




# MACROWINE 2018

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

Hotel Palafox  
ZARAGOZA



## Book of Abstracts

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## Aroma profile and composition of Barbera wines fermented with ten different couples of *Starmerella bacillaris* and *Saccharomyces cerevisiae*

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Yeasts represent the most important group of microorganisms to winemakers, because they are responsible for the transformation of grape must into high quality wines. This transformation is driven either by inoculated or indigenous yeasts already present on wine grapes and winemaking equipment, which individually and collectively contribute to wine quality. Besides the dominant species *Saccharomyces cerevisiae*, there are many non-*Saccharomyces* species with several phenotypes that contribute to the wine quality, both positively and negatively. Thus, in order to improve wine particular characteristics, mixed fermentations with *Starmerella bacillaris* and *S. cerevisiae* strains have been proposed. In this study, we investigate the interactions that take place between the above-mentioned species during alcoholic fermentation, with particular attention to the volatile profile of the wines. Ten different commercial *S. cerevisiae* strains were used to conduct mixed culture fermentations with *Starm. bacillaris*. Further, pure fermentations were performed with *S. cerevisiae* in parallel. The different combination of strains tested influenced the growth dynamics, fermentation behavior of the two yeast species and as a consequence wine composition in a strain-dependent manner. In particular, wines produced from mixed fermentations, contained significant higher amounts of glycerol and low amount of acetic acid and ethyl acetate. This study reveals, the importance of *S. cerevisiae* strain selection on the chemical composition of the wines, produced from mixed culture fermentations with *Starm. bacillaris*.