Population-wide diversity study in *Lachancea thermotolerans* highlights superior starters for winemaking

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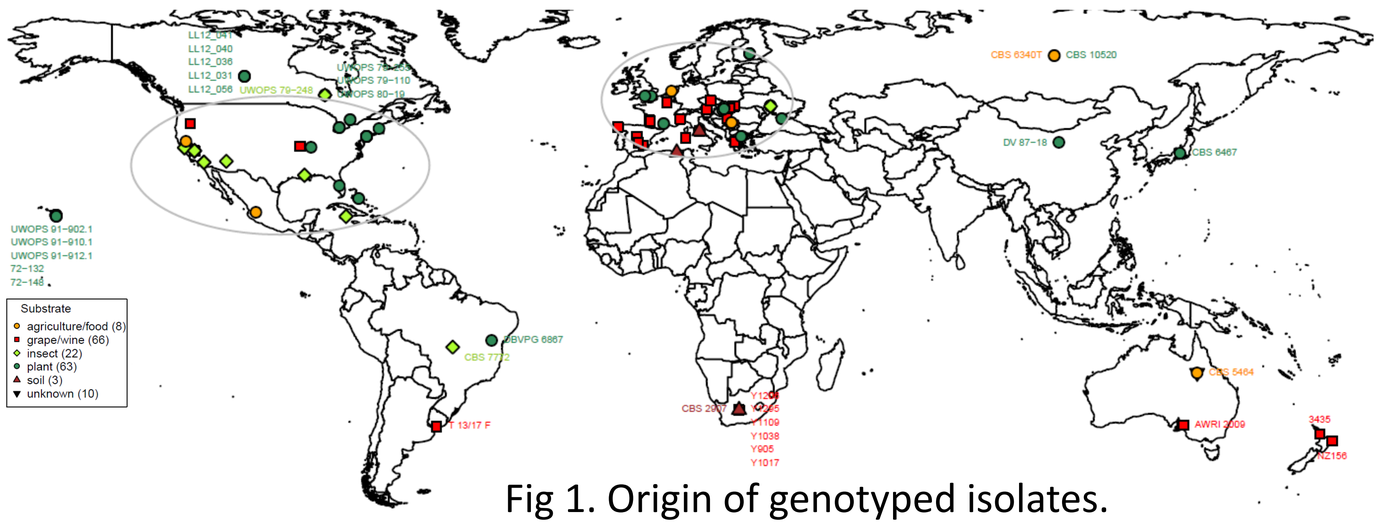

Fig 1. Origin of genotyped isolates.

Lachancea thermotolerans (LT) can partially ferment sugars to lactic acid, driving pH and ethanol decrease in wines. A genetic study revealed grouping of isolates based on their geographic origin or substrate of isolation (Hranilovic et al. 2017, PLOS ONE).

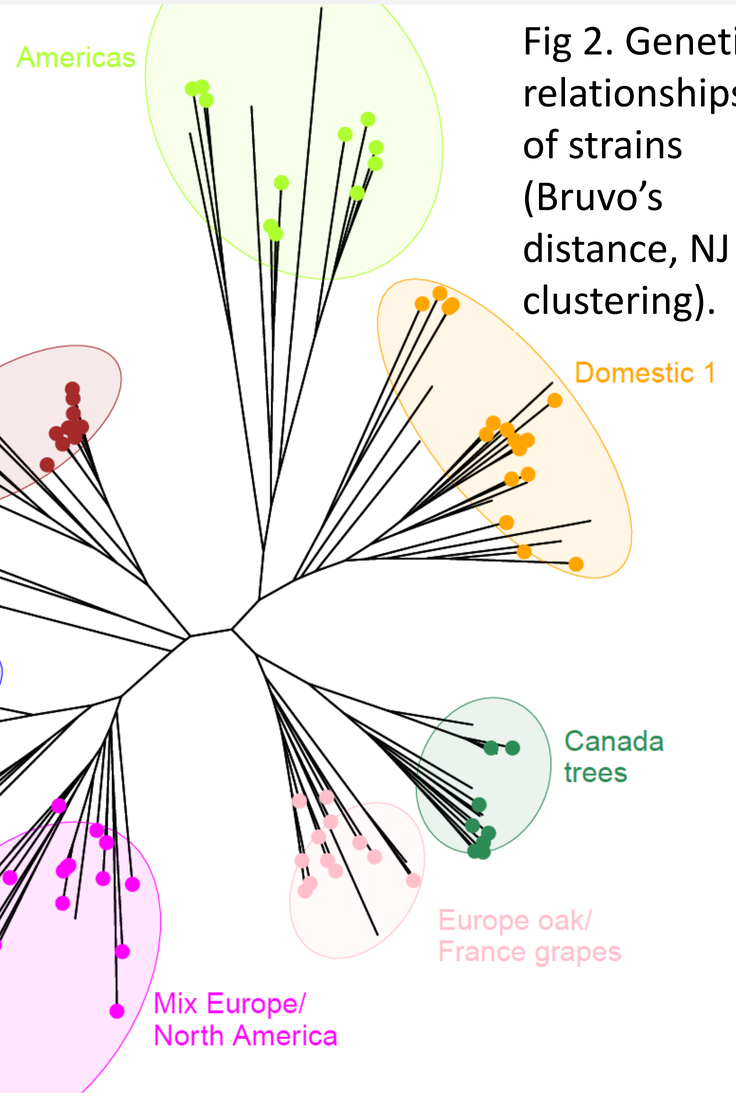

Fig 2. Genetic relationships of strains (Bruvo's distance, NJ clustering).

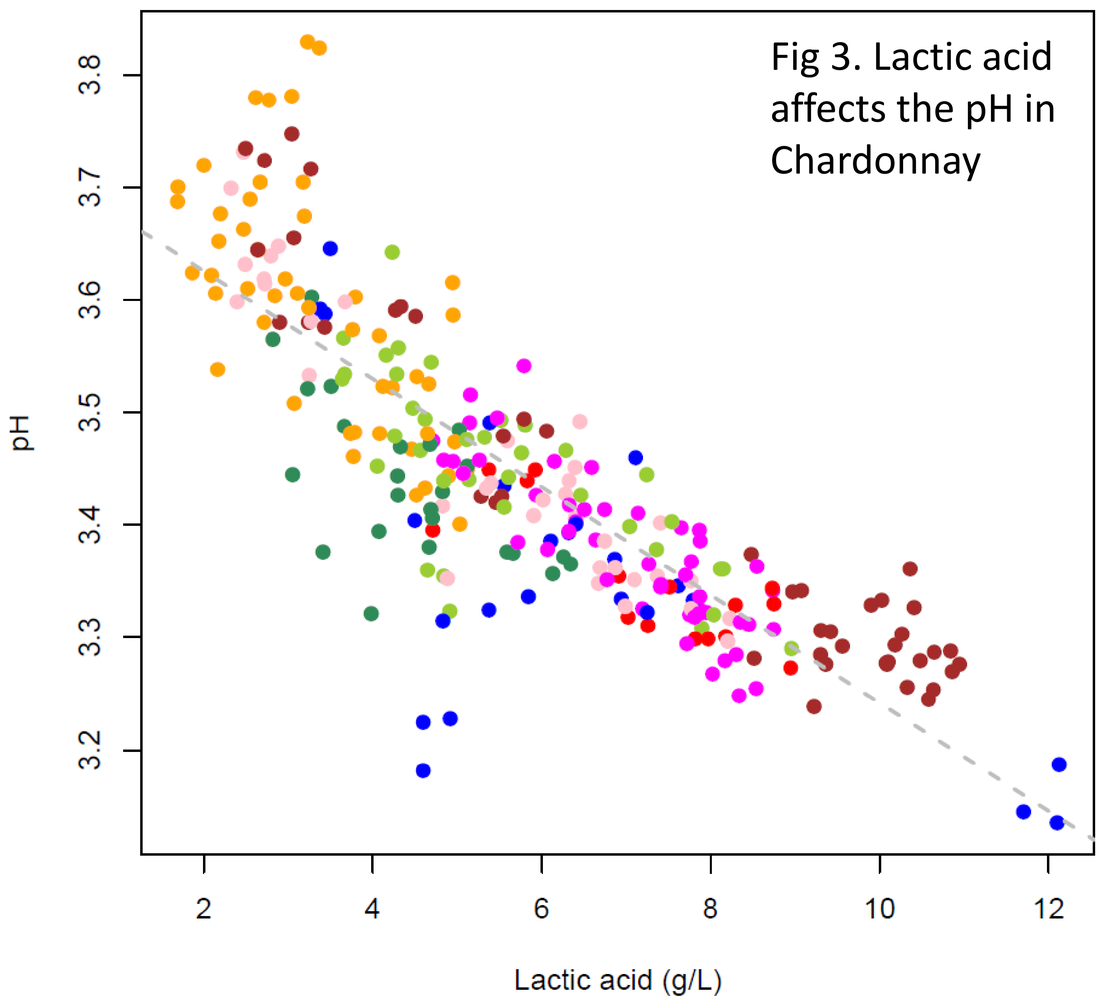

Fig 3. Lactic acid affects the pH in Chardonnay

Characterisation of 94 strains in Chardonnay (236 g/L sugar, pH 3.5) confirmed a range different oenological performances of the strains (Hranilovic et al. 2018, Sci Rep). A subset of strains was further tested in mixed fermentations with *Saccharomyces cerevisiae* (SC) in Cabernet Sauvignon (236 g/L sugar, pH 3.7).

The modulations in ethanol content and pH in Cabernet Sauvignon highlighted the potential of certain strains to ameliorate wines from warm(ing) climates.

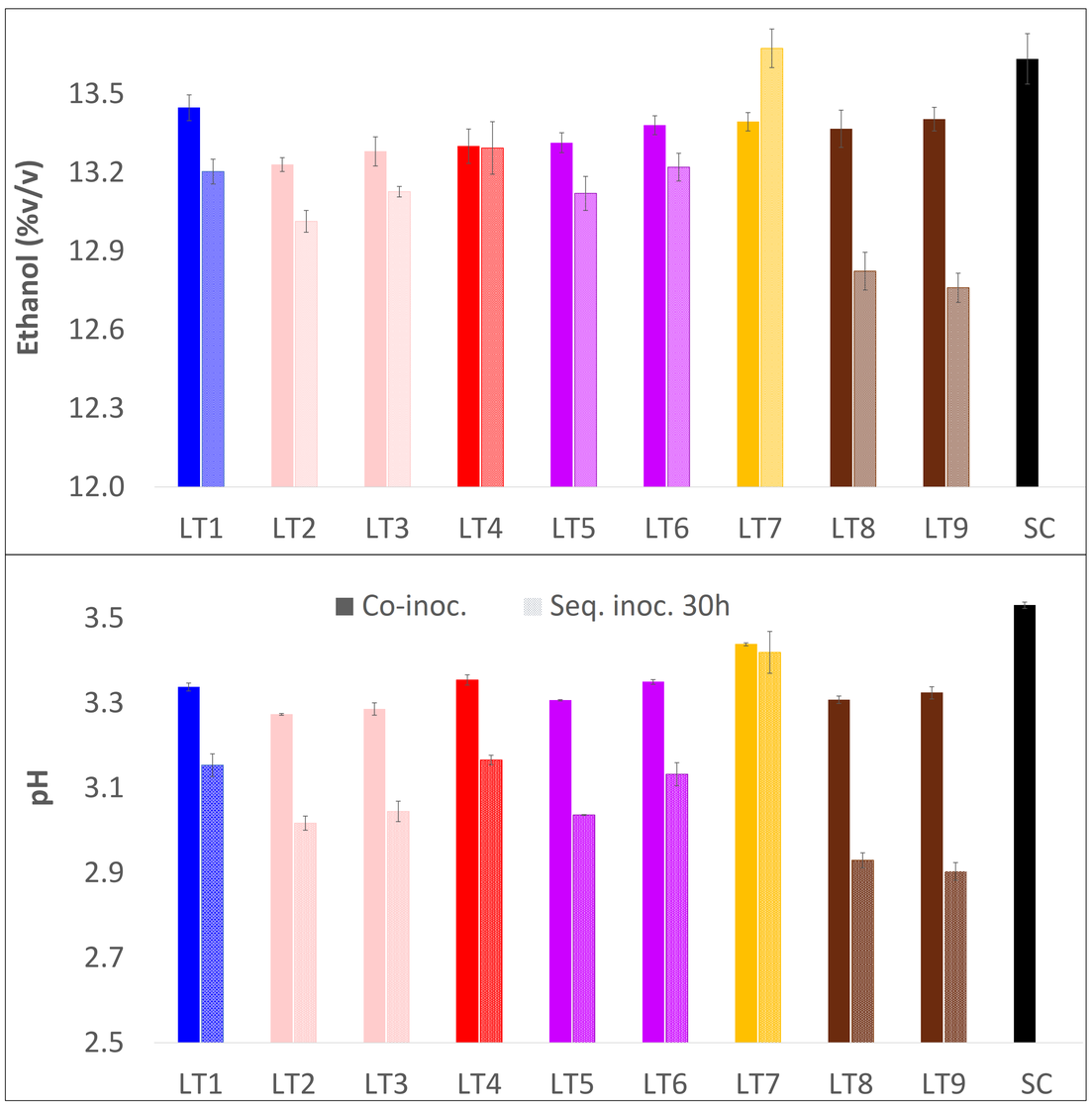

Fig 4. Ethanol and pH in dry Cabernet Sauvignon wines produced by an LT strain in co- or sequential inoculation with SC, and an SC monoculture.

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