

## New synthetic genes for human favorite baker's yeast

The humble baker's yeast has been enlisted to serve the needs of humanity, responsible for beer, wine and bread, among other staples. A domesticated servant for at least millennia, the microscopic fungus has now had one of its chromosomes swapped out by a host of undergraduate students in favor of a pared-down, synthetic version.

A chromosome is a twisted strand of DNA, the genetic code that tells an organism's cellular machinery what proteins to produce, among other vital functions. There are 16 in baker's yeast (compared to 23 in humans), and the so-called Synthetic Yeast 2.0 project focused on chromosome number three, a "sentimental favorite of yeast geneticists," according to biologist Jef Boeke of Johns Hopkins University, who helped lead the research. That's because it contains the genetics that control the yeast's sexual behavior. As a fungus, *Saccharomyces cerevisiae* can reproduce both sexually and asexually, and the genes in chromosome number three control mating, which makes it easy to track through the generations. It was also the first chromosome to have its code fully transcribed by scientists and happens to be third shortest of the yeast's 16 chromosomes.

**Read the full, original story: [Baker's Yeast Gets a Genetic Makeover](#)**