How to Survive the Mosquito: Vectorial Politics in Brazil and Beyond

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"When it comes to mosquitoes, the world will become Brazil," a Brazilian entomologist explained, highlighting the relevance of Brazil-based research. While climate change is driving an "insect apocalypse," it is also fueling the global spread of the *Aedes aegypti* mosquito—a vector of viruses such as dengue, Zika, and chikungunya—with transmission rates projected to rise. Popular and scientific media often frame new mosquito-borne outbreaks in the Global North as "emerging." Yet, in places like Brazil, the *Aedes aegypti* has long been a persistent concern. What does it mean to view a planet facing rising mosquito-borne diseases from Brazil's perspective? According to Brazilian researchers, the country offers critical lessons.

My book, tentatively titled "How to Survive the Mosquito: Vectorial Politics in Brazil and Beyond", argues that climate change is reshaping disease geographies and the geopolitics of science. Drawing on multi-method research, including extensive multi-sited ethnography, I trace how Brazilian researchers framed mosquitoes as an opportunity to produce knowledge capable of challenging the Global North's historical dominance in scientific production. Cognizant of the failures of past campaigns, these researchers sought to reinvent vector control by harnessing mosquitoes' ecological capacities. If successful, Brazilian science would no longer be considered "peripheral" but positioned to provide solutions to a planetary threat. At the same time, my book complicates narratives about decolonizing science from the Global South, showing how these efforts also obscure other hierarchies, including deeply racialized inequalities embedded in Brazilian science and society.

In analyzing how Brazil is framed as both a harbinger of a planetary challenge and a source of possible solutions, "How to Survive the Mosquito" focuses on three technoscientific projects, in different regions in Brazil, that proposed using the mosquito itself to address the pathogens it can transmit—turning the mosquito into an unwitting "ally." In Rio de Janeiro (Southeast), a group released mosquitoes infected with *Wolbachia*, a bacterium that inhibits viral transmission. In Recife (Northeast), another group released irradiated sterile male mosquitoes to suppress future mosquito generations. In Foz do Iguaçu (South), a third group used the mosquitoes' need for human blood to entrap them, test for viral DNA, and transform them into sentinels, mapping the insects' presence, distribution, and status as vectors. By investigating the different ways my interlocutors framed their projects as conscripting *A. aegypti*'s "reproductive work" to produce national scientific capital, I show how the three groups also naturalized the Brazilianness of their projects.

In the book, I develop vectorial politics as a framework for analyzing knowledge in a changing climate. It examines efforts to reposition both Brazil and the mosquito—from a source of disease to a site of innovation, from enemy to ally—while revealing how these shifts carry embedded pathogenic inequities. By examining the geopolitics of knowledge, racialized imaginaries of Brazilianness, and the mobilization of nature to address planetary challenges, my book shows how novel mosquito projects were both technoscientific interventions and world-making endeavors.