

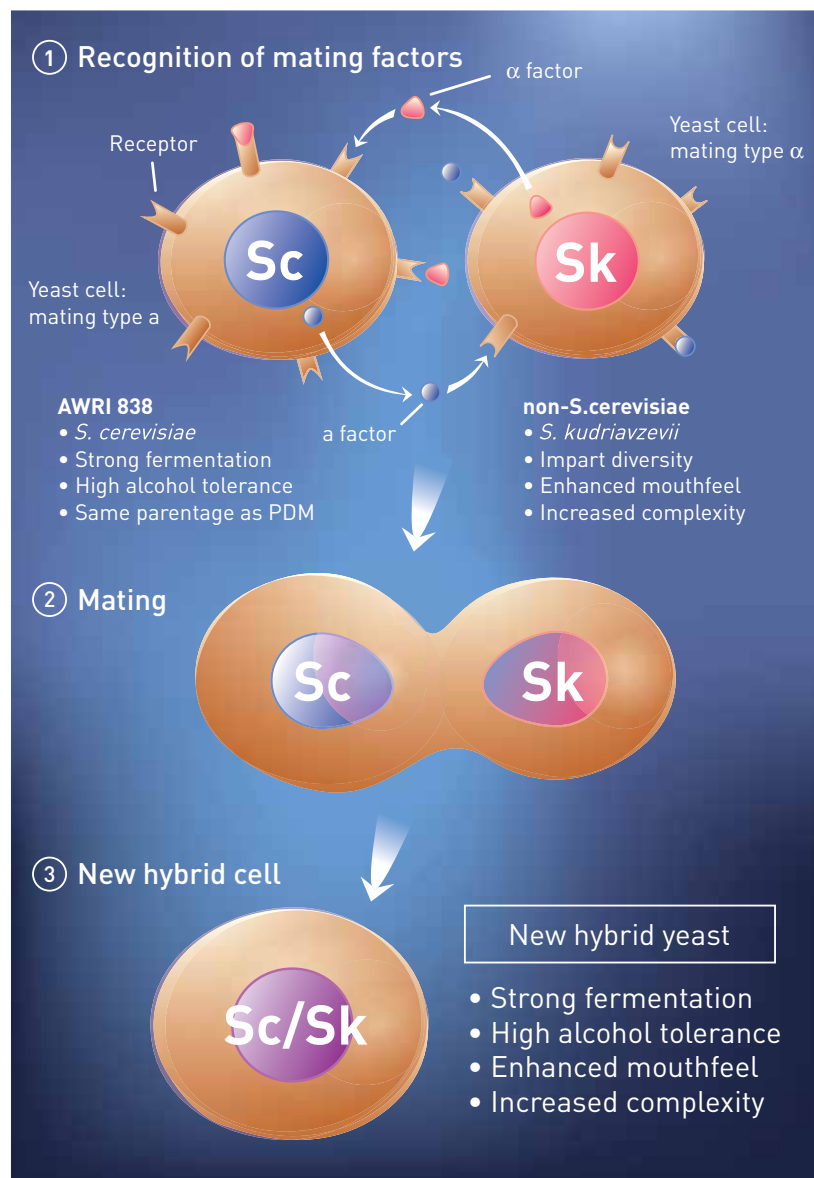
HYBRID YEAST

Increasing wine complexity and mouthfeel

Winemakers globally are seeking tools to add complexity and mouthfeel to wine. There are different ways of acquiring these desired characters in wine, such as adding pressings back to the wine or ageing on yeast lees. These processes can be time consuming and require careful monitoring. There is also the opportunity to use additives such as tannins and mannoproteins. This is, however, incorporating more additives to the winemaking process that most winemakers are already trying to reduce. What is the optimal solution?

Hybrid yeast adds complexity and mouthfeel to wine

The Australian Wine Research Institute (AWRI) have developed a novel set of hybrid wine yeast strains that promote increased mouthfeel and complexity in wine. These non-GMO hybrid strains, called *AWRI 1503*, *AWRI Fusion*, and *AWRI Cerebay* have been generated by using conventional breeding techniques similar to those used for generating new plant varieties. A simplified example of this process used for *AWRI 1503* is illustrated below.



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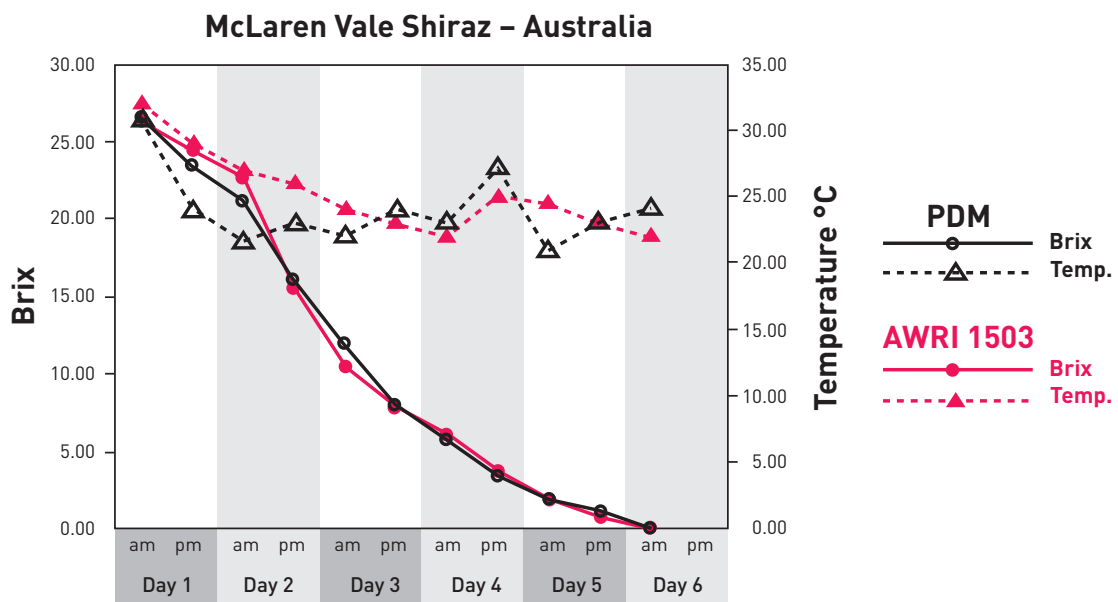
Each strain is unique

Each of these hybrid strains has unique properties, but all of them bring increased complexity and improved mouthfeel to wine.

AWRI 1503

[Saccharomyces cerevisiae x Saccharomyces kudriavzevii]

AWRI 1503 was originally promoted as a Chardonnay strain due to the production of estery, floral, tropical, citrus, nutty and waxy characters, with the palate showing a creamy texture with complex acid and a late mineral character. More recently, AWRI 1503 has been successfully used in red wine fermentation trials with Shiraz/Syrah and Cabernet Sauvignon in which enhanced mouthfeel and increased fruit concentration was observed. This hybrid yeast appears to be well suited for building aroma and palate complexity, particularly in young red wines. A fermentation aid such as Mauriferm Gold is recommended in low YAN and highly clarified juices, particularly white grape juices.



AWRI Fusion

[Saccharomyces cerevisiae x Saccharomyces cariocanus]

The aroma profile of AWRI Fusion has been described as peach, pear, nectarine, violets, lemon fruit/zest, creamy, mineral and matchstick, based on wines made in a barrel- and tank-fermented Chardonnay trial. The palate is described as complex, full flavoured, tight, leaner, phenolic and having flavour persistence. This hybrid yeast appears to be well suited for building flavour complexity in white wines such as Chardonnay, Colombard, Pinot Gris/Grigio and Semillon.

AWRI Cerebay

[Saccharomyces cerevisiae x Saccharomyces bayanus]

While *S. bayanus* yeast are capable of completing fermentation, they are less robust than many *S. cerevisiae* strains. AWRI Cerebay combines the robust fermentation properties of its parent *S. cerevisiae* strain and a blend of the flavour properties of both parent yeasts. Based on a 2007 Australian winery Merlot trial, this hybrid appears to have potential to enhance the flavour and complexity of red wines, in particular Merlot, Cabernet and Grenache. Descriptors for the wine include riper and richer fruit, less green character and greater complexity and intensity.