

The perfect wine? Biotechnology poised to upend ancient craft of winemaking

Winemakers have come to realize that there are many different strains of yeast (and even bacteria) at play that enhance the aromas and flavors of wine derived from a variety of grape vines. Whether you're tasting the tarty fruitiness of a red wine, the buttery, creamy feel of a Chardonnay, or the bitter acidity of a wine that's gone bad all depends on the microbes chomping away in the barrel.

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That's where genetic engineering can make an impact, Roy Walker, a molecular biologist at Macquarie University in Sydney, told The Daily Beast. Wine yeast could be genetically modified to resist spoilage yeast, or perhaps release antimicrobial chemicals that target *B. bruxellensis*. Some strains could be designed to work together instead of competing—each specializing in specific tasks that a winemaker could precisely control to engineer the perfect wine.

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There is one looming threat on the winemaking horizon that genetic engineering could help the wine industry with: climate change. With unseasonably warm winters, hotter summers, and unpredictable weather patterns like violent storms, droughts, or forest fires, grape farmers and winemakers are taking hits left and right.

[**This is an excerpt. Read the original post here**](#)