

Lab boost for precious anti-malaria drug

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US scientists on Wednesday said they had used baker's yeast to make a key ingredient of malaria drugs, a feat that could iron out fluctuations in supply caused by sourcing the chemical from a Chinese herb.

One of the revolutions in [malaria treatment](#) in recent decades has been the advent of artemisinin drugs, whose active ingredient comes from a traditional Chinese herb, *Artemisia annua*.

But weather can affect harvests of the plant, causing shortages and [price spikes](#).

In a study published in *Nature*, a team led by Chris Paddon of Amyris Inc., a biotech firm based in Emeryville, California, reported on a way to ferment artemisinic acid—a precursor to artemisinin—from genetically-engineered baker's yeast.

Their technique derives 25 grammes of concentrate from a litre of artemisinic acid. A previous attempt, reported by a European team last year, made only 1.6 grammes per litre.

The artemisinic acid can then be converted to artemisin by a simple chemical process using oxygen as a catalyst.

"Because all intellectual property rights have been provided free of charge, this technology has the potential to increase provision of first-line antimalarial treatments to the developing world at a reduced average annual price," the researchers said.

In 2010 there were more than 200 million cases of malaria, and at least 655,000 deaths, according to the UN's [World Health Organisation](#).

More information: [dx.doi.org/10.1038/nature12051](https://doi.org/10.1038/nature12051)

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