

Geneticists aim to eradicate malaria with genetically engineered mosquitoes

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In a basement on the Irvine campus of the University of California, behind a series of five protective doors, two teams of biologists have created a novel breed of mosquito that they hope will help eradicate [malaria](#) from the world.

The mosquito has been engineered to carry two ingenious genetic modifications. One is a set of genes that spew out [antibodies](#) to the malarial parasite harbored by the mosquito. Mosquitoes with these genes are rendered resistant to the parasite and so cannot spread malaria.

The other modification is a set of genetic elements known as a gene drive that should propel the malaria-resistance genes throughout a natural mosquito population. When a malaria-resistant male mosquito mates with a wild female, the gene drive copies both itself and the resistance genes over from the male chromosome to its female counterpart.

Because almost all the progeny carry the new genes, instead of just 50 percent as would be expected by [Mendel's laws of genetics](#), the inserted genes are expected to spread rapidly and take over a wild population in as few as 10 generations, or a single season. A large region, at least in principle, could be freed from malaria, which kills almost 600,000 people a year.

Read full, original post: [Engineering Mosquitoes' Genes to Resist Malaria](#)