A team of researchers, led by senior author Erol Fikrig, M.D., studied the question by using three different strains of Zika virus to infect three types of cells found in placental tissue. The cells types—known as Hofbauer cells, cytotrophoblasts, and fibroblasts—were obtained from normal term pregnancies.

The researchers found that fibroblasts and Hofbauer cells were susceptible to infection by Zika virus in isolated cultures. They also observed infection of Hofbauer cells within whole placental tissue.

"These placenta-specific cells could potentially serve as a reservoir for Zika virus production within the fetal compartment," said first author Kellie Ann Jurado, a postdoctoral fellow.

The researchers also stated that the Hofbauer cells, which are believed to migrate around the placenta, may aid in delivery of Zika virus to the fetal brain.

The findings further the understanding of Zika virus infection and potential routes of viral production and circulation within the placenta, said Jurado. The study results may also help investigators develop new strategies to potentially prevent infection of the fetus, the researchers noted.


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