Wine with no hangover? CRISPR gene-edited yeast could make that happen

[R]esearchers working at the University of Illinois College of Agricultural, Consumer, and Environmental Services (ACES) claim to have produced a yeast that could vastly increase the quality of wine while also reducing its hangover-inducing properties.
…researchers developed what they call a “genome knife,” which allowed them to slice across multiple copies of a target gene until all the copies were cut, thereby making it impossible for any remaining genomes to correct any altered ones.

After being completely cut, the enzyme RNA-guided Cas9 nuclease was then employed to carry out precise metabolic engineering on strains of polyploid Saccharomyces cerevisiae, a species of common yeast instrumental in winemaking, bread baking, and beer brewing.

This newly-modified strain, the team believes, is a breakthrough of “staggering” proportions. The applications of this compound possibly range in the thousands, given the ubiquity of the species of yeast and its use in a myriad different industries.

if winemakers were to clone this new enzyme, then they could use it to improve malolactic fermentation (the conversion of bitter malic acid, naturally present in freshly pressed grapes, into softer-tasting lactic acid) to produce a consistently smoother wine while also removing the toxic byproducts that can cause hangovers.

The results of this research was recently published in the journal Applied and Environmental Microbiology.

The GLP aggregated and excerpted this blog/article to reflect the diversity of news, opinion, and analysis. Read full, original post: New innovations in biotechnology mean good news for wine drinkers