

Video Article

Population Replacement Strategies for Controlling Vector Populations and the Use of *Wolbachia pipientis* for Genetic Drive

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URL: <http://www.jove.com/index/Details.stp?ID=225>

DOI: 10.3791/225

Citation: Rasgon J. (2007). Population Replacement Strategies for Controlling Vector Populations and the Use of *Wolbachia pipientis* for Genetic Drive. *JoVE*. 5. <http://www.jove.com/index/Details.stp?ID=225>, doi: 10.3791/225

Abstract

In this video, Jason Rasgon discusses population replacement strategies to control vector-borne diseases such as malaria and dengue. "Population replacement" is the replacement of wild vector populations (that are competent to transmit pathogens) with those that are not competent to transmit pathogens. There are several theoretical strategies to accomplish this. One is to exploit the maternally-inherited symbiotic bacteria *Wolbachia pipientis*. *Wolbachia* is a widespread reproductive parasite that spreads in a selfish manner at the extent of its host's fitness. Jason Rasgon discusses, in detail, the basic biology of this bacterial symbiont and various ways to use it for control of vector-borne diseases.

References