

As genetic sequencing has advanced over the years, it has been improving our understanding of organism classification. Knowing the length and sequence of specific regions of DNA allows us to identify organisms based on the precise order of DNA base pairs

In the brewing industry, genetic sequencing has not been widely practiced until recently. White Labs has been engaged in researching the full genetic makeup of our main collection of *Saccharomyces* strains since 2012. In recent months, we brought some of that technology in-house to further investigate the origins and specificity of our alternative organisms, including our line of *Brettanomyces*. These particular species have posed a further challenge, in that their nomenclature is ever-changing and the organisms themselves are in an ever-adaptive pathway, making them difficult to identify using traditional microbiological methods.

When the identity of our WLP644 *Brettanomyces bruxellensis* Trois first came into question, we began looking more closely at the genetics of these wild yeasts. We sent samples out to independent laboratories for sequencing, getting back varying results as to the strain's actual speciation. Recently, we were able to identify why these results did not seem to be conclusive. In performing our own identification, we amplified a small section of the ribosome, call the ITS region. The ITS region of *Brettanomyces* is generally between 450-550 base pairs, whereas *Saccharomyces* tends to be about 800 base pairs in size. As evident by the figure, the WLP644 ITS amplicon falls within the category of *Saccharomyces*.

Interestingly, the strain itself displays many properties similar to *Brettanomyces* yeast: lack of flocculation, pellicle formation, and flavor compound production not typical of any traditional brewing species of *Saccharomyces*. This was validated through further trial fermentations and and Gas Chromatograph analysis of the resulting beer. Based on what we feel is now conclusive information, we feel it necessary to rename/recategorize this strain as a wild *Saccharomyces*, rather than *Brettanomyces*.

WLP644 is now *Saccharomyces brux-like* Trois (formerly known as *Brettanomyces bruxellensis* Trois). We are also releasing WLP648 *Brettanomyces bruxellensis* Vrai, for those looking for the traditional *Brettanomyces* character.

