

Toxic Traps Prey on Mosquitoes' Motherly Instincts

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Tulane University researchers are using mosquitoes' motherly instincts against them to develop a novel trap to fight the spread of dengue fever. Researchers are deploying small devices with just the right mix of chemicals to convince the disease-carrying mosquitoes they've found the perfect place to lay their eggs.

But once they fly into this lethal “maternity ward,” there's no getting out alive.



Dawn Wesson, associate professor of tropical medicine, explains how a lethal “maternity ward” works to capture disease-carrying mosquitoes. View the video produced by Ryan Rivet.

[Dawn Wesson](#), associate professor of tropical medicine in the [School of Public Health and Tropical Medicine](#), is about to begin a pilot study to see if the 12-inch-high traps are an effective, low-cost strategy to prevent transmission of dengue fever, one of the most widespread and deadly mosquito-borne viruses in the world. Wesson and her team plan to eventually deploy up to 10,000 traps in Iquitos, Peru, an area in the Amazon rainforest where dengue fever is a persistent problem.

“If this trap works, we think it can change a lot of people's lives,” Wesson says.

There is no vaccine or cure for dengue fever. Mosquito control ? the only effective way to stop transmission ? is virtually nonexistent in most areas where the virus is common.

Most other traps target host-seeking mosquitoes looking for a blood meal. Tulane's traps target those that have already tasted blood, making them the most dangerous because they may have bitten someone infected with the dengue virus. Female mosquitoes feed before they breed.

Wesson's team will place two to three traps in homes and yards in an area of Iquitos for a year. Homeowners will maintain the traps, filling them up weekly and swapping out components every two months. Teams will compare mosquito sampling data and dengue fever cases between the area with traps and a control area where no traps are present. Tulane is leading the project in conjunction with researchers from North Carolina State University and the University of Californiaâ€”Davis, and officials from the U.S. Navy.