Genetic Control of Malaria and Dengue

Zach N. Adelman
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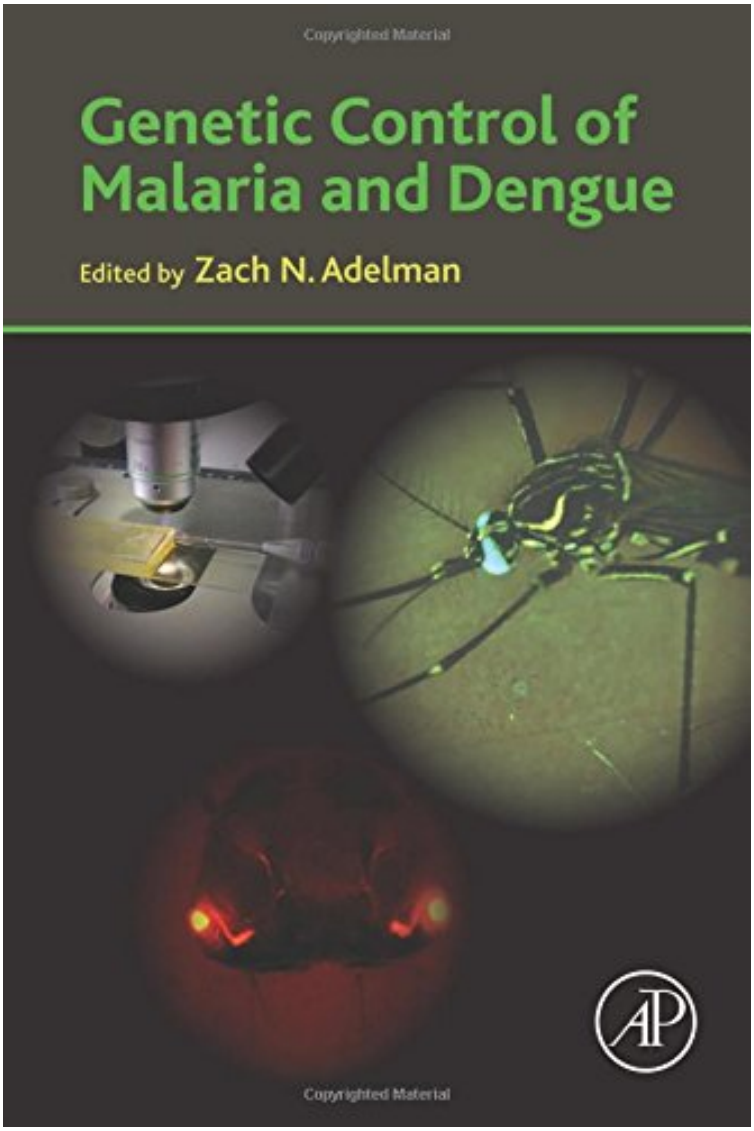

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Zach N. Adelman : Genetic Control of Malaria and Dengue before purchasing it in order to gage whether or not it would be worth my time, and all praised Genetic Control of Malaria and Dengue:

Genetic Control of Malaria and Dengue focuses on the knowledge, technology, regulation and ethics of using genetically modified mosquitoes to interrupt the transmission of important vector-borne diseases including Malaria. It

contains coverage of the current state of knowledge of vector-borne diseases and how they are currently controlled; vaccine, drug and insecticide development; various strategies for altering the genome of mosquitoes in beneficial ways; and the regulatory, ethical and social environment concerning these strategies. For more than five decades, the prospect of using genetically-modified mosquitoes to control vector-borne disease transmission has been a purely hypothetical scenario. We simply did not have the technology or basic knowledge to be able to do it. With the explosion of field trials and potential interventions in development, Genetic Control of Malaria and Dengue provides a comprehensive overview of research in genetics, microbiology, virology, and ecology involved in the development and implementation of genetic modification programs for virus and disease control. This book is meant to provide a practical guide to researchers, regulators and the general public about how this technology actually works, how it can be improved, and what is still unknown.Includes coverage of vectorial capacity, critical to understanding vector-borne disease transmissionProvides a summary of the concepts of both population suppression and population replacementContains pivotal coverage of ethical and ecological ramifications of genetics-based control strategies

About the AuthorZach N. Adelman is an associate professor in the Department of Entomology and Fralin Life Science Institute at Virginia Tech. Following earlier work on the generation of pathogen-resistant mosquitoes and the development of novel mosquito promoters, Dr. Adelman's research has more recently focused on the development of novel gene editing/gene replacement approaches for disease vector mosquitoes as well as understanding genetic interactions between arthropod-borne viruses and their mosquito vectors.