

## Infographic: Just one mosquito species can spread 54 viruses. Here's how genetic modification can help us conquer this disease-spreading, destructive powerhouse

*Aedes aegypti* is one of the most common mosquitoes in the U.S. that can spread disease. One of the best-known mosquito-borne diseases is malaria, but *Aedes aegypti* is associated with 54 viruses. West Nile virus, Zika, and dengue are just three diseases these mosquitoes transmit around the U.S.

With 1 in 150 people becoming seriously ill due to West Nile virus, sometimes fatally, what can we do to prevent mosquito bites?

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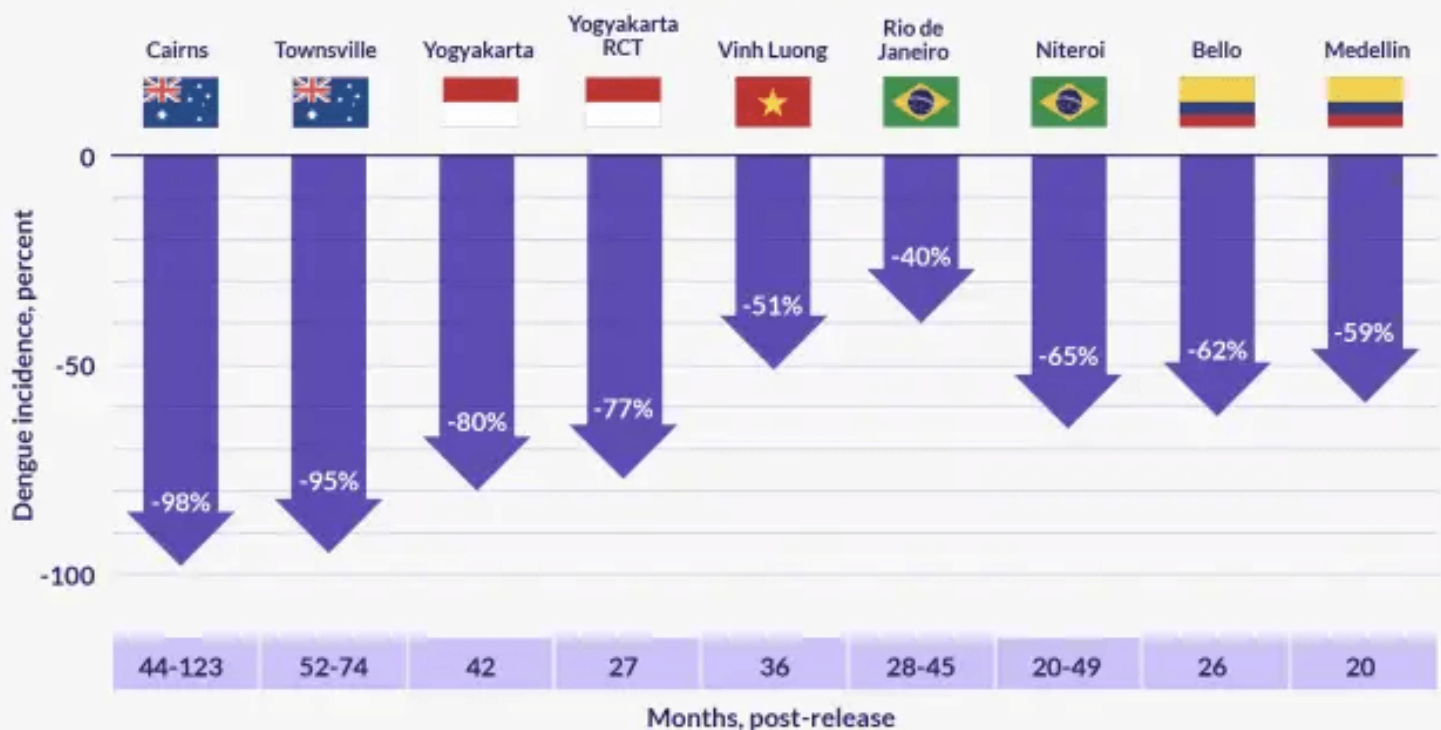
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The World Mosquito Program has discovered something amazing: When *Aedes aegypti* carry *Wolbachia*, a common bacteria in mosquitoes, it competes with viruses like dengue. This makes it much harder for the virus to reproduce inside the mosquito, reducing the risk of spreading diseases to humans.

By selectively breeding *Aedes aegypti* with *Wolbachia* and releasing them into areas with heavy viral burdens, the World Mosquito Program is reducing disease with impressive results.

# Reducing Dengue with Wolbachia

Reduction of dengue incidence in the project sites where we have finished releasing Wolbachia-carrying mosquitoes.



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Oxitec has been testing its GM mosquitoes in Brazil, the Cayman Islands<sup>1?</sup>, Malaysia, and Panama for the last ten years. Remarkably, Oxitec demonstrated that their biotechnology could reduce the local *Aedes aegypti* population by more than 90%.

In 2021, Florida started releasing 144,000<sup>1?</sup> genetically modified, non-biting male *Aedes aegypti* engineered by Oxitec.

how gm mosquitoes reduce wild mosquito populations

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