

---

## Poster presentations

---

### **P1 – Assessment of grapevine diversity in old vineyards from Northeast Portugal**

Augusto, Diana<sup>1</sup>; Ibañez, Javier<sup>2</sup>; Faustino, Mariana<sup>3</sup>; Pinto, Joana<sup>3</sup>; Soares, Salviano<sup>4</sup>; Falco, Virgílio<sup>3,5</sup>; Pinto-Sintra, Ana Lúcia<sup>1,6</sup>; Leal, Fernanda<sup>1,6</sup>; Martínez-Zapater, José Miguel<sup>2</sup>; Oliveira, Ana Alexandra<sup>3,6</sup>; Castro, Isaura<sup>1,6\*</sup>

<sup>2</sup>University of La Rioja and Government of La Rioja, Institute of Grapevine and Wine Sciences (ICVV), Spanish National Research Council (CSIC), Logroño, Spain

<sup>3</sup>University of Trás-os-Montes e Alto Douro (UTAD), Department of Agronomy, Vila Real, Portugal

<sup>4</sup>University of Trás-os-Montes e Alto Douro (UTAD), Department of Engineering, Vila Real, Portugal

<sup>5</sup>University of Trás-os-Montes e Alto Douro (UTAD), Chemistry Research Centre (CQ-VR), Vila Real, Portugal

<sup>6</sup>University of Trás-os-Montes e Alto Douro (UTAD), Centre for Research and Technology of Agro-Environmental and Biological Sciences (CITAB), Institute for Innovation, Capacity Building and Sustainability of Agri-Food Production (Inov4Agro), Vila Real, Portugal

\*icastro@utad.pt

#### **Abstract**

The high diversity of grapevine varieties in Portugal is well known. In several municipalities in the northeast of Portugal at the beginning of the last century, more than one hundred different varieties were recognized. Currently are authorized for wine production with Protected Designation of Origin “Trás-os-Montes” 33 varieties and “Douro”/“Porto” 110, comprising 115 different varieties.

Nevertheless, despite this huge diversity, only 22 (19.1%) have representativity in these wine regions higher than 1%, corresponding to 84,2% (“Trás-os-Montes”) and 89.0% (“Douro”/“Porto”) of the total vineyard area. Prospection and identification of grapevine material in ancient vineyards in these wine regions is of utmost importance to prevent its disappearance. Thirteen old vineyards, aged between 50 and over 100 years, were studied, comprising a total of 456 plants. Genotyping by SSR and SNP markers allowed the identification of 88 different molecular profiles, including 15 unknown genotypes. In fact, 18 genotypes were detected in only one plant which emphasizes the urgency in their preservation. Moreover, chlorotype diversity was also analyzed. Four chlorotypes (A, B, C and D) were detected: chlorotype A was the most frequent, followed by chlorotype D. Chlorotypes B and C were only present in four foreign grapevine varieties.

**Keywords:** *Vitis vinifera* L., grapevine germplasm, autochthonous varieties, halt genetic erosion