

Genetic Diversity in Portuguese native *Vitis vinifera* L. *ssp. vinifera* and *ssp. sylvestris*

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Abstract: To assess the different origins of Portuguese grapevine varieties, we used six nuclear and four chloroplastidial microsatellites as molecular markers, in order to compare the genetic structure of native wild-vines with native grapevine varieties. Both native subspecies have a great diversity, and a high interrelationship across the six nuclear microsatellites. Although identical numbers of alleles were found in each population, their distribution was different in the *vinifera* and *sylvestris* subspecies. Portuguese wild-vines have only chlorotypes A and B; A being the most frequent. The fifty-seven analysed Portuguese varieties have chlorotypes A, B, C, and D. The most frequent was the chlorotype A (75%), followed by D (21%). The results obtained reinforced the idea of Western Europe as having been one of the domestication centres for the grapevine, with contributions from the Eastern European gene pool. The observed genetic structure is a starting point from which to clarify the high number of native cultivars found in Portugal, and reinforces their probable origin in the Iberian Peninsula.

Keywords: domestication centre; genetic structure; Portuguese *vinifera* and *sylvestris* subspecies; vine