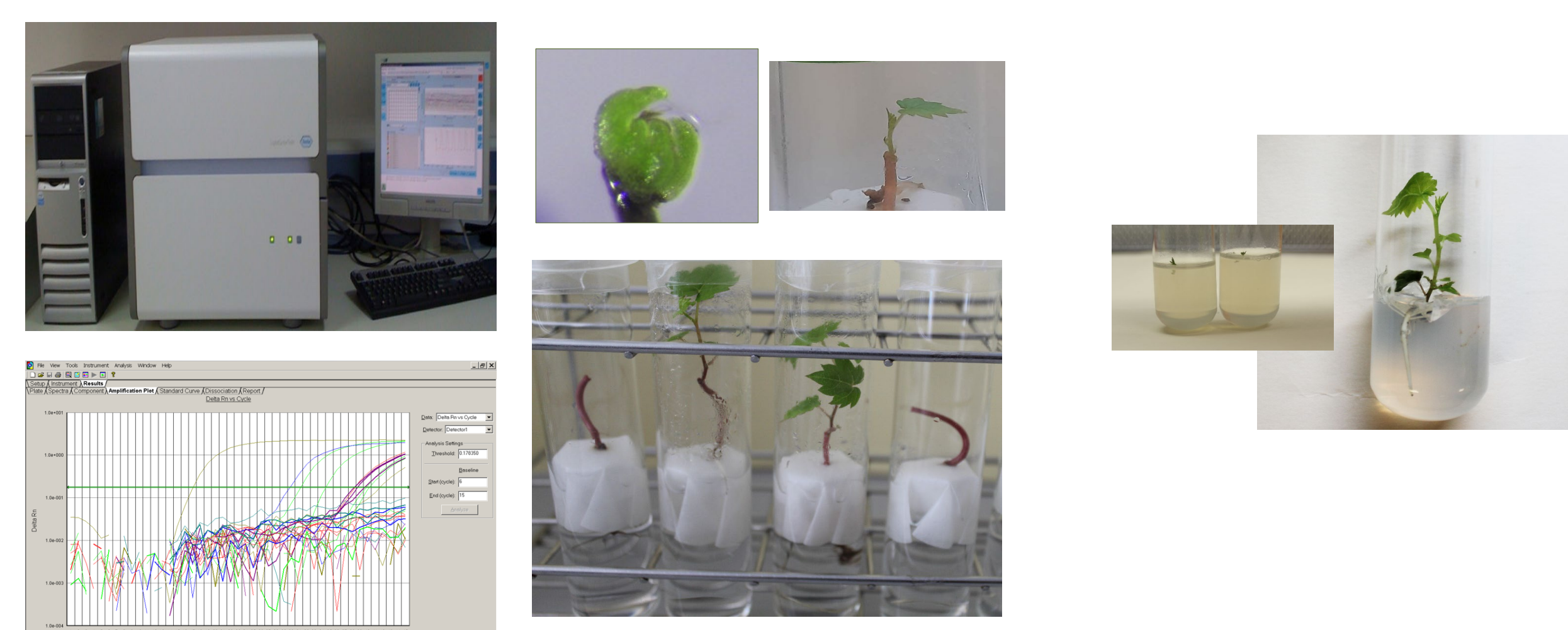


Prospection along the Comunitat Valenciana have been carried on. For varietal identification, SSR markers were used. As a result, historic grapevine varieties in great risk of disappearance like Cor d'Angel, Raïm del Clotet, Cardeal, or Forcallat blanc had been located. New homonymies and synonymies have been also reported, clarifying previous information. SSR profiles were firstly assigned for historic varieties like Trepadell, Arcos, Montalbana or Esclafagerres, among others. New profiles were also found for old varieties which names are not found in bibliographic sources like Macabeo negro, Gancha aroba, or Morenillo de la Hoya. New SSR profiles were also found for some 'unnamed' accessions. In addition, old germplasm from different origin probably introduced by migrants had been located (Cot de Cheragás, Cereza, etc). These results indicates that great richness of varieties is now present at the Comunitat Valenciana. The preservation of minor and endangered varieties is being performed in the germplasm collections of Generalitat Valenciana ('Instituto de Viticultura y Enología' and 'Estación Experimental de Elx'). Some minor varieties are maintained in the Botanical Garden of Universitat de València. In addition, 80 genotypes including grapevine varieties and rootstocks, are being under *in vitro* culture preservation in standard growing conditions (24°C, 70% humidity, and 16/8h photoperiod). This germplasm can be acclimatized and transferred to soil and/or used for other research purposes, including biotechnological breeding.

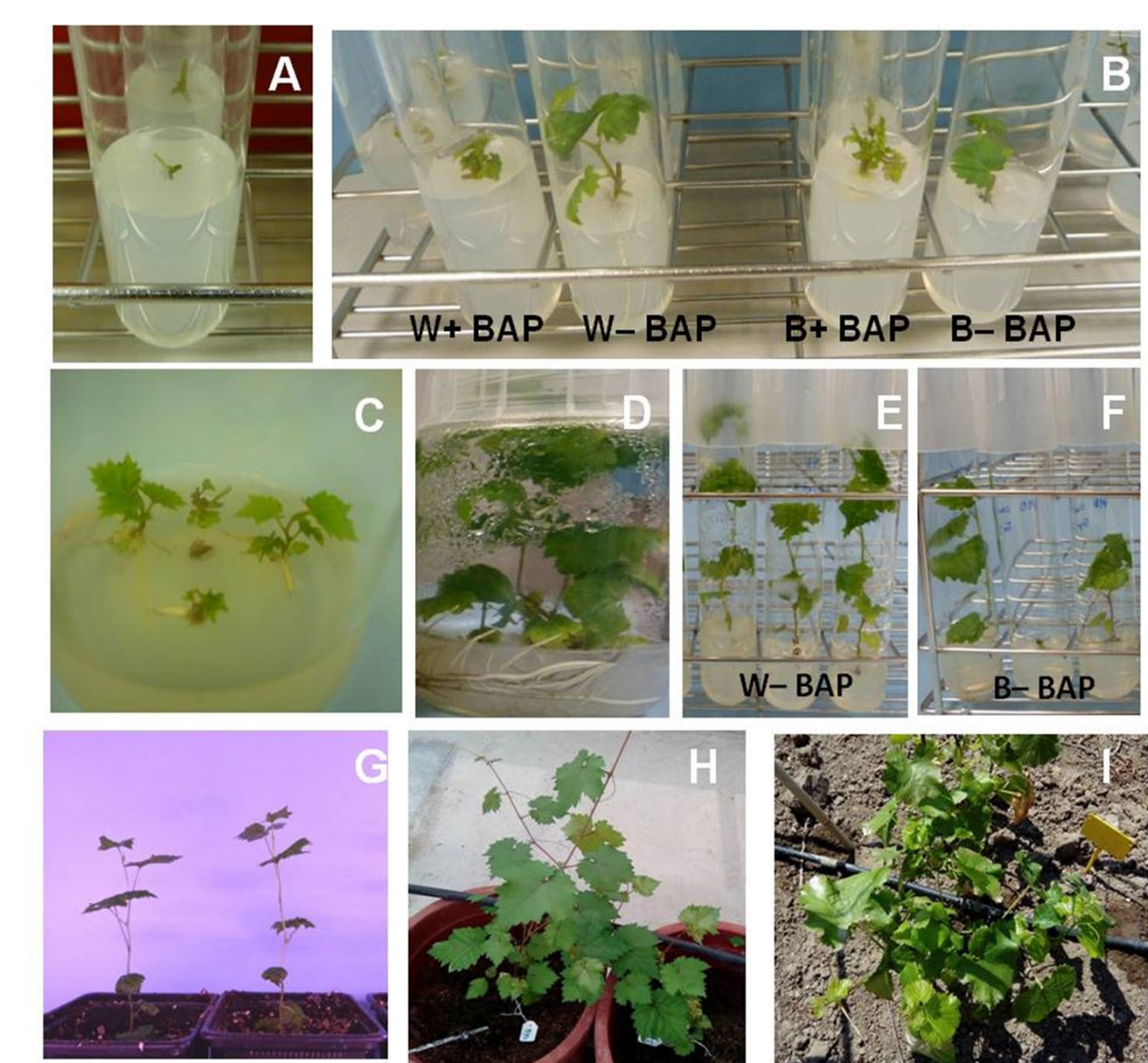
### IN VITRO ESTABLISHMENT AND PRESERVATION



### VIRUS ANALYSIS AND SANITATION



### MICROPROPAGATION



### PRESERVATION AT GREENHOUSE AND FIELD CONDITIONS



### CHARACTERIZATION

