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BioTork, Yeast, and Whiskey: a blossoming love story

BioTork improves whiskey-producing yeast

Gainesville, FL – The Florida-based biotechnology company, BioTork, has significantly improved strains of yeast used in the fermentation of grains to make whiskey.

Like beer, wine, other spirits and fuel ethanol, whiskey is made through the fermentation of a carbon source (barley, corn, rye or wheat) by yeast, usually *Saccharomyces cerevisiae*. However, the yeasts employed to ferment traditional whiskey substrates are often not capable of fully fermenting the grain substrate, leaving potential revenues on the table in the form of unmade ethanol and resulting in higher costs due to the need to clean distillation columns more frequently. BioTork has developed strains of yeast derived from currently used distillery strains that are capable of producing up to 20% more ethanol with 1-2 days shorter fermentation time from real-world whiskey worts. These strains could help whiskey producers produce more ethanol with shorter turn-around-times for their fermenters.

BioTork CEO Eudes de Crécy emphasizes, "The beauty of our technology is that it would allow whiskey producers to make approximately up to 20% more alcohol from the same amount of starting material, and in a shorter amount of time. The potential for increasing production of whiskey from the same costs is monumental."

The whiskey industry has been expanding, with the global market expected to grow at a CAGR of about 4.56% in volume until 2020. Some producers have even been watering down their liquor in order to meet demand. Although the aging process of liquor creates an industry in which future demand must be estimated, many suggest that it will continue to rise due to opening Asian markets. An improved yeast strain would allow greater output of whiskey from the same amount grain, not only saving producers money but also allowing them to meet future demands.

Founded in 2008, BioTork is a strain development company that holds the license to use a state-of-the-art patented proprietary technology that allows for the improvement of microorganisms through natural selection and evolutionary optimization. They can improve existing bioconversion processes or create new ones in any type of microorganism, including bacteria, yeast, algae, and filamentous fungi. As a consequence, BioTork can make fermentation processes more efficient, cheaper, or even allow agricultural waste to be used as substrate.

Its use of natural selection rather than genetic modification to improve strains allow BioTork to provide non-GMO microorganisms for use in markets where this is desirable, although BioTork can also improve GMO strains if needed. The possible applications of BioTork's technology are endless, but the company tends to focus on renewable chemicals and sustainability, such as the conversion of low-value carbon sources and waste products into high-value chemical commodities.

In this case, BioTork has improved the organism – yeast – in order to make the biological process – the fermentation of grain into whiskey- a more efficient and therefore less costly and more sustainable endeavor.

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