## The Impact of the Genetic Groups of Microorganisms on the Production of Mousy-Compounds

Authors : Pierre Moulis, Markus Herderich, Doris Rauhut, Patricia Ballestra

**Abstract :** Nowadays, it is starting to be more frequent to detect wines with mousy off-flavor. The reasons behind this could be the significant decrease in sulphur dioxide, the increase in pH, and the trend for spontaneous fermentation in wine. This off-flavor can be produced by Brettanomyces bruxellensis or some Lactic acid bacteria. So far there is no study working on the influence of the genetic group on the production of these microorganisms. Objectives: The objectives of this research are to increase knowledge and to have a better understanding of the microbiological phenomena related to the production of the mousy off-flavor in the wine. Methodologies: In this research, microorganisms were screened in an N-heterocycle assay medium (this medium contained all known precursors) and the production of mousy compounds was quantified by Stir Bar Sorptive Extraction-Gas Chromatography-Mass Spectrometry (SBSE-GC-MS). Main contributions: Brettanomyces bruxellensis and Oenococcus oeni could produce mousiness at a different amount depending on the strain. But there is no group effect. **Keywords :** mousy off-flavor, wine, Brettanomyces bruxellensis, Oenococcus oeni

1

**Conference Title :** ICFM 2023 : International Conference on Food Microbiology

Conference Location : Melbourne, Australia

**Conference Dates :** February 06-07, 2023