

ZIKA

WHAT CEID IS DOING ABOUT ZIKA

Zika virus is an emerging infectious disease carried by mosquitoes and linked to birth defects, miscarriage, and devastating illness. It's estimated that 5 billion people are at risk for Zika worldwide. CEID scientist **Courtney Murdock** works on the mosquitoes driving this epidemic.

THE MURDOCK LAB

The Murdock Lab, in the Odum School of Ecology and College of Veterinary Medicine, investigates how environmental factors such as temperature and humidity affect vector-parasite associations to understand how these factors impact parasite growth and development within a host, and effects on host immunity, physiology, and condition. These factors determine the capacity for transmission, implying that environmental change will affect mosquito-borne diseases in a major way.

MAJOR DISCOVERIES

• Climate change is predicted to expose up to 1.3 billion people to Zika by mid-century.

• Urbanization and changes in seasonality could expand Zika's range north and into longer seasons.

• Twenty-six new mosquito species predicted to be capable of transmitting Zika.

• Minor fluctuations in temperature modulate a mosquito's ability to transmit Zika, challenging the standard model of transmission.

SUPPORT CEID

Financial support from individual, foundation, and corporate partners is crucial for CEID to continue driving research and educating the next generation of scientists. To learn more about how to support our research on Zika and other infectious diseases, visit us at https://t.uga.edu/4xa or e-mail us at ceid@uga.edu

"OFTEN MOSQUITO INTERVENTIONS ARE THE ONLY WAY TO MITIGATE THESE DISEASES, WHICH IS WHY UNDERSTANDING HOW TEMPERATURE, RAINFALL AND LAND USE AFFECT MOSQUITOES' CAPACITY FOR TRANSMITTING DISEASE IS SO IMPORTANT."

> Courtney Murdock University of Georgia

CEID MISSION

The Center for the Ecology of Infectious Diseases brings together social and natural scientists through data science, basic biology, and scientific synthesis. Our community values scientific curiosity, seeks rigorous solutions to the ecological problems of disease transmission and evolution, and prepares a rising generation of scientists with the technical skills needed to advance scientific inquiry and translational practice.