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Oxitec's safe, environmentally friendly technology reduces disease spreading mosquitoes in local communities

Mosquito-transmitted diseases are a public health risk magnified by climate change and innovative interventions are urgently needed

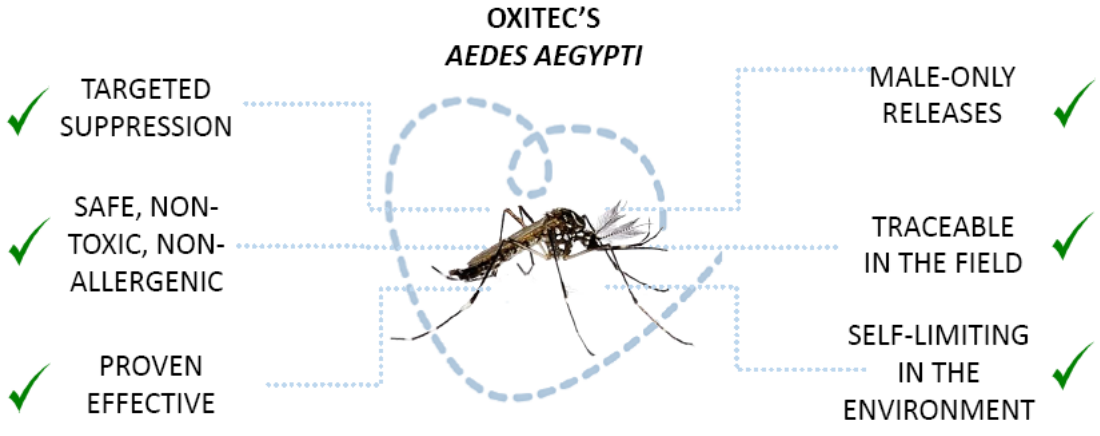
According to the Centers for Disease Control and Prevention (CDC), mosquitoes kill more people than any other creature in the world. *Aedes aegypti* is an invasive mosquito that can transmit viruses that cause Zika, dengue, chikungunya, and yellow fever. This species can also transmit canine heartworm. There is no cure or vaccine for many of the diseases transmitted by *Aedes aegypti* mosquitoes.

Climate change has magnified the risks of invasive mosquito species and *Aedes aegypti* can now withstand temperate California winters, remaining a threat year after year. This species is spreading and is now in more than 300 cities and towns throughout California. Innovative mosquito control techniques are needed as these mosquitoes have shown resistance to pyrethroids, the most commonly used class of mosquito adulticide. This limits the efficacy of traditional mosquito control approaches.

Oxitec has developed an innovative solution to protect the public from *Aedes aegypti* mosquitoes, which can transmit deadly diseases

Oxitec's non-biting male Friendly™ *Aedes aegypti* mosquitoes carry a self-limiting gene that prevents their female offspring from surviving, allowing for male-only production. After Friendly™ male mosquitoes are released and mate with invasive pest females, the number of female *Aedes aegypti*, which are capable of transmitting viruses, is reduced.

Like all male mosquitoes, Oxitec's males do not bite. They only mate with females of their own species, and their self-limiting gene cannot establish in the ecosystem. Oxitec's technology is environmentally sustainable and does not harm beneficial insects like bees and butterflies. It does not use chemicals, nor produce toxins or allergens.



Oxitec seeks approval to initiate pilot projects in California and following comprehensive federal scientific review that granted approval in other states

Nearly a dozen mosquito control agencies support Oxitec's efforts to bring non-biting male Friendly™ *Aedes aegypti* mosquitoes to California so they can learn more about this innovative technology.

Oxitec submitted an application to the U.S. Environmental Protection Agency (EPA) for an amendment to its Experimental Use Permit (EUP) to implement pilot projects in California. As part of this application process, the public will have an opportunity to submit a comment in the Federal Register. Then, the EPA will review and respond to the comments before issuing a decision.

Once the EPA approves Oxitec's California amendment, the company will need to secure approval from the CA Department of Pesticide Regulation (DPR) as well as required local approvals before initiating pilot projects in communities.

Oxitec's technology has been proven to control disease vectors

In 2019, Oxitec released non-biting male *Aedes aegypti* Friendly™ mosquitoes in the State of São Paulo, Brazil and after 13 weeks suppressed up to 95% of *Aedes aegypti* mosquitoes. This showed the potential to reduce the risk of disease transmission by this pernicious vector of dengue, Zika, chikungunya and yellow fever. Together, these viruses infect hundreds of thousands of Brazilians every year, with devastating consequences.

Independent research found community support for the project was overwhelmingly high, with 94% of residents supporting the use of Oxitec's mosquito technology in their neighborhoods.

In May 2020, Oxitec received full biosafety approval for this technology from Brazil's national biosafety regulatory authority CTNBio after demonstrating the technology's full safety to human health and the environment.

Peer-reviewed scientific research and extensive federal evaluation shows Oxitec's technology is safe and effective

Oxitec recently secured regulatory approvals from the EPA and the Florida Department of Agriculture and Consumer Services for a pilot project in Florida. The decisions included input from the CDC and seven other State of Florida agencies, including the Departments of Health and Environmental Protection.

There are over 100 independent peer-reviewed scientific publications on Oxitec's technology. The EPA's scientific and environmental assessments for the original EUP included a review of over 4,500 pages of data and protocols, including 2,500+ pages of scientific peer-reviewed literature.

More than 1 billion Friendly™ mosquitoes have been deployed worldwide, generating significant levels of suppression of *Aedes aegypti* while leaving no trace in the environment.

A 2018 peer-reviewed article in Psyche: A Journal of Entomology evaluated a prior generation of Oxitec's non-biting male *Aedes aegypti* Friendly™ mosquitoes and found:

"It is important to emphasize that OX513A strain is self-limiting strain and does not persist in the environment when released, thus the present susceptibility tests suggest the strain poses few long-term risks when implemented in the vector control program. In the meantime, regardless of the scientific rigor and ground-breaking potential, transparent evaluation and implementation of genetic technologies are persistently thwarted by a cultural and political aversion to the new, a fear of that which is not understood. A willingness to objectively comprehend and evaluate perceived risk is the key to overcoming such uncertainties; without which, antipathy towards genetic technologies is nothing short of an irrational phobia."

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