

## Tick-tock: Inside the race to eliminate the scourge of Lyme disease

In the centuries-long arms race against ticks, the enemy has always held the upper hand, and now its grip appears to be tightening—the Centers for Disease Control and Prevention estimates that nearly half a million Americans may get Lyme each year, while the population of ticks and the geographic range in which they're found have grown dramatically over the past half century. [Scientist Sam] Telford has spent his 30-plus-year career studying and developing countermeasures against ticks and the pathogens they transmit.

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Telford is advising on a project to release scores of genetically modified mice into the fields and tall grass of Nantucket and Martha's Vineyard... [The] idea was to genetically alter white-footed mice—one of the biggest Lyme reservoirs in Massachusetts—so they naturally produce antibodies that kill [Lyme disease causing *Borrelia burgdorferi*] bacteria.

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Currently, there's no firm timeline for the so-called Mice Against Ticks program. It could be two, five, or 10 years before people feel comfortable enough moving forward with genetically modified animals roaming the hills. So far, though, there's strong public support for the approach and a sense that residents are willing to once again put their faith in science, which gives Telford hope that all is not lost in the battle against ticks.

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