

Zika is latest mosquito-borne virus knocking on Texas' door

January 18 2016, by Bill Hanna, Fort Worth Star-Telegram

Another mosquito-borne illness is rapidly spreading across South and Central America, one that may be linked to disturbing birth defects in Brazil.

The Zika virus is confirmed in cases from Brazil to Mexico, including one reported near Monterrey, less than 150 miles from the Texas border. Puerto Rico just reported its first case in December.

State officials say they don't believe that the Zika virus, discovered in Uganda in 1947, is an immediate threat to Texas, but many questions remain unanswered.

Brazil has had a dramatic jump in cases of microcephaly, a birth defect in which a child is born with a smaller-than-normal head, a sign of an underdeveloped brain. The number increased from 200 in 2014 to 3,000 last year.

"I think it's very likely Zika is directly or partially responsible for most if not all of these cases in Brazil. The diagnostics have not been in place to diagnose most of these mothers," said Scott Weaver, director of the Institute for Human Infections and Immunity at the University of Texas Medical Branch in Galveston.

The first Brazilian case of Zika was reported on May 1, and 18 states in Brazil had cases as of Dec. 1, according to the Pan American Health Organization.

Researchers at UTMB's Galveston National Laboratory, where Weaver is scientific director, will be studying Zika and trying to determine whether it is responsible for the jump in microcephaly cases and whether the virus has mutated.

"Before 2007, there were no major outbreaks," Weaver said. "Its circulation may have become more efficient. It may be producing higher levels of the virus within people. It could have changed in a way to predispose cross-placements into the fetus and central nervous system. These are all hypotheses we will be testing at UTMB."

Zika is carried by the *Aedes aegypti* mosquito, which bites during the day, unlike the *Culex* mosquito, which carries West Nile and bites at night.

The aedes is present in Texas, but other mosquito-borne viruses it carries, such as dengue fever or chikungunya, have not become established here. Lifestyle differences between the U.S. and Latin America may play a role.

"The aedes likes to stay inside and bite during the daytime," Weaver said. "In many Latin American countries it has the perfect conditions to stay inside and bite. Most of us have air conditioning and our homes have screens on the windows, so they don't get inside as often or have as much access to bite."

State health officials are closely watching to see whether Zika makes it to Texas.

"We know Zika virus has arrived in the Americas and are monitoring the illness because of the likelihood it could spread further," said Chris Van Deusen, a spokesman for the Texas Department of State Health Services.

For now the biggest concern is for those traveling getting infected and bringing it back to Texas.

Justin Smith, a pediatrician at Cook Children's Medical Center in Fort Worth, said physicians have been monitoring the spread of Zika in recent weeks.

"Anytime we see something in Mexico, it gets our attention," Smith said.

Tarrant County Public Health officials are urging doctors to check patients returning from areas that have already been affected by the virus, said Anita Kurian, associate director of Tarrant County Public Health.

Historically, Zika's symptoms haven't been severe. Most people who contracted the [virus](#) were symptom-free, while some had a fever and a rash.

A University of North Texas Health Science Center professor who has overseen a program to test and trap mosquitoes in Tarrant County said it's too early to say whether Zika will make it to Texas.

"It's a really difficult question to say whether it will arrive here. Probably not in the near future but in the long term it may reach Florida and South Texas. For DFW, the chances are slimmer," said Joon Lee, an associate professor of environmental and occupational health sciences.

While it may take years to answer all of the questions, Weaver said they hope to have some answers about Zika within the next year.

"I think we'll know more about microcephaly once the diagnostics are in place in Brazil," Weaver said. "We should also know more within a year about the risk of circulation in the U.S. Our understanding should be

better."

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Citation: Zika is latest mosquito-borne virus knocking on Texas' door (2016, January 18)
retrieved 26 April 2024 from

<https://medicalxpress.com/news/2016-01-zika-latest-mosquito-borne-virus-texas.html>

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