



# MACROWINE 2018

28<sup>th</sup> - 31<sup>st</sup> May

Hotel Palafox  
ZARAGOZA



## Book of Abstracts

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## Astringency diversity of Italian red wines

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With more than 300 grape varieties, Italy owns one of the richest ampelographic heritages worldwide. Several of these grapes are very rich in tannins [1], so that wines should be very astringent. Nevertheless, these high tannin grapes, includes varieties giving wines with pleasant astringency and listed among the most renowned and appreciated Italian wines.

The Diversity of Italian Wines (D-Wines) project aims to collect and analyze a large-scale multi-parametric dataset regarding Italian wines.

In this frame, a set of 109 different mono-varietal red wines (2016) from 11 cultivars representative of the Italian territory were analyzed. Their diversity in terms of astringency characteristics were explored by sensory analysis through sorting [2,3] where judges were asked to label groups with terms describing astringency [4]. In parallel, wines tannin were measured by MCP assay [5] and their reactivity with salivary proteins by SPI [6]; base parameters were also measured.

Data exploration by AHC and PCA suggest an intra-varietal variability of the astringency features and provide first indications about varieties with a tendency to opposite characteristics: eg. Sagrantino and Nebbiolo (100% of samples sorted at list by 30% of the jury in the "Drying" group) vs. Teroldego and Corvina (100 % of samples sorted at maximum by the 30% of the jury in both the "Drying" and "Harsh" groups). On the first three PCs (72% variance), "Drying", tannins and ethanol are well correlated among them and negatively correlated to "Velvet" (PC1), while "Harsh" is positively correlated to pH (PC2); SPI (PC3) doesn't show correlation with other variables. SPI values range from 5.986 and 5.653 g/L GAE for Aglianico and Sagrantino to 1.824 and 1.828 g/L GAE for Corvina and Nerello Mascalese, respectively.

It is expected that the outcomes obtained by the D-Wine group will help in the management of the sensory consistency and optimal quality of Italian red wines to improve their attractiveness