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## ACCEPTED MANUSCRIPT

# Mosquito-borne and sexual transmission of Zika virus: Recent developments and future directions Tereza Magalhaes<sup>1</sup>, Brian D. Foy<sup>1</sup>, Ernesto T. A. Marques<sup>2,3</sup>, Gregory D. Ebel<sup>1</sup>, James Weger-Lucarelli<sup>1</sup> <sup>1</sup>Department of Microbiology, Immunology and Pathology, Arthropod-borne and Infectious Diseases Laboratory, Colorado State University, Fort Collins, Colorado <sup>2</sup>Laboratory of Virology and Experimental Therapeutics, Centro de Pesquisas Aggeu Magalhaes, Fundacao Oswaldo Cruz, Recife-PE, Brazil

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#### **Highlights**

- Zika virus (ZIKV) is unusual among the mosquito-borne flaviviruses in that it is transmitted by mosquitoes and through sex, but much remains to be discovered about the relative influences of these two transmission routes in ZIKV ecology, infection and disease.
- Mosquito-borne ZIKV transmission in both sylvatic and urban cycles seems to be mostly from Aedes species, and this is the likely driver of the rapid and widespread nature of the current pandemic.
- Sexual ZIKV transmission is driven by a urogenital tissue tropism of the virus in males that can
  result in high and persistent viral titers in semen, and may be causing more frequent disease and
  severe pathology among women compared to men.

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