

**Subject:** Media Review on Gene Drive - Ethics Advisory Committee

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A Vector Control Research Alliance

**Ethics Advisory Committee  
Media Review on Gene Drive**

*Dear members of the Ethics committee, please find below a selection of the best and most significant articles on issues related to gene drive, malaria and other relevant topics to Target Malaria. It covers the period of March 2017.*

**[In a remote West African village, a revolutionary genetic experiment is on its way — if residents agree to it](#)**

BANA, Burkina Faso — This small village of mud-brick homes in West Africa might seem the least likely place for an experiment at the frontier of biology. Yet scientists here are engaged in what could be the most promising, and perhaps one of the most frightening, biological experiments of our time.

**[In Africa, Scientists Are Preparing to Use Gene Drives to End Malaria](#)**

In Burkina Faso, Mali, and Uganda, the groundwork is being laid for a powerful kind of experiment. A project now underway aims to release mosquitoes that have been genetically programmed to drive themselves and their malaria-causing brethren toward extinction.

**[What will you do in the gene-editing revolution?](#)**

[...] Far faster than anybody thought, we're working out the genes responsible for all manner of traits in all creatures great and small. Far more easily than anyone expected, we've moved from standard gene therapies to figuring out how to actually edit our own DNA, to ferret around inside living cells, snipping out

duff genes and replacing them.

### [A Brave New World](#)

[...] Also within the last two years, scientists have explored whether CRISPR can be used to change the human germline by editing the genes of a human *embryo*. Not only would the embryo, if brought to term, not have the bad genes, but all subsequent offspring of that new human would be free of the bad gene and could therefore not pass on that gene's undesirable traits.

### [Ge "GMO" isn't a dirty word: Genetically modified insects could save lives, but first humans have to be convinced](#)

For years scientists have tinkered with mosquito genes to try to eradicate the crippling spread of diseases like malaria. But today new gene-editing technology has heightened the potential for helping hundreds of millions of impoverished people worldwide who are ravaged by the pathogen these tiny killers spread.

### [The pros and cons of 'gene drives'](#)

Scientists have used genetics to alter mosquito populations for several decades, to try to eliminate diseases such as malaria and more recently Zika. But these efforts — when they've worked at all — have only partially addressed the problem. Now, scientists want to use a powerful new technology with the potential to change or wipe out an entire species of mosquito. The key tool is something called a "gene drive."

### [Creating Zika-Proof Mosquitoes Means Rigging Natural Selection](#)

Of the many great things promised by Crispr gene editing technology, the ability to eliminate disease by modifying organisms might just top the list. But doing that requires perfecting something called a gene drive. Think of gene drives as a means of supercharging evolution to, say, give an entire population of mosquitoes a gene that kills the Zika virus.

### [Mice as Conservationists?](#)

A naturally occurring gene in house mice may help eliminate their invasive cousins that live on islands [...] Our group is currently investigating new biotechnology that could reduce or even eliminate these invasive mice. The project involves designing a genetically modified mouse that can do two things: spread a gene and only have male offspring.

### [New Zealand Could Use Gene Editing to Kill Off Its Cutest Predator](#)

Gene drives could be a revolutionary technological tool, capable of allowing scientists to engineer problematic pests like mosquitoes or rodents out of an environment. But first, there is an awful lot to figure out. And none of it is quite as simple as releasing a bunch of stoats to eat the rabbits.