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## Zika Virus Experts Available for Interviews

**Entomologists and medical professionals can comment on everything from novel genetic technologies to prevention methods aimed at Zika virus**

By [Sean Nealon](#) On JANUARY 27, 2016



*Aedes aegypti* mosquito, which transmits Zika virus, feeding on a human.

RIVERSIDE, Calif. ([www.ucr.edu](http://www.ucr.edu)) — A relatively new mosquito-borne virus, Zika virus, has recently caused concern because of its connection to neurological birth disorder and due to its rapid spread throughout the world. The University of California, Riverside has several experts who can comment on the virus:

[Omar Akbari](#), an assistant professor of entomology, is focused on developing novel genetic based gene-drive technologies for mosquitoes that can be used to rapidly replace entire wild populations with genes that confer resistance to vectored diseases. His lab is currently focused on engineering technologies for *Aedes aegypti*, the main mosquito responsible for the transmission of both Dengue and Zika viruses.

While mosquitoes are not developed yet, the combination of an evolutionary stable gene drive system linked with genes that can prevent *Aedes* from vectoring Dengue and Zika could provide a rapid, wide range solution to combating the spread of these devastating viruses in a

cheap, environmentally friendly manner.

“Zika virus is extremely worrisome because of the widespread distribution of the mosquito species that is responsible for transmitting the virus,” Akbari said. “To prevent further cases, wide-scale vector control measures should be undertaken, in addition to developing new control measures.”

Akbari recently co-authored a [review piece](#) in Nature Review Genetics about engineered gene drives, which could play a key role in combating Zika virus. Read the [press release](#) about the piece.

Akbari can be reached at [omar.akbari@ucr.edu](mailto:omar.akbari@ucr.edu).

[Bill Walton](#) is a professor of entomology who studies mosquito biology and ecology.

“Pregnant women, and couples who plan to have a child within the next three months, should use caution and avoid traveling abroad to places where Zika transmission is occurring in outbreak condition,” Walton said.

“The same precautions that folks in California are currently using to reduce mosquito bites to avoid West Nile virus are applicable to avoid Zika virus. While most of the Zika infections are likely to manifest themselves as minor symptoms, such as mild flu, it is a good idea to take precautions to reduce mosquito bites. We need to be proactive, and not simply reactive, in our mosquito control efforts.”

Walton can be reached at 951-827-3919 or [william.walton@ucr.edu](mailto:william.walton@ucr.edu).

Research by [Anandasankar Ray](#), an associate professor of entomology and the director of the Center for Disease Vector Research, is focused on how mosquitoes find humans through the sense of smell. Ray has discovered odors that mosquitoes avoid, so they can be used to lower transmission of diseases such as Zika, Dengue, malaria and West Nile to humans. He has founded a company, Sensorygen, Inc., that aims to create a new generation of inexpensive, nontoxic, environmentally friendly insect repellents.

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[Ilhem Messaoudi](#), an associate professor of biomedical sciences in the School of Medicine, has given interviews on chikungunya and yellow fever – diseases spread by the mosquito that is a vector for the Zika virus. One of her research areas of focus is to understand how the immune system changes as we age.

She can discuss the Zika virus, what we know so far, how likely it is to spread, symptoms and prevention, and what local physicians in the U.S. should keep in mind.

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[Dr. Phyllis Guze](#), is a founding member of the School of Medicine leadership team and the chair of the Division of Clinical Medicine.

“The Zika virus spreads via mosquito bites from a specific type of mosquito,” Dr. Guze said. “This mosquito is found in essentially all of the Americas. The virus has been around for many decades but it is just this year that in Brazil particularly, that there has been a significant epidemic. Noted has been what appears to be an association of microcephaly in children born to mothers who have had the disease. There is also some question about an association with other neurologic illnesses. There is no vaccine or treatment. Most people do well and only have mild flu-like symptoms.”

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[Brandon Brown](#), an assistant professor at the School of Medicine’s Center for Healthy Communities, Brown is a health services researcher whose has worked on HIV and HPV-related disease, cancer prevention among underserved populations in Peru, Mexico and Nigeria.

“A whole country, El Salvador, has asked women to avoid pregnancy for two years due to Zika virus,” Brown said. “We have to think about the impact of this push for abstinence/contraception on a country that is mostly Catholic. Symptoms of illness with Zika are similar to a cold, but we see much more in the news about the impact of Zika on children born to mothers who were infected while pregnant, causing birth defects – e.g., small head and brain, intellectual disability. Zika is spread through mosquito bites, from the same mosquito that transmits dengue, which we have in the US. So some similar prevention rules apply: try to eliminate potential mosquito breeding sites such as standing water, and use repellents when traveling to areas where Zika is known to be present.”

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[Dr. Claudia Muñoz](#), an assistant clinical professor of neurology, is a public health researcher. She has participated in population-based research both in the United States and in Latin America.

She said, “Zika virus is a virus spread most commonly by mosquitos. It is related to the dengue virus, but tends to cause mild symptoms of fever, rash, muscle aches and bloodshot eyes. Only about 1 in 5 people infected with the virus develop symptoms. The reason this seemingly low-key virus is causing great alarm is because it has been associated with an increase in the occurrence of a condition called microcephaly. Microcephaly is when a fetus develops with an abnormally small brain and head. This condition seems to occur when the pregnant mother is infected with the virus, although not all mothers who test positive for Zika have babies with microcephaly. So far cases of Zika infection in the U.S. has been in persons returning from travel to affected areas of the world. As the virus spreads and more people who travel become infected, there is the possibility that active transmission of Zika within the US may occur. The research is ongoing and there are many questions yet to be answered about the Zika virus. In the meantime, it is important to be informed, but not to panic. The Center for Disease Control and Prevention has some relevant facts on [their website](#).”

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