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Analyzing Sexual Transmission in the Spread of the Zika Virus in Colombia

Victoria M. Kelley
UC Davis, vmkelley@ucdavis.edu

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Name: Victoria Kelley (in collaboration with Daniela Olivera, Julian Prieto, and Catalina Ardila from Universidad de los Andes in Bogota, Colombia)

Affiliation: UC Davis

Title: Analyzing Sexual Transmission in the Spread of the Zika Virus in Colombia

Abstract: Zika has become a global concern for public health due to its devastating birth defects for pregnant women and its rapid spread through Latin America and the Caribbean. In Colombia the outbreak started in October 2015 and since then, 87,355 cases have been reported. The Zika virus is a vector borne disease transmitted through the bite of the female mosquito *Aedes aegypti*, however there is evidence of a sexual transmission route for this disease. Mathematical models are helpful to understand the disease's dynamics and to identify the most important infection routes. Using SIR models as tools, we developed a mathematical model to evaluate the role of sexual transmission in the spread of the disease. We evaluated the importance of this pathway for the current outbreak in Colombia.