Rodent-targeting gene drive could be delivered through CRISPR

Scientists are getting closer to creating a genetic pest-control measure against rodents.

Female <u>mice engineered to carry a genetic cut-and-paste machine called a gene drive</u> may be able to pass a particular version of one gene on to more than 80 percent of their offspring, researchers report January 23 in Nature.

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Such <u>engineered genetic cheats</u> have been proposed to wipe out disease-carrying mosquitoes and invasive species by targeting genes involved in reproduction. Gene drives might also be used to prevent pests from carrying diseases, such as <u>malaria</u>. Researchers have made successful gene drives in laboratory experiments in mosquitoes, fruit flies and yeast.

But no one has yet built one that works in a mammal. And [researcher Kimberly] Cooper isn't claiming to have done so either. By definition, a gene drive must cheat Mendelian inheritance rules over multiple generations, spreading itself to an entire population. Cooper's group has produced one generation of genetic cheater mice, but hasn't yet tracked the gene drive's spread through multiple generations.

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Cooper isn't worried about making a gene drive for use outside of the lab in the near future. Instead, her goal is to create a tool that makes it easier to engineer mice for research, she says. Scientists could insert several human genes into such rodents at the same time, making mice that might better mimic human diseases.

Read full, original post: A CRISPR gene drive for mice is one step closer to reality