

First Evidence of Horizontal Transmission by Fecal Shedding of Dengue Virus 4 Among *Aedes aegypti* Larvae (Diptera: Culicidae) Under Laboratory Conditions

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PMID: 34981991 DOI: [10.1089/vbz.2021.0044](#)

Abstract

The transmission pathways of dengue virus (DENV) among mosquitoes are a topic that has gained relevance in recent years because they could explain the maintenance of the virus in the wild independently of the human-mosquito horizontal transmission cycle. In this regard, *Aedes aegypti* larvae exposed to supernatants of C6/36 cells infected with DENV-4 were evaluated for virus excretion in feces and viability of infection in immature stages (larvae). The results demonstrate that larvae excrete DENV-4 in their feces with the potential to at least infect immature individuals of the same species. A horizontal transmission pathway of larvae-larvae DENV-4 under laboratory conditions is suggested.

Keywords: *Aedes aegypti*; dengue virus; horizontal transmission; viral excretion.

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